DULLES CORRIDOR RAPID TRANSIT PROJECT

FINAL ENVIRONMENTAL IMPACT STATEMENT
AND SECTION 4(f) EVALUATION

Prepared by:
US Department of Transportation (US DOT)
Federal Transit Administration (FTA)
Virginia Department of Rail and Public Transportation (DRPT)
and
Washington Metropolitan Area Transit Authority (WMATA)
in cooperation with
Federal Aviation Administration (FAA)

Pursuant to:
National Environmental Policy Act of 1969, 42 U.S.C. Section 4321 et seq.
National Historic Preservation Act of 1966, Section 106, 16 U.S.C. Section 470f
Section 4(f) of the Department of Transportation Act of 1966, 49 U.S.C. Section 303

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Moving Forward

In January 2001, the 103-mile Adopted Washington Regional Metrorail System was completed, successfully fulfilling a vision for a world-class transit system that was conceived almost 50 years ago. To meet the needs of continued, robust growth beyond the service area of the Metrorail system, new investment in regional transportation improvements is needed where existing and planned facilities can no longer support the demands of businesses and communities. One such area is the Dulles Corridor, which lies west of the nation's capital in Northern Virginia in Fairfax and Loudoun counties. The Dulles Corridor is a vibrant, diverse mix of businesses, neighborhoods, recreational amenities and an international airport that continues to attract population and employment growth at almost twice the rate of the region.

New transit investment in the Dulles Corridor will link the region's key activity centers serving growth and development beyond the completed regional Metrorail system.

To respond to this increasing travel demand, the Federal Transit Administration (FTA), the Virginia Department of Rail and Public Transportation (DRPT), and the Washington Metropolitan Area Transit Authority (WMATA), in cooperation with the Federal Aviation Administration (FAA), are proposing a 23-mile extension of Metrorail in the Dulles Corridor. The proposed extension will enhance the overall transportation system, improving transit service, ridership, and transit travel times, while supporting the existing and future land uses and economic development. It will assist in maintaining the regional competitiveness of the corridor and in preserving the quality of the environment that makes the Dulles Corridor attractive to residents, businesses, and visitors alike. Equally important, the proposed extension will provide high-quality, high-capacity transit service between Washington Dulles International Airport and the region's core via a direct connection to the existing Metrorail system.



Washington Metrorail System

Investment in efficient and reliable transportation facilities to meet travel needs will contribute to the area's economic, social, and environmental quality.

The Final EIS is a decision tool for shaping the future of the Dulles Corridor. It describes:

- Why transportation improvements are needed;
- Why Metrorail extension has been selected to meet these needs;
- What other alternatives were considered;
- What the economic, environmental, and social impacts of the extension would be;
- How much the extension would cost: and
- Actions required to make the proposed extension a reality.

The Final EIS documents the evaluation process and findings used by decision-makers to select the appropriate transportation improvements needed to secure the future of the Dulles Corridor in light of the potential effects on the social, economic and natural environment.

Its purpose is to assist decision-makers and the public in selecting a transportation investment strategy for the Dulles Corridor and the region, consistent with federal, state and local goals and with environmental and community initiatives.

The Final EIS has been prepared in accordance with the provisions of the National Environmental Policy Act of 1969 (NEPA), as amended. FTA is the lead federal agency for the Dulles Corridor Rapid Transit Project, and the Federal Aviation Administration (FAA) is a federal cooperating agency. The Final EIS is being circulated to inform decision-makers and the public about the selection of the Metrorail extension and on the potential consequences of implementing the proposed extension in the corridor. Overall, the potential adverse impacts of the extension on the human and natural environment are expected to be minor given the complexity of the project. Coordination with the public, stakeholders, resource agencies, and local governments has confirmed these findings.

The potential adverse effects of the project are expected to be relatively low as a result of the use of existing transportation rights-of-way given the complexity and length of the project.

The proposed extension would be constructed in two phases in order to reduce annual funding needs by spreading the construction costs over a longer period of time. The first



Traffic Congestion

The central and eastern portions of the corridor currently experience some of the region's worst traffic congestion.

phase of 11.6 miles would commence from a seamless connection with the existing Orange Line near West Falls Church, serve Tysons Corner, and reach Reston at Wiehle Avenue. It is anticipated that this first phase, named the Wiehle Avenue Extension, would begin operations in 2011. The second phase of 11.5 miles would continue westward from Wiehle Avenue and serve Reston, Herndon, Dulles Airport, and eastern Loudoun County by 2015.

The extension would be funded by FTA, the Commonwealth of Virginia, Fairfax County, Loudoun County, and the Metropolitan Washington Airports Authority (MWAA), along with possible private sector funding. At this time, FTA is considering only the first phase of construction (i.e., the segment between the Orange Line near West Falls Church and Wiehle Avenue) for New Starts funding from the pending six-year reauthorization of the New Starts program. FTA may consider the subsequent phase for federal funding in the future, but has made no commitment to do so. Furthermore, FTA has determined that the first phase now being considered for funding has independent transportation utility even if the subsequent phase is never built. (The first phase serves the high employment area of Tysons Corner.) Therefore, FTA will make a decision on funding the first phase without regard to the possible future phase.

In the Final Environmental Impact Statement (EIS), the alternative formerly known as "LPA Phase 1" in the October 2003 Supplemental Draft EIS and Section 4(f) Evaluation has been renamed the Wiehle Avenue Extension and is expected to begin operations in 2011. This change reflects the federal approach to the project's funding under the FTA's New Starts program. It will assure consistency among the environmental, engineering and financial documents during the project's development.

The proposed extension would be constructed in two phases in order to reduce annual funding needs by spreading the construction costs over a longer period of time.

In the October 2003 Supplemental Draft EIS and Section 4(f) Evaluation, as well as this Final EIS, the term "full LPA" represents the Wiehle Avenue Extension and the second phase of the Dulles Corridor Rapid Transit Project. This second phase would extend west from Wiehle Avenue to Washington Dulles International Airport and Route 772 and is expected to begin operations in 2015.

The terms "LPA", "proposed action", or "selected LPA" refer to both the Wiehle Avenue Extension and the full LPA collectively.

Overview

The Final EIS is a significant milestone in advancing a solution to address the travel needs and leverage the opportunities in the Dulles Corridor, and to assist the region and corridor in realizing and maintaining its full potential. This Executive Summary provides an overview of the findings and conclusions of the Final EIS in terms of the following:

- Future Needs and Challenges
- Project Description
- The Alternatives Process
- Implementing the Project
- Coordination Opportunities
- Future Actions

The Final EIS contains more information on the topics discussed in this Executive Summary. The following table lists the topics and where further details may be found in the document.

Summary Topic	Final EIS Chapters	
Future Needs and Challenges	Chapter 1	Purpose and Need
Project Description	Chapter 2	Alternatives Considered
The Alternatives Process	Chapter 2	Alternatives Considered
	Chapter 3	Social Effects
	Chapter 4	Environmental Effects
	Chapter 5	Economic Effects
	Chapter 6	Transportation Effects
	Chapter 7	Section 4(f) Evaluation
	Chapter 9	Secondary and Cumulative Effects
Implementing the Project	Chapter 8	Financial Analysis
	Chapter 10	Evaluation of Alternatives Carried Forward
Coordination Opportunities	Chapter 11	Public Coordination and Comments
	Appendices	J,K
Future Actions	Chapter 11	Public Coordination and Comments
	Appendices	J,K

FUTURE NEEDS AND CHALLENGES

The Dulles Corridor, located in Northern Virginia west of the nation's capital, is truly the "Main Street" of one of the nation's fastest-growing business and population centers. It is home to the headquarters of leading technology firms, to Tysons Corner - one of the nation's largest employment and retail shopping centers, and to Washington Dulles International Airport. In addition, the corridor offers a diverse mix of high-intensity office development, many of the most desirable residential neighborhoods in the region, and numerous cultural and recreational resources, such as the Washington and Old Dominion Railroad Regional Park.

Key activity centers will continue to generate diverse travel needs exceeding the capacity of existing and future improvements.

Regionally significant activity centers in the corridor continue to expand and prosper. This continued growth is generating an unfulfilled demand for additional and improved transportation facilities to enhance mobility and accessibility within and through the corridor, and to provide a full range of transportation choices to meet a range of travel needs.



Tysons Corner

Key activity centers include:

Tysons Corner - The "downtown" of Fairfax County, Tysons Corner is one of the most recognizable "edge cities" in the nation, with over 30 million square feet of commercial space and the nation's eighth largest shopping center. With Tysons Corner Center and Tysons Galleria as its centerpieces, Tysons Corner has emerged as a regional shopping destination, housing more than 330 stores and attracting 1.9 million visitors annually. Tysons Corner is one of the largest suburban business districts in the country and is larger, both in geographic area (3 square miles) and employment (90,000 jobs), than many of the central business districts in major U.S. cities including Miami, San Diego, and St. Louis.



Reston

Reston - One of the premier planned communities in North America, Reston encompasses more than 7,400 acres and a population of more than 63,000 people living in a diverse mix of housing types. The area has also emerged as a center for

high-technology firms and boasts one of the highest concentrations of office development in Fairfax County (second only to Tysons Corner). The existing employment of the Reston area of approximately 44,000 jobs is expected to increase to nearly 65,000 in 2025. Reston Town Center has more than 50 shops and restaurants, a multiplex theater, an outdoor ice rink, a 514-room hotel, and almost one million square feet of office space.



Herndon

Herndon - Similar to other areas of the Dulles Corridor, Herndon has grown over the last decade, while maintaining a balance of commercial, residential, and recreational uses. Growth is projected to continue, with a build-out potential for commercial properties in excess of 30 million square feet of floor space.



Dulles Airport

Dulles Airport - Located on 11,000 acres in the western end of the corridor, Washington Dulles International Airport is one of the world's fastest growing airports, employing more than 18,800 persons. As demand for air travel increases, the region is increasingly dependent upon Dulles Airport. At full build-out, Dulles Airport is projected to handle 55 million passengers per year (150,000 per day). The Smithsonian's National Air and Space Museum opened the Steven F. Udvar-Hazy Center in 2003 and is expected to attract three million visitors annually.



Loudoun County

Eastern Loudoun County – The high-tech industry has spurred substantial growth in Loudoun County. America Online/Time Warner, MCI, and Orbital Sciences have added thousands of jobs to the eastern part of the county. The proximity of Dulles Airport has given rise to a large amount of industrial development. In addition to job growth, Loudoun County has experienced extensive population growth. From 2001 to 2003, the county led not only Northern Virginia with a population growth of 30.7 percent, but was recognized by the U.S. Census Bureau as the fastest growing county in the nation.

With the Dulles Corridor's increasing attractiveness as a place to live and work, travel in the corridor has been steadily growing over the past 15 years. This increasing travel demand has strained the capacity of the existing transportation network, causing delays and increasing travel times between activity centers within the corridor and the region. The central and eastern portions of the corridor currently experience some of the region's worst traffic congestion, constraining the economic opportunities and threatening the quality of life that make the corridor a thriving regional center.

Over the next 25 years, the Dulles Corridor will continue to outpace the region in employment and population at an anticipated growth rate significantly higher than the entire Washington metropolitan region. Population in the corridor is expected to increase by 45 percent (compared to 32 percent for the region), adding 168,000 persons. The addition of 185,000 jobs will result in a 63 percent increase in employment levels, compared to an average increase of 41 percent throughout the region. Parallel increases in travel demand throughout the corridor are projected to exceed the capacity of the already overburdened transportation system, resulting in severely congested traffic conditions on numerous routes, further degradation of air quality, and a threat to the valued quality of life in the Dulles Corridor.

According to a 2002 survey by the American Public Transportation Association, support for transit investment in the Washington metropolitan region is almost twice that of support nationwide.

Currently planned roadway improvements are only expected to maintain existing levels of service in the corridor, and will not be able to meet future demand. Due to right-of-way, financial, and air quality constraints, additional roadway expansion beyond these planned improvements cannot be accommodated in the corridor. Existing local bus service provides a partial solution to auto travel, but it is hampered by traffic on already congested roadways, particularly in the Tysons Corner area. Given these factors and a need to reduce auto emissions in the region to meet federal air quality standards,

transportation improvements, such as a high-capacity rail rapid transit line in the Dulles Corridor, have long been the focus of public and private sector studies. The Northern Virginia 2020 Transportation Plan and local comprehensive plans recognize the need for significant future investment in transit in the corridor.

The Metrorail extension was selected as the solution to address these needs and challenges for the following considerations:

- Meeting the mobility and accessibility needs of future residents, businesses, and visitors;
- Serving and supporting future land use and development patterns while leveraging economic development and redevelopment opportunities for a vibrant, sustainable future;
- Accommodating future increases in the volume of travel demand on a roadway system that is largely "built-out", and the associated constraints for existing and planned transit systems to operate on these roadways; and
- Maintaining the air quality of the Washington metropolitan region by contributing to the attainment of regional air quality goals.

PROJECT DESCRIPTION

The Dulles Corridor Rapid Transit Project, which will be constructed in two phases, would be fully integrated with the existing Metrorail system in terms of scheduling, signage, and fare collection. Selected after consideration of various alternative improvements for the corridor, the entire 23.1-mile extension is known as the Locally Preferred Alternative (LPA). The LPA includes an extension of the regional Metrorail system through Tysons Corner, along the Dulles International Airport Access Highway (DIAAH) to Dulles Airport, along the Dulles Greenway, into eastern Loudoun County.

Having the Metrorail extension in dedicated right-of-way will improve efficiency, reliability, and predictability for travelers in the corridor.

The LPA would be implemented in two phases: the Wiehle Avenue Extension and the full LPA. The Wiehle Avenue Extension would include construction of the LPA to Wiehle Avenue with express bus service along the remainder of the project corridor. The full LPA would include an extension to Dulles Airport and Route 772 in Loudoun County. A map of the extension project is provided on the following page.

Wiehle Avenue Extension

The first phase of 11.6 miles would commence from a seamless connection with the existing Orange Line near West Falls Church, serve Tysons Corner, and reach Reston at Wiehle Avenue. It is anticipated that this first phase, the Wiehle Avenue Extension, would begin operations in 2011. The alignment follows the Dulles Connector Road, Route 123, and Route 7 in Tysons Corner and the Dulles International Airport Access Highway (DIAAH). The five stations of the Wiehle Avenue Extension are Tysons East, Tysons Central 123, Tysons Central 7, Tysons West, and Wiehle Avenue.

The Wiehle Avenue Station would serve as an interim end-of-line station. West of the station and in the median of the DIAAH, interim tail tracks with a pocket track would provide the end-of-line, turn-back maneuver and storage of trains.

In its opening years, the Wiehle Avenue Extension would operate with a mix of 6- and 8-car trains at approximately 7-minute headways during the peak periods, and 4-car trains at 12-minute headways in the off-peak periods. To accommodate these operations, the Wiehle Avenue Extension would improve the existing West Falls Church Yard by adding storage tracks for forty-two cars and expansion of the maintenance building for eight more cars. Yard improvements would also include a new yard lead from the extension and construction of a sound attenuation box over the existing loop track and a portion of the new yard lead.



LEGEND

- Major Arterials
- Limited Access Highway
- U.S. Highways

Proposed Metrorail Alignment

- At-grade/Retained Fill
- Aerial
- Underground
- Aerial Yard Lead

- Existing Metrorail Orange Line and Stations
- Proposed Station
- Proposed Underground Station
- Future Station
- Rail Yard
- Dulles Corridor Limits

0 1 2 3 MILES

Note: Short bridge crossings for highway and culvert overpasses/underpasses not shown.

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

Dulles Corridor Rapid Transit Project Locally Preferred Alternative

Dulles Corridor Rapid Transit Project

The Wiehle Avenue Extension would include express bus service between the Wiehle Avenue Station and transit centers/stops in the western part of the corridor.



Dulles Airport

Full LPA

Completion of the 23-mile full LPA would extend Metrorail 11.5 miles westward from Wiehle Avenue Station to serve Reston, Herndon, Dulles Airport, and eastern Loudoun County by 2015. The alignment remains located in the DIAAH until entering Dulles Airport property and then follows the Dulles Greenway to the terminus at Route 772 in Loudoun County. The six additional stations of this second phase of construction are Reston Parkway, Herndon-Monroe, Route 28, Dulles Airport, Route 606, and Route 772. Metrorail operations for the full LPA would be the same as those for the Wiehle Avenue Extension.



The Herndon-Monroe park-and-ride facility would be expanded from the existing 1,750 spaces to 3,500 spaces. Park-and-ride structures would be constructed at the new stations west of Wiehle Avenue: 2,000 spaces at Route 28, 2,000 spaces at Route 606, and 3,300 spaces at Route 772. Under the full LPA, total park-and-ride capacity in the corridor, including West Falls Church, would be nearly 16,400 spaces.

A new Metrorail service and inspection (S&I) yard would be constructed on Dulles Airport property. The yard would occupy roughly 70 to 90 acres and would be designed to accommodate 250 rail vehicles but would initially be built for 184. For safety and security considerations, where the alignment traverses airport property, there would be no tunnel exits of any kind in the secure zone of the airport.

THE ALTERNATIVES PROCESS

Alternatives Previously Considered

Numerous alternatives have been evaluated for the Dulles Corridor over the last 40 years, including a range of different travel modes.

Over the last four decades, the transportation needs of the Dulles Corridor and potential improvements have been the subject of several studies conducted by public agencies and private entities. Most of these studies identified mass transit alternatives as the best transportation solution for the corridor. Numerous land use and regional transportation plans include references to specific Dulles Corridor transit alternatives, supportive land use measures, and potential funding sources.

DRPT initially identified and described alternatives for the Dulles Corridor Rapid Transit Project in the Dulles Corridor Transportation Study, completed in 1997, that served as a federal Major Investment Study (MIS). The MIS recommended a Metrorail extension and an interim expanded bus system. In a Supplement to the Dulles Corridor Transportation Study, completed in 1999, the MIS recommendations were revised for a phased implementation of transit improvements: first, the existing express bus service; then enhanced express bus service; then bus rapid transit (BRT); a Metrorail extension through Tysons Corner with BRT between Tysons Corner and Loudoun County; and finally, full Metrorail service between the Orange Line and Loudoun County. The Commonwealth Transportation Board (CTB) adopted the revisions described in the MIS Supplement and directed that the revisions be included in the Commonwealth of Virginia's State Transportation Improvement Plan (STIP).

Alternatives Considered in the Draft EIS

The alternatives advanced for detailed evaluation in the Draft EIS were those judged to best achieve the goals and objectives for the corridor, relative to the other alternatives under consideration. Alternatives were assessed in terms of how well they achieved the following objectives:

The Draft EIS evaluated a range of multi-modal transportation options, including phased implementation of both BRT and Metrorail service, as compared to a "No Build" (Baseline) condition, to provide a seamless connection to the Metrorail system.

- Enhanced transportation service;
- Increased transit ridership;
- Supported future development;
- Supported environmental quality;
- Provided cost-effective, achievable transportation solutions; and
- Served diverse populations.

The range of alternatives considered included a variety of modes, alignments, stations, S&I yard, and ancillary facilities.

The modal alternatives initially considered included bus system improvements, bus rapid transit, express bus service, light rail transit, personal rapid transit, Metrorail, and monorail.

As a result of the previous studies, project scoping, and preliminary screening during the initiation of the preparation of the Draft EIS, the alternatives retained for further, more detailed evaluation focused on BRT and Metrorail improvements, or some combination of both, along with associated maintenance facilities.

The Draft EIS used the conclusions of the 1999 Supplement to the Dulles Corridor Transportation Study (MIS) as a point of departure, which called for phased implementation of BRT and Metrorail service.

The following alternatives were considered in the June 2002 Draft EIS.

No Build Alternative - The No Build Alternative includes additional investment beyond the existing highway and transit service infrastructure and services within the corridor, and any investments that are committed to be implemented by 2025 aside from the Dulles Corridor Rapid Transit Project. This alternative serves as the basis for comparison and evaluation of the Build Alternatives described below.

Bus Rapid Transit (BRT) - BRT is transit service that uses buses operating in a limited access right-of-way to provide amenities typical of rail service, such as enhanced stations and platforms and off-vehicle fare collection. BRT would extend the full length of the Dulles Corridor from the West Falls Church Station on the Metrorail Orange Line to Route 772 in Loudoun County.

Metrorail - Metrorail is service like that currently provided by the existing 103-mile regional system, consisting of rapid transit vehicles operating on a dedicated right-of-way. Metrorail would extend the full length of the corridor from a point between the East and West Falls Church Stations on the Metrorail Orange Line to Route 772 in Loudoun County.

The Build Alternatives retained for consideration in the Draft EIS were those that best served the needs of the Dulles Corridor.

Combined BRT/Metrorail - Metrorail would extend from a point between the East Falls Church and West Falls Church stations on the Orange Line through Tysons Corner, and BRT would operate in the remainder of the corridor, from Tysons Corner to Route 772 in Loudoun County.

Phased Implementation - BRT and Metrorail improvements would be implemented beginning with BRT for the length of the corridor. Ultimately BRT would be replaced with Metrorail service, first from the existing Metrorail Orange line through Tysons

Corner, and then from Tysons Corner to Dulles Airport, terminating at Route 772 in Loudoun County.



The alternatives evaluated in the June 2002 Draft EIS generally followed the Dulles Connector Road, DIAAH, and the Dulles Greenway, with several alignment design options. Because the project is an extension of the existing Metrorail system, each proposed alternative included a direct connection to the Metrorail Orange Line. Other elements of the alternatives considered in the Draft EIS included ancillary facilities, such as a Metrorail S&I Yard and a BRT Maintenance and Storage Facility. The highway and transit infrastructure for the No Build Alternative was assumed to be completed by others and in place before the project would be implemented.

The comparative evaluation of the alternatives for the project described in the June 2002 Draft EIS focused on the relative effectiveness of each alternative in meeting the stated project goals and objectives, the essential differences among alternatives and alignment options, and the basic advantages and disadvantages of each alternative. Goals ranged from improving public transit and broadening the availability of transportation services to supporting future land use development patterns and preserving and enhancing neighborhood and environmental quality. The effectiveness of each of the alternatives in meeting these goals was assessed against a set of evaluation criteria and measures.

The goals used to measure the performance of alternatives were:

- *Increase transit ridership*
- *Support future development*
- *Provide cost-effective, achievable transportation solutions*
- *Serve diverse populations*

Key findings in the Draft EIS relative to the alternatives considered include the following:

Draft EIS No Build Alternative

- The No Build Alternative would not afford enhanced opportunities for economic development, and is not consistent with local and regional plans, which call for transit investment in the corridor.
- The No Build Alternative would have the fewest short-term environmental impacts, but the least desirable long-term effect on the environment, including transportation, social, economic and environmental factors.

The No Build Alternative, or taking no additional action, would not be consistent with adopted local and regional plans.

Draft EIS BRT Alternatives

- BRT service could be implemented before Metrorail or Combined BRT/Metrorail.
- BRT would not support land development patterns in Tysons Corner as well as Metrorail, Combined BRT/Metrorail, or Phased Implementation, and would not penetrate Tysons Corner to effectively serve its workers, shoppers, and residents.
- BRT would be less expensive to construct than choices involving Metrorail service.
- BRT would provide less overall passenger capacity than Metrorail.
- BRT would not provide the same level of accessibility for minority and low-income populations to regional job choices as Metrorail.

According to MWCOG, vehicle-miles of travel, which is a measure of how extensively roads are used, is expected to significantly increase within the corridor by 2025. Planned freeway and arterial lane-miles will not keep pace.

Draft EIS Metrorail Alternatives

- Metrorail would provide the best opportunity to capture previous investment made in regional infrastructure.
- Metrorail service would generally result in the shortest travel time, especially for reverse commute trips and those that begin and end in Tysons Corner.

- Metrorail service would deliver the highest ridership (more than twice as much as BRT) and the highest number of new trips (more than three times more than BRT), and would result in a higher percentage of people using transit.
- Metrorail would provide a seamless "single-seat" link between Dulles Airport and the region's core, and provide facilities commensurate to the status of this international airport.
- Metrorail service would provide a much greater increase in the capacity to move people through the corridor than either BRT or Combined BRT/Metrorail.
- Metrorail would have higher growth potential in station areas along the corridor due to planned increases in allowable densities at rail stations, and would better contribute to the objectives of adopted county master plans.
- More members of the business community, area neighborhood residents, and civic organizations expressed support for Metrorail than for any other choice.

The Draft EIS found that BRT would be faster to implement and less expensive to construct than Metrorail but would serve fewer people less effectively, and therefore was not selected as the Locally Preferred Alternative.

Draft EIS Combined BRT/Metrorail Alternative

- The combined service would be similar in nature to both the BRT and the Metrorail options.
- With Combined BRT/Metrorail, areas that would be served by BRT would not have to wait for rapid transit service as long as they would for Metrorail service.
- Combined BRT/Metrorail would blend the benefits of Metrorail service in areas where BRT would not adequately serve development patterns with the benefits of enhanced, more immediate transit service in other areas.
- Combined BRT/Metrorail would provide a greater increase in capacity to move people through the corridor, and would have higher ridership and improved travel times when compared to BRT service alone.

Draft EIS Phased Implementation Alternative

The Draft EIS concluded that major transit capital investment such as Metrorail in the Dulles Corridor would improve transit travel times and make them more competitive with highway travel. Peak period Metrorail times are faster than highway times in over one-half of analyzed corridor origination-destination pairs.

- Phased Implementation would cost the most, but would combine the advantages of both BRT and Metrorail service. Under Phased Implementation, transit service would be introduced in the corridor as soon as possible.
- Phased Implementation would be the most disruptive to the community, traffic, and transit service during the conversion of BRT to Metrorail because of the extended construction periods associated with each of the modes, followed by the conversion period.
- Phased Implementation would provide all the long-term benefits of Metrorail described above.

Alternatives Considered in the Supplemental Draft EIS

Based on public and agency coordination after the completion of the Draft EIS and after an LPA was selected, DRPT and WMATA identified a series of modifications to the project to resolve outstanding design issues, reduce environmental and community impacts, and allow for construction of the project in two phases. The Supplemental Draft EIS was prepared to assist decision-makers and the public in understanding the effects of the proposed modifications to the selected LPA. A comparative evaluation was presented for the following alternatives:

Supplemental Draft EIS No Build Alternative

- The No Build Alternative for the Supplemental Draft EIS was similar to the No Build Alternative defined in the Draft EIS but updated to reflect current conditions.

- The alternative included existing transportation infrastructure and services, as well as improvements included in the region's constrained long-range plan and planned to be implemented by 2025.
- The No Build Alternative provided a baseline for comparison against which the other alternatives were evaluated.

Supplemental Draft EIS Metrorail Alternative

- This alternative was the Metrorail Alternative evaluated in the Draft EIS and originally selected as the LPA (with Alignment T6 through Tysons Corner and a new S&I Yard at Site 15).
- The alternative would generally follow an alignment between the Metrorail Orange Line near West Falls Church Station and Route 772 in Loudoun County, using the median of the Dulles Connector Road, the DIAAH, and the Dulles Greenway. It would include 11 new stations and ancillary facilities, such as a new Metrorail S&I Yard, traction power substations, tie-breaker stations, and stormwater management ponds.
- The Metrorail Alternative was included in the Supplemental Draft EIS to facilitate understanding of the changes in effects associated with the proposed modifications to the LPA.

Supplemental Draft EIS Locally Preferred Alternative

The primary difference between the Supplemental Draft EIS Metrorail Alternative and the proposed LPA is that the proposed LPA would be implemented in two phases – the Wiehle Avenue Extension (originally called LPA Phase 1) and the full LPA.

The Supplemental Draft EIS addressed proposed design modifications to the selected Locally Preferred Alternative, including implementation of the project in two phases.

Supplemental Draft EIS Wiehle Avenue Extension

- For the Wiehle Avenue Extension, Metrorail would be constructed from the Metrorail Orange Line through Tysons Corner to Wiehle Avenue, with express bus service in the western portion of the corridor until rail service could be extended.
- The Wiehle Avenue Extension would be similar to the Metrorail Alternative in terms of alignment, stations, facilities, and operating characteristics but would have an interim end-of-line station at Wiehle Avenue.
- The Wiehle Avenue Extension would include improvements at the West Falls Church S&I Yard to accommodate the extension.
- Alignment plans and profiles were adjusted for a variety of purposes including reducing potential noise impacts, visual impacts, costs, and improving operational efficiency.
- Design modifications of station site plans and ancillary facilities addressed operational changes to respond to concerns of local jurisdictions and landowners.

The potential benefits and effects of the full LPA under the Supplemental Draft EIS were similar to the Metrorail Alternative from the June 2002 Draft EIS.

Supplemental Draft EIS Proposed Full LPA

- The proposed full LPA would be similar to the Metrorail Alternative in terms of alignment, stations, facilities, and operating characteristics and would continue west of Wiehle Avenue to Route 772.
- Alignment plans and profiles for the full LPA were adjusted for a variety of purposes including reducing potential effects on historic resources, noise impacts, visual impacts, costs, and improving operational efficiency.
- Design modifications of station site plans and ancillary facilities addressed operational changes to respond to concerns of local jurisdictions and landowners.

Revisions to the Locally Preferred Alternative have been approved by the Commonwealth Transportation Board and the Washington Metropolitan Area Transit Authority Board of Directors.



Evaluation of alternatives in the Supplemental Draft EIS showed that many of the benefits and potential effects of the proposed LPA were similar to those presented for the Metrorail Alternative in the Draft EIS. The proposed LPA would provide a greater degree of improvement in Dulles Corridor transit services than the No Build Alternative, and overall would provide similar support for future development in the Dulles Corridor to the Metrorail Alternative. Relative to the Metrorail Alternative, the design modifications for the LPA would result in slightly higher ridership, reduced visual impacts at the eastern end of the corridor, and an increase in impacts on water resources in the western end of the corridor. The full LPA would provide higher transportation and economic development benefits than the Wiehle Avenue Extension, and this first phase of the project would not be consistent with future land use designations or future land development patterns west of Wiehle Avenue. Although implementation of more express bus service in the western end of the corridor for the Wiehle Avenue Extension would have minimal physical effects, this service would also result in fewer transportation and development benefits than the full LPA.

Based on the analysis contained in the Supplemental Draft EIS, public comments received on the document, and agency coordination, the CTB approved the revision of the LPA in March 2004 to incorporate the elements required for phased construction and the design refinements outlined in the Supplemental Draft EIS and recommended in the Public Hearings Report. In April 2004 the WMATA Board also approved the revision of the LPA as outlined in the Supplemental Draft EIS and recommended in the Public Hearings Report.

Alternatives Considered in the Final EIS

The Final EIS includes the evaluation of the No Build Alternative and the LPA, which would be implemented in two phases.

The Final EIS was developed to respond to comments and issues raised during the circulation of the Draft EIS and the Supplemental Draft EIS and to provide more detailed information on the design of proposed mitigation measures for unavoidable impacts associated with the project. The Final EIS presents an evaluation of the following alternatives:

Final EIS No Build Alternative

- The No Build Alternative for the Final EIS is similar to the No Build Alternative defined in the Supplemental Draft EIS but updated to reflect current conditions.
- The alternative includes existing transportation infrastructure and services, as well as improvements included in the region's constrained long-range plan and planned to be implemented by 2025.
- The No Build Alternative provides a baseline for comparison against which the other alternatives were evaluated.

Final EIS Locally Preferred Alternative

The LPA for the Final EIS generally follows an alignment between the Metrorail Orange Line near the West Falls Church Station and Route 772 in Loudoun County, using the median of the Dulles Connector Road, the DIAAH, and the Dulles Greenway. The alignment diverges from these routes to serve Tysons Corner and Dulles Airport. The LPA would include 11 new stations, as well as ancillary facilities, such as a new Metrorail S&I Yard on Dulles Airport property, traction power substations, tie-breaker stations, and stormwater management ponds. The LPA would be implemented in two phases – the Wiehle Avenue Extension and the full LPA.

Final EIS Wiehle Avenue Extension

- Initially, Metrorail service would be provided from the existing Orange Line near West Falls Church through Tysons Corner to Wiehle Avenue (the Wiehle Avenue Extension). Express bus service would be provided between Wiehle Avenue and the western portion of the corridor until Metrorail is extended to Route 772.
- It is anticipated that the Wiehle Avenue Extension would begin operations in 2011.

Final EIS Full LPA

- During the second phase of construction, Metrorail service would be extended west of Wiehle Avenue to Dulles Airport and Loudoun County.
- The full LPA is expected to begin operations by 2015.

Potential positive effects include:

- *Air quality benefits*
- *Enhanced mobility*
- *Reinforcement of land use patterns*

The following table summarizes the characteristics of the alternatives evaluated in the Final EIS.

Characteristics of Alternatives Evaluated in the Final EIS

		Locally Preferred Alternative		
Characteristics	***No Build Alternative (2025)***	***Wiehle Avenue Extension Opening Year (2011)***	***Wiehle Avenue Extension (2025)***	***Full LPA (2025)***
New Metrorail Line	–	11.6 miles	11.6 miles	23.1 miles
New Metrorail Stations	–	5	5	11
Yard Facilities	–	Improvements to West Falls Church S&I Yard	Improvements to West Falls Church S&I Yard	Site Y15 and Improvements to West Falls Church S&I Yard
Ancillary Facilities	–	11 substations, 4 tie-breaker stations, 11 stormwater facilities	11 substations, 4 tie-breaker stations, 11 stormwater facilities	21 substations, 7 tie-breaker stations, 24 stormwater facilities
Metrorail Operating Characteristics	7 minute peak period service	7 minute peak period service	7 minute peak period service	7 minute peak period service
	12 minute off- peak period service	12 minute off- peak period service	12 minute off- peak period service	12 minute off- peak period service
Capacity and Reliability Improvements to Metrorail System	8-car train operations, line reconfiguration, longer headways	No improvements beyond those included in the No Build Alternative	No improvements beyond those included in the No Build Alternative	No improvements beyond those included in the No Build Alternative
Express Bus Service	Fairfax and Loudoun Counties planned transit improvements (Express Bus) in the Dulles Corridor to West Falls Church Station	More Express Bus Service provided between Wiehle Avenue and points west	More Express Bus Service provided between Wiehle Avenue and points west	No Express Bus Service provided
Highway	Existing highways and planned highway improvements through 2025 included in the 2003 update of the MWCOG constrained long-range transportation plan (CLRP)	No improvements beyond those included in CLRP	No improvements beyond those included in CLRP	No improvements beyond those included in CLRP

Characteristics	No Build Alternative (2025)	Locally Preferred Alternative		
		Wiehle Avenue Extension Opening Year (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
Other Bus Service	Existing Metrobus, Fairfax Connector and Loudoun County Bus Services; marginal increases in local transit service to meet demand	Bus Service improvements provided	Bus Service improvements provided	Bus Service improvements provided

Environmental Effects of Alternatives Evaluated in the Final EIS

Adjacent communities would benefit from improved mobility and accessibility, but could experience increases in traffic volumes.

The alternatives evaluated in the Final EIS have been assessed for their potential effects on the existing social, environmental, economic, and transportation conditions in the Dulles Corridor. The social and environmental effects of the alternatives are anticipated to be minor, especially given the length and complexity of the project, because most of the Metrorail extension would occur within the medians of the Dulles Connector Road, DIAAH, and Dulles Greenway. During the preparation of the Final EIS, agency coordination continued to address potential effects of design refinements and appropriate mitigation.

In comparison to the No Build Alternative, the full LPA is expected to have positive effects on commercial and residential properties located near transit stations, and contribute to more sustainable and transit-supportive economic development by focusing higher-density residential and commercial land uses around the transit stations, as a result of the investment in the Metrorail extension.

The design of facilities will incorporate mitigation measures to offset unavoidable adverse impacts to the transportation, social, economic and environmental context.

The full LPA and its first phase, the Wiehle Avenue Extension, would result in changes to traffic conditions as people change their travel patterns to access the new transit stations, affecting some of the neighborhoods that surround certain stations. Although several neighborhoods would experience such traffic-related effects, these neighborhoods would also directly benefit from the mobility and accessibility that the transit improvements would bring. Neighborhoods surrounding the Tysons East, Tysons West, Wiehle Avenue, Reston Parkway, and Herndon-Monroe stations would be most affected.

Secondary effects related to increased development at transit stations as a result of the LPA could include effects on neighborhoods, community services, visual and aesthetic conditions, cultural resources, parks and recreation, natural resources, and traffic conditions. The LPA would have a low impact on the cumulative effects resulting from other transportation and local improvement projects, such as the new runways proposed at Dulles Airport, being implemented at the same time.

IMPLEMENTING THE PROJECT

Funding Needs and Strategy

Capital Costs

The Federal Transit Administration, the Commonwealth of Virginia, Fairfax and Loudoun counties, and Metropolitan Washington Airports Authority would provide capital funding for the project as summarized in the table below:

Capital Costs and Funding Shares

	Wiehle Avenue Extension 11.6 miles by year 2011	*Full LPA 23.1 miles by year 2015*
Costs in year of expenditure $	***$1.5 billion***	***$3.5 billion***
Federal Sources		
Federal Transit Administration	***50.0 %***	***50.0 %***
Non-Federal Sources		
Commonwealth of Virginia	***25.0 %***	***25.0 %***
Fairfax County	***25.0 %***	***16.1 %***
Loudoun County		***4.8 %***
Metropolitan Washington Airports Authority		***4.1 %***

As the project sponsor and federal grant recipient, DRPT will be applying for New Starts funding from FTA at 50 percent of the capital costs.

Federal funding has been requested for 50 percent of the capital costs for the Wiehle Avenue Extension.

The anticipated capital funding sources of the funding partners are:

- Federal Transit Administration (federal New Starts funds);
- Commonwealth of Virginia (Virginia Transportation Act of 2000, Dulles Toll Road Revenues and future transportation appropriations);
- Fairfax County (Transportation Improvement District Revenues and Fairfax County General Obligation Bonds); and
- Loudoun County (Business and Professional Occupancy License Tax Revenues).
- MWAA (Passenger Facility Charges).

Operating and Maintenance Costs

WMATA will be the operator of the project. Opening year operating and maintenance (O&M) costs were estimated for the No Build Alternative and for the project in its two phases. The O&M cost estimates in the tables below are the increase in costs of the project over the costs of the No Build Alternative in current 2004 dollars and in year-of-expenditure (YOE) dollars.

Implementation of the Locally Preferred Alternative will result in an increase in Metrorail system operations and maintenance costs.

Incremental Annual Operating and Maintenance Costs

	Wiehle Avenue Extension 11.6 miles by year 2011	**Full LPA 23.1 miles by year 2015**
Costs in 2004 $	**$39.9 million**	**$71.7 million**
Costs in opening year $	**$47.5 million**	**$93.9 million**

Operating revenues would come from a number of sources, including passenger fares, parking, joint development, advertising, concessions, and grants. An operating subsidy is required from each WMATA Compact jurisdiction to fund the difference between project operating and maintenance costs and project revenues.

COORDINATION OPPORTUNITIES

The Metrorail Extension as the Locally Preferred Alternative has been developed and advanced by a partnership of federal, state and local entities as the result of an open and collaborative public discussion of the corridor, its future needs, and potential solutions to transportation demands. The preparation of the Draft EIS, Supplemental Draft EIS, and the Final EIS was guided by a proactive, responsive public outreach and agency coordination program, with participation from thousands of people with diverse

interests from all parts of the corridor, as well as representatives from over 75 federal, regional, state, and local agencies.



Public Hearings on the June 2002 Draft EIS and October 2003 Supplemental Draft EIS provided additional opportunities for interested parties to review and comment proposed improvements.

To accommodate various degrees of participation and support the decision process, a broad range of outreach techniques was used to define the project purpose and need, design solutions, and assess potential consequences of different actions in terms of transportation, social, economic, and environmental considerations. Comments received focused mainly on the need for a rapid transit investment in the corridor, and how improvements should be designed to avoid and minimize potential effects of construction and operation on adjacent properties and resources.

In 2002, the Draft EIS was circulated for review by elected officials, government agencies, and the public, and was made available at libraries, information centers, and community centers prior to the July 2002 public hearings. The Supplemental Draft EIS was circulated in a similar manner to the Draft EIS, and public hearings were held in December 2003. Comments received on the Draft EIS and the Supplemental Draft EIS influenced the development of the project and are addressed in the Final EIS.

FUTURE ACTIONS

Environmental Process

The environmental process for the project is nearing a conclusion. The notification that the Final EIS is available and is circulating has appeared in the Federal Register. The following actions remain:

- Circulation of the Final EIS for 30 days among officials, agencies, stakeholders; and
- FTA preparation and issuance of its Record of Decision (ROD) which describes the basis of FTA's decision, alternatives considered, and mitigation measures.

Preliminary Engineering

The project continues to move forward during the new phase of preliminary engineering. Preliminary engineering is more than design and will entail the following actions:

- DRPT and WMATA coordination with agencies, property owners and stakeholders to address outstanding issues of facility design and mitigation;
- DRPT coordination with resource and regulatory agencies regarding mitigation of adverse effects and permit applications that will support construction;
- Fairfax County initiative for an alternative site plan of the Tysons West Station facilities;
- Fairfax County initiative for joint development at the north side facilities of Wiehle Avenue Station;
- WMATA technical management of preliminary engineering design and of contract documents for the design-build phase;
- DRPT preparation of a right-of-way acquisition plan and negotiation of inter-agency and utility agreements for the construction, acquisition, and operation of the project;
- DRPT preparation of the final financial plan for the Wiehle Avenue Extension, including capital and operating funding commitments;

- DRPT request for FTA approval to enter the final design phase of the Wiehle Avenue Extension;
- DRPT application to FTA for a Full Funding Grant Agreement for the Wiehle Avenue Extension; and
- Coordination for the financial planning of the remaining 11.5 miles of the full LPA.

Public Outreach Efforts

Public outreach efforts will continue throughout preliminary engineering and final design. The focus of these outreach activities will be to keep the public, stakeholders, and affected property owners informed about the project's progress.

SUMMARY OF THE LOCALLY PREFERRED ALTERNATIVE

The Final EIS provides detailed analysis of the No Build Alternative, the full LPA and its first phase, the Wiehle Avenue Extension. For easy comparison, the following table highlights the results of those analyses.

Summary of the Locally Preferred Alternative

Measures	No Build Alternative (2025)	Metrorail Extension Project		
		Wiehle Avenue Extension (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
Transit Operations				
Number of Metrorail Stations	Base	5	5	11
Opening Year Ridership (Average Weekday Riders)	Base	62,800	Not Applicable	Not Applicable
Opening Year New Trips	Base	29,100	Not Applicable	Not Applicable
Forecast Year Total Ridership (Average Weekday Riders)	Base	Not Applicable	73,300	91,200
Forecast Year New Trips	Base	Not Applicable	34,400	47,800
Costs				
Capital Costs (Year of Expenditure)	$0	$1.5B	$1.5B	$3.5B
Capital Funding Sources	Not Applicable	50% Federal 50% Non Federal	50% Federal 50% Non Federal	50% Federal 50% Non Federal
Incremental Annual O&M Costs (YOE)	Base	$47.5M	$67.6M	$117.9M
Social Effects				
Consistent with Comprehensive Plans	No	Partially	Partially	Yes
Residential Displacements (No.)	0	0	0	0
Commercial Displacements (No.)	0	3	3	3
Residential Properties Partially Acquired (No.)	0	11	11	11
Shifts in Population and Employment	Unlikely	Likely	Likely	Likely
Overall Visual Impacts	Continues Current Conditions	Minimal	Minimal	Minimal
Cultural Resources (Adverse Effect)	0	0	0	1
Section 4(f) Direct Use (No.)	0	0	0	1
Environmental Effects				
Streams Impacts (Linear feet)	0	0	0	245
Wetlands Impacts (Acres)	0	0	0	5.2
Floodplains Impacts (No. of 100-year crossings)	0	3	3	5
Air Quality – NAAQS Violations	None	None	None	None
Noise Receptors Above FTA Criteria Before Mitigation	0	184	184	183
Vibration Receptors Above FTA Criteria Before Mitigation	0	7	7	7
Hazardous Materials Generators Potentially Affected	0	4	4	11
Economic Effects				
Corridor Development Potential	304,638,650 SF	Not Applicable	+5%	+13%
Corridor Employment	403,857	+3%	+6%	+16%

Measures	No Build Alternative (2025)	Metrorail Extension Project		
		Wiehle Avenue Extension (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
Property Values Near Station Areas	Continues Current Conditions	Likely to Increase	Likely to Increase	Likely to Increase
Transportation Effects				
Transit Capacity (at Tysons Central 123 Station)	400	7,680	8,640	8,640
Transit Mode Share (at Tysons Corner)				
- Home Based Work Trips Attracted to Corridor	8.4%	11.9%	11.6%	12.6%
- Home Based Work Trips Produced in Corridor	25.9%	33.5%	34.3%	34.4%
Number of intersections at LOS F (pm peak)	16	3	6	16
Existing and Planned Parking Spaces at Park-and-Ride Stations	4,800	5,600	6,300	14,350

Below is a summary of major mitigation measures. A more comprehensive listing of proposed mitigation measures is presented in Chapter 2 of the FEIS.

Mitigation of Effects

Area	Summary of Mitigation Measures
Land Use and Socioeconomics	Assist Fairfax and Loudoun counties and the Town of Herndon to pursue transit-oriented development and joint development opportunities. Fairfax County will incorporate the park-and-ride requirements (500 spaces) for the Tysons West station into the Fairfax County Comprehensive Plan.
Property Acquisition and Displacements	All property acquisitions would be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act, as amended.
Visual and Aesthetic Conditions	Minimize the potential visual and aesthetic effects through sensitive design of the Metrorail facilities and landscaping.
Cultural Resources	Preserve and enhance the historic design features of the Dulles Airport Historic District through appropriate design and activities to increase public awareness of the district's unique historic characteristics.
Parklands	Design the proposed Metrorail overpass in the W&OD Railroad Regional Park according to the ***NVRPA Guideline for the Development of W&OD Trail Bridge Crossings***. Maintain public use of the W&OD Railroad Regional Park and minimize disruption of Pimmit Run Stream Valley Park, Scotts Run Stream Valley Park, and Difficult Run Stream Valley Park during construction.
Safety and Security	Conform WMATA's Safety and Security Program with Dulles Airport measures and develop mutual aid agreements with local jurisdictions. Where the alignment traverses airport property, there would be no tunnel exits of any kind in the secure zone of the airport.
Water Resources	Plant riparian buffers to protect affected surface waters and water quality, provide compensatory mitigation for unavoidable wetlands impacts associated with the S&I Yard on Dulles Airport property and the Route 28 station, and avoid changes in floodplain elevations(s) of more than 1 foot. Coordinate with Fairfax and Loudoun counties to ensure consistency with local stream protection policies and coordinate with FAA to control potentially hazardous wildlife interference of airport operations.
Noise	Install parapet and trackside noise barriers near sensitive areas, reduce noise impacts of the improved West Falls Church Yard facilities, and comply with WMATA, FTA, and local regulations and policies. Analyze reflective highway noise impacts to the Hallcrest Heights residential community during preliminary engineering and/or final design.
Vibration	Utilize dampening materials or devices under switches and crossovers near sensitive receptors.
Transportation Effects	Construct roadway improvements, such as new turn and acceleration lanes, to increase access to the Tysons Central 123, Wiehle Avenue, Route 606 stations, and the Yard Site 15 facilities and to mitigate traffic impacts at the Tysons East, Wiehle Avenue, Reston Parkway, Herndon-Monroe, and Route 606 stations.
Construction Effects	Prepare plans for erosion and sediment control and maintenance of traffic, and use applicable Best Management Practices. Comply and coordinate with relevant local, state and federal regulations and agencies to address construction-related activities. Communicate and coordinate with affected local businesses and communities.

For More Information:

For more information on the Dulles Corridor Rapid Transit Project, please call the project hotline at 1-888-566-7245 TDD 202-638-3780 or view the project website at www.dullestransit.com.

The Final EIS is available for review at the libraries and community centers noted below. The Executive Summary of the Final EIS may be viewed on the project web site www.dullestransit.com.

Arlington Central Library
Ashburn Farm Association
Broadlands Visitors Center
Dolley Madison Community Library
Eastern Loudoun Regional Library
Fairfax City Regional Library, Virginia Room
Falls Church Community Center
Falls Church Library
Great Falls Community Library
Greater Reston Chamber of Commerce
Herndon Community Center
Herndon Fortnightly Library
Lovettsville Library
McLean Community Center
Middleburg Library
Patrick Henry Community Library
Purcellville Library
Reston Community Center
Reston Regional Library
Rust Library
Sterling Library
Thomas Balch Library for Local History
Tysons-Pimmit Regional Library
Vienna Community Center

FEDERAL TRANSIT ADMINISTRATION • VIRGINIA DEPARTMENT OF RAIL AND PUBLIC TRANSPORTATION
WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY • in cooperation with the FEDERAL AVIATION ADMINISTRATION

Dulles Corridor Rapid Transit Project
Final Environmental Impact Statement and Section 4(f) Evaluation






Volume I - Final Environmental Impact Statement and Section 4(f) Evaluation

- Abstract
- Signature Page
- Table of Contents
- Executive Summary
- Chapter 1- Purpose and Need for the Proposed Action
- Chapter 2- Alternatives Considered
- Chapter 3- Social Effects
- Chapter 4- Environmental Effects
- Chapter 5- Economic Effects
- Chapter 6- Transportation Effects
- Chapter 7- Section 4(f) Evaluation
- Chapter 8- Financial Analysis
- Chapter 9- Secondary and Cumulative Effects
- Chapter 10- Evaluation of Alternatives Carried Forward
- Chapter 11- Public Coordination and Comments

Dulles Corridor Rapid Transit Project

Home

U.S. DEPARTMENT OF TRANSPORTATION (US DOT)
FEDERAL TRANSIT ADMINISTRATION (FTA)
VIRGINIA DEPARTMENT OF RAIL AND PUBLIC TRANSPORTATION (DRPT)
AND
WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY (WMATA)

DULLES CORRIDOR RAPID TRANSIT PROJECT
FINAL ENVIRONMENTAL IMPACT STATEMENT

ABSTRACT

This Final Environmental Impact Statement (EIS), describes modifications that have been made to the Dulles Corridor Rapid Transit Project since the publication of the *Dulles Corridor Rapid Transit Project Draft Environmental Impact Statement and Section 4(f) Evaluation* (Draft EIS) in June 2002, the selection of the Locally Preferred Alternative (LPA) in December 2002, and the publication of the *Dulles Corridor Rapid Transit Project Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation* (Supplemental Draft EIS) in October 2003. The Final EIS has been prepared to identify the improvements of the LPA, document the basis for the decision, and commit to mitigation measures that will offset adverse effects. A comparative evaluation of the No Build Alternative and LPA and associated costs is also included, as are public comments received on the Draft EIS and Supplemental Draft EIS as well as responses to those comments.

The Dulles Corridor Rapid Transit Project is proposed to improve mobility and transit accessibility in the rapidly developing and congested Dulles Corridor. The limits of the project extend from the vicinity of the West Falls Church Metrorail Station in Fairfax County to the vicinity of Route 772 in Loudoun County. The corridor is bounded by Routes 193 and 7 on the north and US 50 on the south. The project corridor is approximately 23.1 miles in length. The LPA evaluated in the Final EIS would operate the entire length of the project corridor, from West Falls Church to Route 772. The project is proposed in two phases: Wiehle Avenue Extension and the full LPA.

The Wiehle Avenue Extension would have an alignment length of approximately 11.6 miles and would operate from the Orange Line near the West Falls Church Metrorail Station to Wiehle Avenue. It also provides express bus service between Wiehle Avenue and Loudoun County. This phase of the LPA has an opening year of 2011 with the final phase, from Wiehle Avenue to Route 772, opening in 2015.

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This Final EIS is available for review. Following the close of the circulation period indicated in the Notice of Availability, FTA will issue a Record of Decision (ROD). The ROD will identify the action to be undertaken, alternatives considered, environmental findings resulting from the proposed action, and mitigation commitments associated with project implementation.

TABLE OF CONTENTS

VOLUME I

S.0 EXECUTIVE SUMMARY S-1

1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION 1-1

1.1 OVERVIEW 1-2

1.2 PROPOSED ACTION 1-5

1.3 PLANNING CONTEXT 1-10
1.3.1 Previous Studies and Plans 1-10
1.3.2 Future Plans 1-12
1.3.3 Related Studies 1-15
1.3.4 Environmental Review and Project Development Process 1-16

1.4 DESCRIPTION OF THE REGION AND CORRIDOR 1-18
1.4.1 Region and Corridor Boundaries 1-21
1.4.2 Corridor Activity Centers 1-21
1.4.3 Corridor Transportation System 1-29
1.4.4 Travel Patterns 1-33

1.5 NEED FOR IMPROVEMENTS 1-37
1.5.1 Anticipated Population and Employment Growth 1-37
1.5.2 Future Land Use and Development Plans 1-40
1.5.3 Increased Travel Demand 1-40
1.5.4 Limitations of the Existing Roadway System 1-41
1.5.5 Limitations of the Existing Transit System 1-42
1.5.6 Air Quality 1-43

1.6 GOALS AND OBJECTIVES 1-43

2.0 ALTERNATIVES CONSIDERED 2-1

2.1 ALTERNATIVES PREVIOUSLY CONSIDERED 2-1

2.2 DRAFT EIS ALTERNATIVES AND RECOMMENDATIONS 2-6

2.3 SUPPLEMENTAL DRAFT EIS ALTERNATIVES AND RECOMMENDATIONS ... 2-8

2.4 FINAL EIS ALTERNATIVES 2-10
2.4.1 No Build Alternative 2-10
2.4.2 Locally Preferred Alternative 2-22
2.4.3 Comparative Evaluation of Alternatives 2-47

3.0 SOCIAL EFFECTS.....3-1

3.1 LAND USE AND SOCIO-ECONOMICS.....3-2
3.1.1 Methodology.....3-2
3.1.2 Existing Conditions and Future Projections.....3-3
3.1.3 Long-Term Effects.....3-15
3.1.4 Construction Effects.....3-19
3.1.5 Mitigation.....3-20

3.2 NEIGHBORHOOD, COMMUNITY SERVICES AND COMMUNITY COHESION IMPACTS.....3-20
3.2.1 Methodology.....3-20
3.2.2 Existing Conditions.....3-22
3.2.3 Long-Term Effects.....3-33
3.2.4 Construction Effects.....3-39
3.2.5 Mitigation.....3-39

3.3 PROPERTY ACQUISITION AND DISPLACEMENT.....3-39
3.3.1 Legal and Regulatory Context.....3-40
3.3.2 Methodology.....3-40
3.3.3 Long-Term Effects.....3-40
3.3.4 Construction Effects.....3-42
3.3.5 Mitigation.....3-43

3.4 VISUAL AND AESTHETIC CONDITIONS.....3-43
3.4.1 Methodology.....3-43
3.4.2 Existing Conditions.....3-43
3.4.3 Long-Term Effects.....3-60
3.4.4 Construction Effects.....3-63
3.4.5 Mitigation.....3-64

3.5 CULTURAL RESOURCES.....3-64
3.5.1 Legal and Regulatory Context.....3-64
3.5.2 Methodology.....3-65
3.5.3 Existing Conditions.....3-66
3.5.4 Long-Term Effects.....3-73
3.5.5 Construction Effects.....3-77
3.5.6 Mitigation.....3-77

3.6 PARKLANDS AND RECREATION AREAS.....3-78
3.6.1 Legal and Regulatory Context.....3-78
3.6.2 Methodology.....3-78
3.6.3 Existing Conditions.....3-79

3.6.4 Long-Term Effects 3-85
3.6.5 Construction Effects 3-87
3.6.6 Mitigation 3-87

3.7 SAFETY AND SECURITY 3-88
3.7.1 Legal and Regulatory Context 3-88
3.7.2 Methodology 3-88
3.7.3 Existing Conditions 3-88
3.7.4 Long-Term Effects 3-91
3.7.5 Construction Effects 3-93
3.7.6 Mitigation 3-94

3.8 ENVIRONMENTAL JUSTICE 3-94
3.8.1 Legal and Regulatory Context 3-94
3.8.2 Methodology 3-94
3.8.3 Existing Conditions 3-95
3.8.4 Long-Term Effects 3-99
3.8.5 Construction Effects 3-101
3.8.6 Mitigation 3-102
3.8.7 Public Involvement Outreach 3-102

4.0 ENVIRONMENTAL EFFECTS 4-1

4.1 GEOLOGIC RESOURCES 4-2
4.1.1 Legal and Regulatory Context 4-2
4.1.2 Methodology 4-3
4.1.3 Existing Conditions 4-3
4.1.4 Long-Term Effects 4-15
4.1.5 Construction Effects 4-16
4.1.6 Mitigation 4-17

4.2 WATER RESOURCES 4-17
4.2.1 Legal and Regulatory Context 4-17
4.2.2 Methodology 4-18
4.2.3 Existing Conditions 4-19
4.2.4 Long-Term Effects 4-47
4.2.5 Construction Effects 4-53
4.2.6 Mitigation 4-54

4.3 AQUATIC BIOTA AND HABITAT 4-59
4.3.1 Legal and Regulatory Context 4-59
4.3.2 Methodology 4-60
4.3.3 Existing Conditions 4-60
4.3.4 Long-Term Effects 4-62

4.3.5 Construction Effects 4-63
4.3.6 Mitigation 4-63

4.4 TERRESTRIAL BIOTA AND HABITAT 4-63
4.4.1 Legal and Regulatory Context 4-64
4.4.2 Methodology 4-64
4.4.3 Existing Conditions 4-64
4.4.4 Long-Term Effects 4-66
4.4.5 Construction Effects 4-67
4.4.6 Mitigation 4-68

4.5 RARE, THREATENED, AND ENDANGERED SPECIES 4-68
4.5.1 Legal and Regulatory Context 4-68
4.5.2 Methodology 4-68
4.5.3 Existing Conditions 4-69
4.5.4 Long-Term Effects 4-70
4.5.5 Construction Effects 4-73
4.5.6 Mitigation 4-73

4.6 AIR QUALITY 4-74
4.6.1 Legal and Regulatory Context 4-74
4.6.2 Methodology 4-76
4.6.3 Existing Conditions 4-81
4.6.4 Long-Term Effects 4-82
4.6.5 Construction Effects 4-87
4.6.6 Mitigation 4-87

4.7 NOISE 4-88
4.7.1 Human Perception of Noise 4-88
4.7.2 Evaluation Criteria 4-88
4.7.3 Methodology 4-94
4.7.4 Existing Conditions 4-94
4.7.5 Long-Term Effects 4-97
4.7.6 Construction Effects 4-103
4.7.7 Mitigation 4-104

4.8 VIBRATION 4-105
4.8.1 Human Perception of Vibration 4-111
4.8.2 Evaluation Criteria 4-111
4.8.3 Methodology 4-116
4.8.4 Existing Conditions 4-117
4.8.5 Long-Term Effects 4-117
4.8.6 Construction Effects 4-124
4.8.7 Mitigation 4-125

4.9 HAZARDOUS AND CONTAMINATED MATERIALS 4-125
4.9.1 Methodology 4-125
4.9.2 Existing Conditions 4-127
4.9.3 Long-Term Effects 4-131
4.9.4 Construction Effects 4-133
4.9.5 Mitigation 4-133

4.10 ENERGY 4-134
4.10.1 Existing Conditions 4-134
4.10.2 Long-Term Effects 4-134
4.10.3 Construction Effects 4-135
4.10.4 Mitigation 4-136

5.0 ECONOMIC EFFECTS 5-1

5.1 ECONOMIC CONDITIONS 5-1
5.1.1 Output, Earnings, and Employment Effects from Capital Expenditures 5-3
5.1.2 Output, Earnings, and Employment Effects from Operations and Maintenance Expenditures 5-8
5.1.3 Tax Revenue Effects 5-10

5.2 STATION AREA DEVELOPMENT 5-12
5.2.1 Station Area Planning and Design Guidelines 5-12
5.2.2 Station Area Characteristics and Development Potential 5-16
5.2.3 Mitigation 5-21

5.3 DEVELOPMENT EFFECTS 5-21
5.3.1 Corridor Development Projections 5-21
5.3.2 Joint Development Opportunities 5-23

6.0 TRANSPORTATION EFFECTS 6-1

6.1 TRANSIT EFFECTS 6-1
6.1.1 Methodology 6-2
6.1.2 Existing and Planned Transit System 6-3
6.1.3 Long-Term Effects 6-8
6.1.4 Construction Effects 6-19
6.1.5 Mitigation 6-20

6.2 EFFECTS ON ROADWAYS 6-20
6.2.1 Methodology 6-20
6.2.2 Existing and Planned Roadway System 6-20
6.2.3 Long-Term Effects 6-24
6.2.4 Mitigation 6-35

6.3 EFFECTS ON OTHER TRANSPORTATION FACILITIES AND SERVICES 6-37
6.3.1 Existing and Planned Facilities and Services 6-37
6.3.2 Long-Term Effects 6-39
6.3.3 Construction Effects 6-41
6.3.4 Mitigation 6-41

7.0 SECTION 4(f) EVALUATION 7-1

7.1 LEGAL AND REGULATORY CONTEXT 7-1
7.1.1 Section 4(f) of the U.S. Department of Transportation Act 7-1
7.1.2 Section 6(f) of the Land and Water Conservation Fund Act 7-2

7.2 PROPOSED ACTION 7-2

7.3 EXISTING SECTION 4(f)/6(f) RESOURCES 7-5
7.3.1 Officially Designated Public Parklands, Recreation Areas, Wildlife and Waterfowl Refuges Identified 7-5
7.3.2 Archaeological Resources 7-12
7.3.3 Historic Architectural Resources 7-12

7.4 USE OF SECTION 4(f)/6(f) RESOURCES 7-15
7.4.1 No Build Alternative 7-15
7.4.2 Wiehle Avenue Extension 7-15
7.4.3 Full LPA 7-17

7.5 AVOIDANCE ALTERNATIVES 7-23

7.6 MEASURES TO MINIMIZE HARM 7-24

7.7 AGENCY COORDINATION 7-25

7.8 CONCLUSION 7-26

8.0 FINANCIAL ANALYSIS 8-1

8.1 CAPITAL FUNDING STRATEGY 8-2
8.1.1 Capital Cost Estimate 8-2
8.1.2 Wiehle Avenue Extension Capital Funding Strategy 8-5
8.1.3 Full LPA – Capital Funding Strategy 8-8
8.1.4 Funding Secured to Date 8-11
8.1.5 Capital Financing Approach 8-11

8.2 OPERATING FUNDING STRATEGY 8-12
8.2.1 Operating and Maintenance Costs 8-13
8.2.2 Operating Revenues 8-15
8.2.3 Passenger Fare Revenues 8-15
8.2.4 Other System Revenues 8-15

8.3 RISKS AND UNCERTAINTIES 8-17
8.3.1 Construction Cost and Revenue Risk 8-17
8.3.2 Operating Cost and Revenue Risk 8-18
8.3.3 Risk Assessment and Mitigation 8-18

9.0 SECONDARY AND CUMULATIVE EFFECTS 9-1

9.1 GENERAL METHODOLOGY 9-2
9.1.1 Identify Sensitive Resources and Area of Effect 9-2
9.1.2 Identify Potential Sources of Effects 9-3
9.1.3 Identify Potential Effects 9-8

9.2 RESOURCE IDENTIFICATION 9-8

9.3 SECONDARY DEVELOPMENT EFFECTS 9-8
9.3.1 Long-Term Effects 9-9

9.4 CUMULATIVE EFFECTS 9-12
9.4.1 Long-Term Effects 9-12

9.5 MITIGATION 9-16

10.0 EVALUATION OF ALTERNATIVES CARRIED FORWARD 10-1

10.1 EVALUATION RELATIVE TO PROJECT GOALS AND OBJECTIVES 10-1
10.1.1 Goals 1 and 2: Improve Transportation Service and Increase Transit Ridership 10-6
10.1.2 Goal 3: Support Future Development 10-8
10.1.3 Goal 4: Support Environmental Quality 10-8
10.1.4 Goal 5: Provide Cost-Effective, Achievable Transportation Solutions 10-9
10.1.5 Goal 6: Serve Diverse Populations 10-10

10.2 NEW STARTS CRITERIA 10-11

11.0 PUBLIC COORDINATION AND COMMENTS 11-1

11.1 PUBLIC INVOLVEMENT 11-2
11.1.1 Public Outreach Activities and Information Exchange 11-2
11.1.2 Public Coordination Meetings and Public Hearings 11-4
11.1.3 Continuing Public Outreach Efforts 11-20

11.2 AGENCY COORDINATION 11-20
11.2.1 Early Agency Coordination and Scoping 11-21

11.3 COMMENTS AND RESPONSES 11-33
11.3.1 Draft EIS 11-33
11.3.2 Supplemental Draft EIS 11-36

INDEX OF TABLES

CHAPTER 1

1.3-1: Early Corridor Studies and Plans 1-12
1.3-2: Related Studies 1-15
1.4-1: Total Weekday Corridor-Related Travel 1-34
1.4-2: Total Weekday Corridor-Related Work Travel 1-34
1.4-3: Total Weekday Corridor-Related Work Travel by Transit 1-35
1.5-1: Population within the Region and the Dulles Corridor 1-38
1.5-2: Employment within the Region and the Dulles Corridor 1-39
1.6-1: Goals and Objectives 1-44

CHAPTER 2

2.1-1: Modes Considered 2-3
2.1-2: Alignments Considered (Metrorail Only) 2-3
2.1-3: Station Options Considered 2-5
2.1-4: Yard Locations Considered 2-5
2.1-5: Alternatives Considered 2-6
2.4-1: Alternatives Evaluated 2-48
2.4-2: Summary of Effects 2-49
2.4-3: Summary of Proposed Mitigation Measures 2-52

CHAPTER 3

3.1-1: Expected Growth in Regional and County Population 3-4

3.1-2: Expected Growth in Regional and County Households 3-5

3.1-3: Expected Growth in Regional Employment and Employment within Corridor Jurisdictions 3-5

3.1-4: Land Use Compatibility 3-16

3.2-1: Neighborhood Characteristics 3-29

3.2-2: Community Facilities and Services in Study Area 3-32

3.2-3: Summary of Long-Term Effects to Neighborhoods and Community Facilities 3-34

3.3-1: Acquisitions and Displacements 3-40

3.4-1: Visual Characteristics 3-59

3.4-2: Summary of Long-Term Visual Effects 3-60

3.5-1: Archaeological Resources Identified 3-72

3.5-2 Historic Architectural Resources Identified 3-73

3.5-3 Project Effects on Archaeological Resources 3-74

3.5-4 Project Effects on Architectural Resources 3-74

3.6-1 Parklands and Recreation Areas 3-79

3.6-2 Summary of Long-Term Effects on Parklands 3-85

3.7-1 Numbers of Crimes 3-90

3.8-1 Census Blocks That Meet Environmental Justice Thresholds 3-96

3.8-2 Effects to Environmental Justice Communities 3-99

CHAPTER 4

4.1-1: Study Area Soils – Fairfax County 4-8

4.1-2: Study Area Soils – Loudoun County 4-9

4.1-3: Summary of Effects to Geologic Resources 4-15

4.2-1: Wetland Systems within the Study Area 4-31

4.2-2: Effects to Water Resources 4-48

4.2-3: Proposed Wetland Mitigation for the full LPA 4-56

4.3-1: Summary of Aquatic Biota and Habitat within the Dulles Corridor 4-61

4.4-1: Terrestrial Biota and Habitat Summary 4-65

4.6-1: National and Virginia Ambient Air Quality Standards 4-75

4.6-2: Intersections Modeled for Air Quality Impacts 4-76

4.6-3: 2003 Monitored Ambient Air Quality in the Region 4-81

4.6-4: Maximum Predicted 1-Hour CO Concentrations (in ppm) for No Build Alternative[1] at Modeled Intersections 4-83

4.6-5: Maximum Predicted 8-Hour CO Concentrations (in ppm) for No Build Alternative[1] at Modeled Intersections 4-83

4.6-6: Maximum Predicted 1-Hour CO Concentrations (in ppm) for the LPA[1] at Modeled Intersections 4-84

4.6-7: Maximum Predicted 8-Hour CO Concentrations (in ppm) for the LPA[1] at Modeled Intersections 4-85

4.7-2: FTA Noise Impacts Summary at Discrete Receptors Under Wiehle Avenue Extension and the Full LPA (dBA) 4-97

4.7-3: Number of FTA Noise Impacts Under the Wiehle Avenue Extension and the Full LPA 4-101

4.7-4: WMATA Noise Impact Summary at Discrete Receptors Under Wiehle Avenue Extension and the Full LPA (dBA) 4-101

4.7-5: Number of WMATA Noise Impacts Under the Wiehle Avenue Extension and the Full LPA 4-102

4.7-6: Recommended Location and Dimensions of Aerial Parapets and At-Grade Barriers 4-105

4.8-1: FTA Ground-Borne Vibration Impact Criteria for Annoyance 4-115

4.8-2: WMATA Criteria for Single Event Maximum Vibration and Ground-Borne Noise from Metrorail Operations 4-116

4.9-1: Environmental Sites of Potential Concern 4-127

4.9-2: Sites of Potential Concern Affected by Construction Activities 4-131

4.10-1: Direct Energy Consumed 4-135

4.10-2: Indirect Construction Energy Consumption for the Full LPA 4-136

CHAPTER 5

5.1-1: Summary of Capital Costs (in thousands, 2004 dollars) 5-3

5.1-2a: Summary of Funding Sources for the Wiehle Avenue Extension (in thousands, 2004 dollars) 5-4

5.1-2b: Summary of Funding Sources for the full LPA (in thousands, 2004 dollars) 5-5

5.1-3: Capital Costs Representing New Resources (in thousands, 2004 dollars) 5-5

5.1-4: Comparison of RIMS II Multipliers by Region 5-6

5.1-5a: Net Effects of Construction Activity Upon Fairfax and Loudoun Counties 5-7

5.1-5b: Net Effects of Construction Activity Upon the Commonwealth of Virginia 5-7

5.1-6a: Net Employment Impacts from Operations and Maintenance Activities 5-9

5.1-6b: Net Earnings Impacts from Operations and Maintenance Activities (in thousands, 2004 dollars) 5-9

5.1-7: Assessed Value of Properties Required for ROW and Associated Loss of base Tax Revenues (in thousands, 2004 dollars) 5-11

5.1-8: Assessed Value of Properties Required for ROW and Associated Loss of Special District Tax Revenues (in thousands, 2004 dollars) . 5-11

5.3-1: Potential Increase in Corridor Development by 2025 Compared to the No Build Alternative 5-22

CHAPTER 6

6.1-1: Summary of Primary Transit Services 6-3

6.1-2: Bus Transit Facilities in the Dulles Corridor 6-7

6.1-3: Average Weekday Transit Patronage Forecasts 6-9

6.1-4: Forecast Daily Station Boardings in Dulles Corridor 6-10

6.1-5: Transit Mode Share for Home-Based Work Trips (Trips Attracted to the Dulles Corridor) 6-11

6.1-6: Transit Mode Share for Home-Based Work Trips (Trips Produced in the Dulles Corridor) 6-11

6.1-7: Transit Travel Times for Select O/D Pairs in Minutes 6-12

6.1-8: Number of Daily Transit Trips Attracted to Corridor Geographic Areas 6-13

6.1-9: Number of Daily Transit Trips Produced in Corridor Geographic Areas 6-13

6.1-10: Transit Capacity by Alternative in the a.m. Peak Hour 6-14

6.1-11: Peak and Off-Peak Headways in the Dulles Corridor (in minutes) 6-15

6.1-12: A.M. Peak Hour Maximum Loads and Average Loads per Vehicle 6-17

6.1-13: Annual Operations and Maintenance Costs – 2025 (2004 dollars in millions) 6-18

6.1-14: Fleet Requirements – Opening Year 6-18

6.2-1: Multilane Highway and Freeway Level of Service Characteristics 6-24

6.2-2: Peak-Hour Traffic Volumes and Levels of Service on Selected Highway Links 6-25

6.2-3: Signalized Intersection Level of Service Characteristics 6-26

6.2-4: West Falls Church Station Peak Hour Intersection LOS and Delay in Seconds 6-27

6.2-5: Tysons East Station Peak Hour Intersection LOS and Delay in Seconds 6-28

6.2-6: Tysons Central 123 Station Peak Hour Intersection LOS and Delay in Seconds 6-29

6.2-7: Tysons Central 7 Station Peak Hour Intersection LOS and Delay in Seconds 6-30

6.2-8: Tysons West Station Peak Hour Intersection LOS and Delay in Seconds 6-30

6.2-9: Wiehle Avenue Station Peak Hour Intersection LOS and Delay in Seconds 6-31

6.2-10: Reston Parkway Avenue Station Peak Hour Intersection LOS and Delay in Seconds 6-32

6.2-11: Herndon-Monroe Station Peak Hour Intersection LOS and Delay in Seconds 6-33

6.2-12: Route 28 Station Peak Hour Intersection LOS and Delay in Seconds 6-34

6.2-13: Route 606 Station Peak Hour Intersection LOS and Delay in Seconds 6-35

6.2-14: Route 772 Station Peak Hour Intersection LOS and Delay in Seconds 6-35

6.3-1: Park-and-Ride Facilities in the Dulles Corridor 6-37

6.3-2: Mode of Access, Dulles Airport and All Major Airports in Region, 1987 to 1998 (thousands of originations) 6-39

6.3-3: Existing and Planned Parking Capacity for the Dulles Corridor Rapid Transit Project 6-39

CHAPTER 7

7.4-1: Summary of Section 4(f) Resource Impacts Associated with the Locally Preferred Alternative 7-21

CHAPTER 8

8.1-1: Capital Cost Estimate and Expenditure Forecast– Wiehle Avenue Extension 8-3

8.1-2: Capital Cost Estimate and Expenditure Forecast – Full LPA 8-4

8.1-3: Sources of Capital Funding – Wiehle Avenue Extension (Millions of YOE Dollars 8-5

8.1-4: Sources of Capital Funding – Full LPA (Millions of YOE Dollars) 8-9

8.2-1: Compact Member Incremental Subsidy Requirements for the Wiehle Avenue Extension (Millions of YOE Dollars) 8-14

8.2-2: Compact Member Incremental Subsidy Requirements for Full LPA (Millions of YOE Dollars) 8-14

CHAPTER 9

9.1-1: Agencies Contacted for Secondary and Cumulative Effects Analysis 9-2

9.1-2: Other Projects or Actions Included in the Cumulative Effects Analysis 9-7

9.3-1: Secondary Development Effects 9-10

CHAPTER 10

10.1-1: Goals and Objectives 10-2
10.1-2: Measures of Effectiveness 10-4
10.2-1: Summary of New Starts Quantitative Measures for the Wiehle Avenue Extension 10-12

CHAPTER 11

11.1-1: Stakeholder Meetings During the Draft EIS Comment Period 11-8
11.1-2: Stakeholder Meetings Following the Draft EIS Comment Period 11-9
11.1-3: Stakeholder Meetings During the Supplemental Draft EIS Comment Period 11-11
11.1-4: Stakeholder Meetings Following the Supplemental Draft EIS Comment Period 11-12
11.2-1: Agency Attendance at Pre-Scoping and Scoping Meetings 11-23
11.2-2: Agency Coordination Meetings 11-24
11.2-3: Agency Attendance at Supplemental Rail Yard Study Pre-Scoping and Scoping Meetings 11-25
11.2-4: Summary of Agency Coordination Meetings 11-27

INDEX OF FIGURES

CHAPTER 1

1.1-1: Dulles Corridor 1-3
1.1-2: Locally Preferred Alternative 1-7
1.3-1: Capital Beltway Corridor Interface 1-15
1.3-2: Environmental Review Process and Schedule 1-19
1.4-1: Washington Metropolitan Region and Northern Virginia 1-23
1.4-2: Major Activity Centers and Existing Transportation Network 1-25
1.4-3: Regional Metrorail System 1-31

CHAPTER 2

2.4-1: No Build Transit Network within the Dulles Corridor (2025) 2-13
2.4-2: Major Roadways in Baseline Highway Network (2025) 2-19

2.4-3: Wiehle Avenue Extension 2-23
2.4-4: Locally Preferred Alternative 2-25
2.4-5: Potential Construction Staging Areas 2-31
2.4-6: Schematics of Alternatives 2-33
2.4-7: Traction Power Substations, Tie Breaker Stations, and Proposed Stormwater Facilities) 2-37
2.4-8: Metrorail Operations for LPA (2025) 2-41

CHAPTER 3

3.1-1: Proposed Land Use in the Dulles Corridor 3-9
3.2-1a: Study Area Neighborhoods and Community Facilities 3-23
3.2-1b: Study Area Neighborhoods and Community Facilities 3-25
3.2-1c: Study Area Neighborhoods and Community Facilities 3-27
3.4-1: Visual Assessment Units 3-45
3.4-2a: Views Along the Alignment: Orange Line Connection 3-47
3.4-2b: Views Along the Alignment: Tysons Corner 3-49
3.4-2c: Views Along the Alignment: Mid-Corridor 3-51
3.4-2d: Views Along the Alignment: Dulles Airport 3-53
3.4-2e: Views Along the Alignment: Loudoun County 3-55
3.4-3: View Corridors Dulles Airport Terminal and Control Tower 3-57
3.5-1a: Area of Potential Effect and Known Historic Resources 3-67
3.5-1b: Area of Potential Effect and Known Historic Resources 3-69
3.6-1a: Public Parkland and Recreational Areas 3-81
3.6-1b: Public Parkland and Recreational Areas 3-83
3.8-1: Environmental Justice Communities 3-97

CHAPTER 4

4.1-1: Geology 4-5
4.1-2: Soils Potentially Containing Fibrous Asbestos Minerals 4-11
4.1-3: Prime Farmland Loudoun County 4-13
4.2-1: Watershed Boundaries and Streams 4-21

4.2-2a: Water Resources 4-27

4.2-2b: Water Resources 4-29

4.2-3: Limits of 100-Year FEMA Floodplain within Study Area 4-33

4.2-4: Chesapeake Bay Preservation Areas (designated by RMAs and RPAs) Fairfax County, VA 4-37

4.2-5: Coastal Zone Commonwealth of Virginia 4-41

4.2-6: River and Stream Corridor Overlay District Loudoun County, VA 4-45

4.2-7: Potential Wetland Mitigation Banks 4-57

4.5-1: Diabase Soils 4-71

4.6-1: Roadway Intersections Modeled for Air Quality Analysis 4-79

4.7-1: Typical A-Weighted Sound Levels 4-89

4.7-2: FTA Noise Impact Criteria for Transit Projects 4-91

4.7-3: Community Noise Monitoring Locations Along the Dulles Corridor 4-95

4.7-4: Potential FTA Noise Impact Locations 4-99

4.7-5a: Proposed Sound Barrier/Parapet Locations and Cross-Section 4-107

4.7-5b: Proposed Sound Barrier/Parapet Locations and Cross-Section 4-109

4.8-1: Typical Ground-Borne Vibration Levels 4-113

4.8-2: FTA Generalized Ground Surface Vibration Curves 4-119

4.8-3: Potential FTA/WMATA Vibration & Ground-Borne Noise Impact Locations 4-121

4.9-1: Hazardous Materials Sites of Potential Concern 4-129

CHPATER 5

5.2-1: Station Locations 5-13

CHAPTER 6

6.1-1: Transit Centers and Park-and-Ride Lots 6-5

CHAPTER 7

7.2-1: Locally Preferred Alternative 7-3

7.3-1a: Potential 4(f)/6(f) Resources 7-7

7.3-1b: Potential 4(f)/6(f) Resources 7-9

7.4-1: LPA Alignment within Dulles Airport Historic District 7-19

CHAPTER 9

9.1-1: Secondary and Cumulative Effects Study Area 9-5

VOLUME II

APPENDICES

A LIST OF PREPARERS

B LIST OF RECIPIENTS

C GLOSSARY OF TERMS

D ACRONYMS

E REFERENCES

F SECTION 106 MEMORANDUM OF AGREEMENT

G ENVIRONMENTAL CONDITIONS MAPPING

H ALTERNATIVES PREVIOUSLY CONSIDERED

I DULLES GREEN PROFFER STATEMENT

VOLUME III

J PUBLIC AND AGENCY COMMENTS AND RESPONSES

K AGENCY CORRESPONDENCE

L FEDERAL CONSISTENCY DETERMINATION

1 PURPOSE AND NEED FOR THE PROPOSED ACTION

This chapter describes the Dulles Corridor and identifies the need for the proposed Dulles Corridor Rapid Transit Project.

The alternative formerly known as "LPA Phase 1" in the October 2003 *Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation* has been renamed the Wiehle Avenue Extension in this Final EIS and is expected to begin operations in 2011. This change reflects the federal approach to the project's funding under the Federal Transit Administration's New Starts program. It will assure consistency among the environmental, engineering and financial documents during the project's development.

In the October 2003 *Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation* as well as this Final EIS, the term "full LPA" represents the Wiehle Avenue Extension and the second phase of the Dulles Corridor Rapid Transit Project. This second phase would extend west from Wiehle Avenue to Washington Dulles International Airport and Route 772 and is expected to begin operations in 2015.

The term "LPA", "proposed action", or "selected LPA" refers to both the Wiehle Avenue Extension and the full LPA collectively.

Section 1.1 provides an overview of the Dulles Corridor, the corridor needs, and the proposed project. It also includes a brief introduction of the various sponsoring agencies for the project.

Section 1.2 briefly introduces the proposed action for the Dulles Corridor Rapid Transit Project.

Section 1.3 describes the planning context in which the Dulles Corridor Rapid Transit Project was developed, including identification of the various methods used to create public involvement opportunities. In addition to a discussion of previous studies, related studies, and plans, the section includes an overview of the role of this Final Environmental Impact Statement (EIS) in the environmental review and project development process.

Section 1.4 defines the boundaries of both the Washington metropolitan region and the Dulles Corridor, and describes key characteristics of both. The activity centers within the corridor are identified, the existing transportation network is described, and the overall travel patterns between the corridor and the region are outlined.

Section 1.5 discusses the need for transportation improvements in the Dulles Corridor.

Section 1.6 identifies the goals and objectives of the project, which were used to evaluate the relative merits of the alternatives under consideration in this Final EIS.

1.1 OVERVIEW

The Dulles Corridor, located in Northern Virginia, west of the nation's capital (see Figure 1.1-1) is home to several of the Washington metropolitan region's most dynamic and rapidly growing activity centers. Extending from the vicinity of West Falls Church Metrorail Station in Fairfax County, Virginia, to Route 772 in Loudoun County, Virginia, the 23-mile corridor includes the high-density office buildings and regional shopping centers of Tysons Corner; the residences, shopping centers, and suburban office complexes of the Reston-Herndon area; the rapidly growing Washington Dulles International Airport (Dulles Airport); and an emerging residential and employment center in eastern Loudoun County.

With the Dulles Corridor's increasing attractiveness as a place to live and work, travel in the corridor has been steadily growing over the past 15 years. This increasing travel demand has strained the capacity of the existing transportation network, causing delays and increasing travel times between activity centers within the corridor and the region. The central and eastern portions of the corridor currently experience some of the region's worst traffic congestion.

Over the next 25 years, continued development of the corridor as a regional employment destination, and the maturation of residential communities and commercial areas within the corridor, is expected to far outpace the growth of the region as a whole. Parallel increases in travel demand are projected to exceed the capacity of the corridor's already overburdened transportation system, resulting in severely congested conditions on numerous routes, further degradation of air quality, and a threat to the valued quality of life in the Dulles Corridor.

The ability to expand roadway capacity in the corridor beyond currently planned improvements is limited. Planned roadway enhancements are not expected to relieve the current state of congestion, which is already near or at gridlock conditions in many locations. Moreover, the existing corridor transit system is limited as an alternative to auto travel because local bus service is also hampered by traffic congestion. Given these factors and a need to reduce auto emissions in the region to meet federal air quality standards, alternative transportation improvements in the Dulles Corridor, such as a high-quality, high-capacity rapid transit line, have long been the focus of public and private sector studies.

Rapid transit in the Dulles Corridor was initially explored in the 1950s as part of the planning of Dulles Airport. At that time, it was decided to reserve the median of the Dulles International Airport Access Highway (DIAAH), previously known as the Dulles Airport Access Road, for future transit access to the airport. Subsequently, the need for transit in the corridor was evaluated in the late 1960s during the planning of the regional Metrorail system. While Metrorail's original Adopted Regional System did not include a connection to Dulles Airport, extending rapid transit service to the airport has remained a local and regional goal.

In recent years, providing a rapid transit connection to Dulles Airport was evaluated in the *Dulles Corridor Transportation Study* (1997) and the *Supplement to the Dulles Corridor Transportation Study* (1999). The former, a Major Investment Study (MIS), recommended developing a rail line between the Metrorail Orange Line and Route 772 primarily using the median of the DIAAH. The MIS Supplement in 1999 recommended developing this rail line through a phased implementation program that would begin with enhanced express bus services, then use bus rapid transit (BRT) technology to institute rapid transit service in the Dulles Corridor as quickly as possible. BRT is an emerging transit mode in which buses are used to provide high-quality service akin to a rapid rail system. The BRT line would then be converted to rail use as project development progressed.



Figure 1.1-1

Dulles Corridor

Dulles Corridor Rapid Transit Project

Most recently, these recommended transit alternatives for the Dulles Corridor were evaluated for the *Dulles Corridor Rapid Transit Project Draft Environmental Impact Statement and Section 4(f) Evaluation* (Draft EIS) published in June 2002. The results of the evaluation assisted the Commonwealth of Virginia, the Washington Metropolitan Area Transit Authority (WMATA), the Federal Transit Administration (FTA), the Federal Aviation Administration (FAA), local and regional decision-makers, and the public in understanding the potential effects of the alternatives under consideration for the project and in selecting a proposed action. Based on the analysis contained in the Draft EIS, public comments received on the document, and agency coordination, a new Metrorail extension from the existing Orange Line to Route 772 in Loudoun County was selected as the Locally Preferred Alternative (LPA) for the project by the Commonwealth Transportation Board (CTB) and by the WMATA Board of Directors in late 2002. Like the alternative recommended in the 1997 MIS, the rail line would primarily use the median of the DIAAH, leaving the highway to directly serve Tysons Corner and Dulles Airport. However, unlike the recommendations of the MIS Supplement, the selected LPA was not proposed to be developed through a phased implementation program that included BRT as an interim step to rail.

Following the publication of the Draft EIS and selection of the Metrorail Alternative as the LPA, additional agency and public coordination resulted in revisions to the selected LPA. The potential effects of these changes—which included design modifications to the preferred alignment and facilities, adjustment of opening years, and scheduling construction of the project in two phases—were documented in the *Dulles Corridor Rapid Transit Project Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation* (Supplemental Draft EIS) published in October 2003. Although many of the merits and potential impacts of the proposed LPA were similar to those presented in the Draft EIS, the Supplemental Draft EIS allowed decision makers to fully and explicitly examine the effects of the revised LPA compared to the Metrorail Alternative evaluated in the Draft EIS and a No Build Alternative. Based on the analysis contained in the Supplemental Draft EIS, public comments received on the document, and agency coordination, in March 2004 the CTB approved the revision of the LPA to incorporate the elements required for phased construction and the design refinements outlined in the Supplemental Draft EIS and recommended in its Public Hearings Report. In April 2004, the WMATA Board of Directors took similar action to revise the LPA.

The Locally Preferred Alternative, as it is now defined, is described and evaluated in this Final EIS (See Figure 1.1-2). The following chapters contain an analysis of the relative merits and potential impacts of these improvements, as compared to a No Build Alternative.

1.2 PROPOSED ACTION

Based on work completed in prior studies, and in order to respond to continuing transportation needs in the Dulles Corridor, Department of Rail and Public Transportation (DRPT) and WMATA have proposed the Dulles Corridor Rapid Transit Project. The proposed project consists of transit system enhancements operating in the 23-mile Dulles Corridor, providing a seamless connection to the existing Metrorail system. These enhancements would offer an alternative means of travel for the growing number of residents, employees, and visitors in the Dulles Corridor and, as a high-quality link to the Metrorail system, would improve mobility throughout the region. By providing a high-capacity transportation choice for travelers, the proposed project would be better able to meet the anticipated increases in travel demand and help reduce future congestion in the corridor. Moreover, the ability of the proposed improvements to increase person-moving capacity over long distances with fewer numbers of vehicles should help minimize future increases in vehicle miles traveled in the corridor and vehicle emissions.

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LEGEND

- Major Arterials
- Limited Access Highway
- U.S. Highways

Proposed Metrorail Alignment

- At-grade/Retained Fill
- Aerial
- Underground
- Aerial Yard Lead

- Existing Metrorail Orange Line and Stations
- Proposed Station
- Proposed Underground Station
- Future Station
- Rail Yard
- Dulles Corridor Limits

0 1 2 3 MILES

Note: Short bridge crossings for highway and culvert overpasses/underpasses not shown.

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

Figure 1.1-2

Locally Preferred Alternative

Dulles Corridor Rapid Transit Project

The LPA for the Dulles Corridor Rapid Transit Project is an extension of the regional Metrorail system, which would provide service to key activity centers along the corridor, including Dulles Airport. Metrorail is a high-speed passenger rail system that is powered by an electrified third rail and operates in exclusive rights-of-way. By using multiple-car trains, Metrorail is capable of moving high volumes of passengers. Key features of the Metrorail system are fixed stations, dedicated right-of-way, advanced fare collection, relatively simple transfers between different lines, and multiple-door boarding from level platforms.

The LPA follows an alignment that primarily runs along the Dulles Connector Road, the DIAAH, and the Dulles Greenway. At its eastern end, the alignment would directly connect to the Metrorail Orange Line, allowing eastbound trains on the Dulles Corridor line to continue on to East Falls Church Station and the region's core. Passengers traveling to points east on the Orange Line would not have to transfer; passengers from the Dulles Corridor wishing to travel to points west on the Orange Line would change trains at East Falls Church Station. Through the Dulles Corridor, the LPA would operate at ground level in the median of the Dulles Connector Road, the DIAAH, and the Dulles Greenway, diverting at Tysons Corner and Dulles Airport to provide direct service to these key activity centers.

In the central portion of the Dulles Corridor, the LPA includes stations located in the median of the DIAAH. These median stations would have a similar design to those on the existing Metrorail system, and passengers would access the stations via pedestrian bridges that connect to station facilities located on the north and/or south sides of the Dulles Toll Road.

The LPA also includes one underground station and three aerial stations in Tysons Corner, an underground station at Dulles Airport, and additional median stations along the Dulles Greenway.

The LPA would include a new rail Service & Inspection (S&I) yard near the western end of the corridor, as well as traction power substations, tie-breaker stations, and stormwater management facilities. Traction power substations and tie-breaker stations (ancillary facilities associated with the supply of power to the rail line) would be located at various points along the alignment. In addition, the project would include a new lead track to the West Falls Church S&I Yard and other improvements to accommodate the new rail line. Improvements would include new storage tracks, new maintenance bays in the S&I building, and a sound attenuation box over the existing loop track and a portion of the new lead track.

A more detailed description of the selected Locally Preferred Alternative and a description of the No Build Alternative are presented in Chapter 2.

The proposed project would be constructed in two phases. The phasing of construction is necessary to spread the costs of construction over a longer period of time to reduce annual funding needs. FTA is considering only the first phase of construction (i.e., the segment between West Falls Church and Wiehle Avenue) for New Starts funding from the anticipated six-year reauthorization of the Federal New Starts program. FTA may consider the proposed subsequent phase for FTA funding in the future but has made no commitment to do so. Furthermore, FTA has determined that the first phase now being considered for funding has independent utility even if the subsequent phase is never built. (The first phase serves the high employment area of Tysons Corner.) Therefore, FTA will make a decision on the funding of the first phase without regard to possible future phases.

The Commonwealth of Virginia has proposed the following approach to implement the LPA: DRPT would be the project sponsor, federal grant recipient, design/build contracting authority, and initial owner. WMATA would be DRPT's technical manager for preliminary engineering and for the design/build contract, leaseholder, operator of the project, and ultimate owner.

1.3 PLANNING CONTEXT

The planning context for the Dulles Corridor Rapid Transit Project includes previous studies and plans, related studies, and the overall process for project development. In the following sections, previous studies related to transit in the Dulles Corridor and plans that include the project as a future improvement are identified, and related studies that would affect or be affected by the project are discussed. In addition, its relationship to the purpose of the Final EIS is explained in more detail, its relationship to the environmental review and project development process is described, and decision-making bodies and required approvals are identified.

1.3.1 PREVIOUS STUDIES AND PLANS

Over the last four decades the transportation needs of the Dulles Corridor and potential improvements for the corridor have been the subject of several studies conducted by public agencies and private businesses. Most of the studies have identified mass transit alternatives as part of the transportation solution for the corridor and, as a result, numerous comprehensive and regional plans have included references to specific transit alternatives, supportive land use measures, and potential funding sources for the Dulles Corridor. Proposed transit solutions for the Dulles Corridor have also been recognized at the federal level, including the identification of the Dulles Corridor Rapid Transit Project as one of the candidate projects to receive federal funding in the *Transportation Equity Act for the 21st Century* (TEA-21), a federal law that authorizes the government to fund transportation projects.

In the following sections the major studies and plans related to the Dulles Corridor are identified and the alternatives or measures proposed in them are briefly described.

1.3.1.1 Recent Studies

This section includes a discussion of those studies that led most directly to the development of the Dulles Corridor Rapid Transit Project and this Final EIS.

A. Dulles Corridor Transportation Study and Supplement (1997, 1999)

DRPT initiated the *Dulles Corridor Transportation Study*, a Major Investment Study (MIS), as a response to the *Dulles Corridor Plan*, adopted by the CTB in 1992. The study and its 1999 Supplement were conducted with the oversight of a policy advisory committee and a technical committee, the guidance of three county-sponsored task forces and committees, and ideas and comments received through extensive public participation.

For the MIS and its Supplement, the study team examined the growth projections for the Dulles Corridor and the region, analyzed changes in travel patterns resulting from development in the corridor, considered a variety of transportation improvements to reflect the identified travel needs, and discussed the costs, benefits, and impacts of these alternatives. It was also determined that the transit improvements should begin at the Orange Line and terminate in eastern Loudoun County, due to the amount of growth projected there.

It was recommended in the MIS that a rail extension of the Metrorail system be implemented in the median of the DIAAH and the Dulles Greenway. The study team for the MIS Supplement subsequently recommended that this rail line be implemented through a multi-modal transportation investment program. The program would begin with express bus service, and then enhanced express bus services would be

implemented. Subsequent phases included developing a BRT system along the DIAAH and converting this BRT system to a rail line in two stages.

B. Dulles Corridor Rapid Transit Project Draft Environmental Impact Statement and Section 4(f) Evaluation (2002)

The BRT and rail alternatives and the proposed phasing approach developed during the MIS and MIS Supplement were carried forward as the Dulles Corridor Rapid Transit Project. The project is identified in TEA-21 as one of the candidate projects to receive federal funding from FTA. Under the National Environmental Policy Act of 1969 (NEPA), as amended, federal agencies must consider the environmental consequences associated with all alternatives for a project involving federal action. This evaluation of environmental consequences is required to assist decision-makers and the public in evaluating the relative merits of the project (as compared to a No Build Alternative) and in selecting a preferred course of action from the alternatives evaluated.

To address environmental requirements under NEPA and to further advance the project development and review process, a Draft EIS was prepared for the Dulles Corridor Rapid Transit Project. The Draft EIS documents the potential social, environmental, economic, and transportation effects of constructing and operating the proposed rapid transit improvements in the Dulles Corridor. Several alternatives were considered, including a No Build or Baseline Alternative, a BRT Alternative, a Metrorail Alternative, an alternative that combines these modes (BRT/Metrorail Alternative), and a Phased Implementation Alternative, in which the alternatives are implemented through a staged program of rapid transit improvements. All of the proposed Build Alternatives follow an alignment that generally runs along the Dulles Connector Road, the DIAAH, and the Dulles Greenway. Several alignment variations in Tysons Corner and along the DIAAH were examined for each alternative, and multiple rail yard sites were considered for the Metrorail and Phased Implementation alternatives.

Based on the analysis contained in the Draft EIS, agency coordination, and comments received during the public review process, the Metrorail Alternative (T6) with a service and inspection (S&I) yard near Dulles Airport (Y15) was selected in late 2002 by the CTB and the WMATA Board of Directors as the LPA for the project. More detailed information about the evaluated alternatives can be found in Chapter 2 of this Final EIS.

C. Dulles Corridor Rapid Transit Project Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation (2003)

After the selection of the LPA, continuing public and agency coordination resulted in modifications to the proposed project, including design modifications to the alignment and facilities and proposed construction of the project in two phases. A Supplemental Draft EIS was prepared to assess the potential effects of the revised LPA on the human and natural environment and to provide a basis for further public discussion. Effects were evaluated relative to those anticipated for a No Build Alternative and the Metrorail Alternative (T6/Y15) evaluated in the Draft EIS and selected as the LPA. In general, the effects and merits of the revised LPA were similar to those presented in the Draft EIS.

Based on the analysis contained in the Supplemental Draft EIS, public comments received on the document, and agency coordination, in March 2004 the CTB approved the revision of the LPA to incorporate the elements required for phased construction and the design refinements outlined in the Supplemental Draft EIS and recommended in the Public Hearings Report. In April 2004, the WMATA Board of Directors took similar action to revise the LPA.

1.3.1.2 Earlier Corridor Studies and Plans

Table 1.3-1 identifies and briefly describes early studies in which high-capacity transit or supportive elements were considered for the Dulles Corridor. Many of the studies recommended potential transportation solutions for the corridor as a whole, whereas others addressed a particular part of the corridor.

Table 1.3-1: Early Corridor Studies and Plans

Study/Plan	Description and Recommendations
Dulles International Airport – Master Plan Report (1964)	The original Master Plan for Dulles Airport envisioned the eventual construction of transit to the airport, indicating that the design of the access road included reserved space in the median which "might ultimately be employed to provide some form of mass transportation, utilizing either bus or rail transit," (Ammann & Whitney, et al. 1964: 49). In 1985, during the update process for the Dulles Airport Master Plan, FAA recommended that the median of the DIAAH continue to be reserved for a future transit line to the airport. It was anticipated that the future transit line would likely be an expansion of the Metrorail system.
Adopted Washington Regional Metrorail System (1969)	Serving Dulles Airport with rail transit was considered during WMATA's initial planning and construction of the Metrorail system. However, a Metrorail extension to Dulles Airport was not included in the original Adopted Regional System because the level of development in the corridor did not warrant an extension at that time.
Northern Virginia Light Rail, Inc. (1983)	In response to a perceived need for transit improvements in the Dulles Corridor, a private consortium known as Northern Virginia Light Rail, Inc. proposed to collect contributions from local developers to build a light rail line to Dulles Airport. Operation of the line would be turned over to WMATA following construction.
Dulles Corridor Transit Development Feasibility Study (1985)	For this study, private-sector strategies for funding transit improvements in the Dulles Corridor were examined. A number of private and public funding mechanisms were considered, and it was determined that a combination of these mechanisms could be used to develop funding for a Dulles Corridor rail line.
DartRAIL (1985 – 1992)	A private group named Dulles Access Rapid Transit (DartRAIL) proposed building a rail transit line between the West Falls Church Metrorail Station and Dulles Airport. Proposed funding sources included surplus Dulles Toll Road revenues and assessments and donations from interested parties, property owners, developers, and the operators of Dulles Airport.
Dulles Airport Access Road Corridor Transit Alternatives Analysis Study (1990)	To evaluate various transit options for the corridor, Fairfax County sponsored an alternatives analysis study that focused on the DIAAH (then called the Dulles Airport Access Road). Study recommendations included pursuing an enhanced express bus system to serve residential neighborhoods and a number of new park-and-ride lots throughout the corridor. The initial elements of the recommended system have since been implemented.
Dulles Corridor Plan (1992)	Recognizing the need for improved transit access in the Dulles Corridor, the CTB passed a resolution that led to the adoption of the *Dulles Corridor Plan*. The plan endorsed implementation of rail in the Dulles Corridor by 2005. Interim development of high-level bus service and park-and-ride lots were among the actions identified.

1.3.2 FUTURE PLANS

Several local and regional plans identify the Dulles Corridor Rapid Transit Project as an element of the future transportation network. The project is included in these plans as an essential element in meeting future transportation and development goals.

1.3.2.1 County Transportation and Comprehensive Plans

The planned improvements for the Dulles Corridor Rapid Transit Project, or supportive measures for the project, are included in the following plans, which identify needs and planned improvements for the counties as a whole:

- *Fairfax County Transportation Plan* (1995);
- *Fairfax County Comprehensive Plan* (2000);
- *Loudoun County Countywide Transportation Plan* (1995, revised 2001); and
- *Loudoun County Revised General Plan* (2001).

Because they were completed prior to the 1997 MIS and its 1999 Supplement, the two transportation plans include less specific actions relative to the Dulles Corridor. In the *Fairfax County Transportation Plan*, the corridor is referenced in the plan's transportation enhancement map, on which the corridor is highlighted. The *Loudoun County Countywide Transportation Plan* generally recognizes a need to plan for supportive land uses in the vicinity of future transit centers in specific corridors, including centers at the western end of the Dulles Corridor.

The county comprehensive plans, on the other hand, include much more specific measures in support of planned improvements in the Dulles Corridor. The Fairfax County plan calls for dense development in the corridor, ranging from 8 to 45 dwelling units per acre with a Floor Area Ratio (FAR) – a ratio of the gross floor area of a building to the total area of the site – in excess of 1.0. Higher-density, mixed-use development will be allowed in the core of Tysons Corner in conjunction with proposed rail stations. The Loudoun County plan allows for up to 50 dwelling units per acre to support proposed transit stations along the Dulles Greenway. The *Loudoun County Revised General Plan* also includes public support for transit services that would use the corridor, such as carpools, vanpools, bus and rail services, and other alternative modes, with specific funding support for bus services.

During work on the Draft EIS, the Dulles Corridor Land Use Task Force was appointed by the Fairfax County Board of Supervisors to review the *Fairfax County Comprehensive Plan* as part of the County's commitment to transit supportive policies in the corridor. The Task Force reviewed the plan's existing land use recommendations for the corridor and recommended changes to better support transit in the Dulles Corridor, such as density increases and mixed-use provisions triggered by the implementation of BRT or Metrorail, and a set of design guidelines that encouraged transit-oriented development. Fairfax County reviewed these changes, and a modified set of changes was forwarded to the County Board of Supervisors for approval. The resulting amendments to the Fairfax County Comprehensive Plan were formally adopted in June 2001 and are described in Chapter 3.

1.3.2.2 Regional Plans and Initiatives

The Dulles Corridor Rapid Transit Project, or supportive measures for the project, are also specifically identified in several regional plans. These regional plans, identified below, focus on issues and needs for the Washington metropolitan region as a whole, or for portions of the region.

- *Update to the Financially Constrained Long-Range Transportation Plan for the National Capital Region* (2003)
- *Transportation Improvement Program (TIP) for the Washington Metropolitan Region FY 2004-2009* (2003)
- *State Implementation Plan (SIP) Severe Area Attainment Plan for the Metropolitan Washington, D.C. Nonattainment Area* (2004)
- *WMATA 10-Year Capital Improvement Plan* (2002)
- *Northern Virginia 2020 Transportation Plan* (1999)

The National Capital Region Transportation Planning Board develops the constrained long-range plan (CLRP) and the TIP for the region. They include projects that are designed to ensure environmental quality and maintain the regional transportation system. All planned projects or studies included in the

CLRP are those for which funds are "reasonably expected to be available." Highway, transit, and pedestrian/bicycle projects, as well as regional transportation studies, are included. The TIP translates the CLRP into a program of action for the current six-year period. The Dulles Corridor Rapid Transit Project was initially identified in both plans as the phased implementation of rail service in the corridor between the existing Metrorail Orange Line and Route 772 in Loudoun County, with all phases included in the CLRP and the early phases of the project (express bus and fixed-guideway bus) programmed in the TIP. In January 2003, the 2002 CLRP was amended with a resolution to reflect the selection of the LPA for the Dulles Corridor Rapid Transit Project and the capital cost information for the LPA.

The SIP outlines measures and identifies projects intended to help the region achieve or maintain attainment status for six criteria pollutants. The *Severe Area Attainment Plan for the Metropolitan Washington, DC Nonattainment Area* was developed by the Metropolitan Washington Air Quality Committee (MWAQC), a multi-jurisdictional committee established by the governors of Maryland and Virginia and the mayor of Washington, D.C., to focus on air quality issues in the Washington metropolitan region. The plan, which was incorporated into the SIPs for Maryland, Virginia, and Washington, D.C., identifies transportation emissions control measures intended to bring the region into attainment for ozone. These measures should help reduce emissions by 2020. The Dulles Corridor Rapid Transit Project, as defined in the TIP, is considered one of these measures.

In November 2002, the WMATA Board approved the transit agency's 10-year Capital Improvement Plan (CIP). The CIP evolved from the *Metrorail Core Capacity Study,* WMATA, 2001; the Regional Bus Study; and the Infrastructure Renewal Program for Metrorail and Metrobus. Due to the fiscal constraints of the WMATA Compact member jurisdictions, the plan as a whole could not become a funded program. The WMATA Board did identify, by resolution in January 2003, the "unfunded urgent priorities" of the CIP. Those priorities became the basis of the current Metro Matters program, whereby WMATA has successfully garnered funding agreements among its Compact jurisdictions for the most crucial elements of the CIP's Infrastructure Renewal Program and its Systems Access Program. The Metrorail sub-element of Metro Matters is most important for the Dulles Corridor Rapid Transit Project since it implements eight-car train operations. Metro Matters would fund the Metrorail improvements of the No Build Alternative described in the FEIS. The evaluation of Build Alternatives in the Draft EIS, Supplemental Draft EIS, and this Final EIS have assumed that the No Build Alternative includes eight-car train operations.

The Metro Matters implementation of eight-car train operations involves the procurement of 26 rail cars, expansion of maintenance shops at three yards, upgrade to traction power, and upgrade of automatic train control. Implementation would provide eight-car train operations making up one-third of peak period Metrorail operations. The CIP's System Access Program also addresses the service reliability of the Metrorail System. Prior to the opening year of the Wiehle Avenue Extension, WMATA will reconfigure the Blue Line and other lines and increase headways from six to seven minutes.

The *Northern Virginia 2020 Transportation Plan* was developed by the Transportation Coordinating Council of Northern Virginia to meet the transportation needs of the western portion of the Washington metropolitan region. Because the proposed project is consistent with the Northern Virginia goals of reducing commute times, improving regional trip times, and increasing transportation options, the phased implementation of Metrorail in the Dulles Corridor (as recommended in the MIS Supplement) is included in the 2020 Plan.

1.3.3 RELATED STUDIES

The Dulles Corridor Rapid Transit Project is related to several recently completed or ongoing studies. Decisions to be made for this project may be affected by the outcomes and decisions associated with these related studies, and vice versa. These studies and their relationship to the Dulles Corridor Rapid Transit Project are summarized in Table 1.3-2.

Table 1.3-2: Related Studies

Study/Plan	Description and Recommendations	Relationship to Project
Metrorail Core Capacity Study, WMATA (2001)	Examined the capacity limits of the existing Metrorail system relative to projected ridership growth. Recommendations included improvements to maximize peak period capacity and the reliability of the existing system, such as the implementation of eight-car train operations, reconfiguration of Blue and Orange line service patterns, and associated improvements.	The baseline condition assumed for the Dulles Corridor Rapid Transit Project includes several improvements to the existing Metrorail system that would be required to meet growth in passenger demand by 2025 and the opening years. These improvements are identified in the Core Capacity Study, planned in the 10-Year CIP, and to be funded initially by Metro Matters.
Metro Matters, WMATA (2003)	The "unfunded urgent priorities" of the CIP became the basis of the current Metro Matters initiative, whereby WMATA seeks funding from federal sources and its Compact jurisdictions for the most crucial elements of the CIP's Infrastructure Renewal Program and its Systems Access Program.	The Metrorail sub-element of Metro Matters implements eight-car train operations.
Capital Beltway Study, Virginia Department of Transportation (VDOT) (ongoing)	Study to identify, design, and assess the best combination of improvements for the Capital Beltway in Virginia. The study area for the proposed improvements extends 14 miles, from Backlick Road in Springfield (the western limits of the Springfield interchange) to the American Legion Bridge, crossing through the eastern end of the Dulles Corridor. Proposed improvements are identified in the Capital Beltway Study Draft EIS (published in March 2002).	This project and the Dulles Corridor Rapid Transit Project will overlap in the vicinity of the Beltway/Route 123 interchange. Metrorail has a higher profile than necessary in order not to conflict with proposed directional ramps of the interchange. During preliminary engineering, both projects' staffs will continue to work together to coordinate engineering designs.
Capital Beltway Corridor Rail Feasibility Study, DRPT (2001)	Assessed the feasibility of a fixed-guideway service in the Beltway Corridor between Springfield and Tysons Corner. Several options in the Beltway Corridor were deemed feasible, and several modes and alignments were recommended for further analysis.	Any Beltway Corridor improvements extending into Tysons Corner would need to be coordinated with the planned Dulles Corridor Rapid Transit Project improvements in this area. Depending on the final alignment and timing of proposed improvements, it is anticipated that any further study of Beltway rail will take into account the results and design of the Dulles Corridor Rapid Transit Project. See **Figure 1.3-1** to view the intermodal connection between projects.

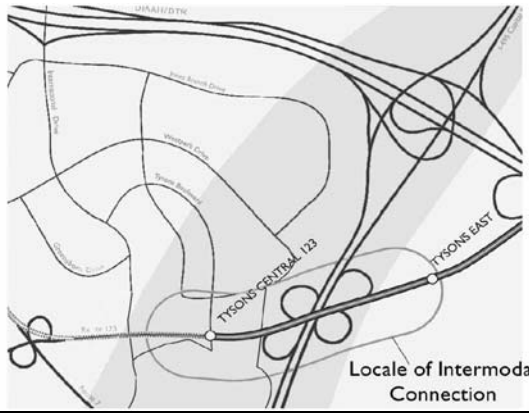


Figure 1.3-1
Capital Beltway Corridor Interface

Study/Plan	Description and Recommendations	Relationship to Project
I-66 EIS (Outside the Capital Beltway), VDOT/DRPT (ongoing)	MIS for I-66 corridor west of the Capital Beltway (completed January 1999). Recommendations included extension of the Metrorail Orange Line from Vienna to Centreville, improvements in bus and Virginia Rail Express (VRE) commuter rail service, and the addition of general purpose and High Occupancy Vehicle (HOV) lanes to I-66. Draft EIS was initiated in Fall 2001. Study team evaluated transportation conditions and developed initial concepts. The study was put on hold indefinitely in early 2003.	Any improvements examined in the I-66 EIS (if implemented) will have an effect on travel patterns and transit demand in the Dulles Corridor. Any future EIS activities will be coordinated with the Dulles Corridor Rapid Transit Project.
I-66 Feasibility Study (Inside the Beltway)	The Virginia Department of Transportation (VDOT) is cooperation with the Virginia Division of the Federal Highway Administration, has undertaken a review of I-66 westbound, between Rosslyn and the Dulles Airport Access Highway. The study was initiated in July 2004 and is scheduled to be completed by early 2005. Concepts to be studied, at a minimum, will include transit, roadway widening, High Occupancy Vehicle/High Occupancy Toll Lanes, as well as a No Build option.	Any improvements examined in the I-66 study (if implemented) will have an effect on travel patterns and transit demand in the Dulles Corridor. Future study activities will be coordinated with the Dulles Corridor Rapid Transit Project.
Metropolitan Washington Airports Authority (MWAA) Capital Improvement Program-Landside (2001-2011)	The $2.6 billion 10-year CIP includes projects designed to enhance the safety, security, and capacity of the Dulles International Airport. Among the improvements are widening and expansion of several roadways providing access to the airport including the DIAAH.	Improvements to the DIAAH, which would widen the facility from 4 lanes to 6 lanes, could require realignment of the Dulles Toll Road at the Herndon-Monroe and Route 28 stations. The design of the Dulles Corridor Rapid Transit Project will be coordinated with the MWAA design of the DIAAH widening.
Metropolitan Washington Airports Authority (MWAA) Capital Improvement Program-Airside (2001-2011)	FAA in association with MWAA is exploring ways that Dulles Airport can meet the projected demands for air transportation while minimizing impact on the environment through the construction of two new air carrier runways. This study, and preparation of the EIS, will take approximately three years and will include gathering public opinion, defining alternative solutions, and studying environmental and community impacts. A final public hearing is scheduled for the Fall 2004.	The runway approach zone of the proposed north-south runway is in proximity to the project's S&I Yard 15 on airport property.

1.3.4 ENVIRONMENTAL REVIEW AND PROJECT DEVELOPMENT PROCESS

The Dulles Corridor Rapid Transit Project is identified in the *Transportation Equity Act for the 21st Century* (TEA-21) as one of the candidate projects to receive federal funding from FTA. Under the *National Environmental Policy Act of 1969* (NEPA), as amended, federal agencies must consider the environmental consequences associated with all alternatives for a project involving federal action. This evaluation of environmental consequences is required to assist decision-makers and the public in evaluating the relative merits of the project (as compared to a No Build Alternative) and in selecting a preferred course of action from the alternatives evaluated.

NEPA requires that federal decision-making include consideration of the potential impacts of a proposed project and its alternatives on the natural and human environment. If substantial environmental impacts are anticipated and cannot be avoided, a plan for mitigating these impacts must be proposed. As part of the decision-making process, reasonable alternatives that would avoid or reduce adverse impacts must

be considered, analyzed, and documented. In addition, the public must be given adequate opportunity to comment on a proposed project, and the project must be coordinated with appropriate agencies.

The level of documentation required for compliance with NEPA varies depending on the class of the proposed action. Class I actions—such as construction of new highway or rail transit facilities, extensions of rail transit facilities, or construction of separate roadways for buses or HOVs—require the preparation of an EIS. An EIS describes in detail how project actions would affect the environment, as well as any proposed mitigation.

1.3.4.1 The Role of the Final EIS

The primary purpose of the Final EIS is to respond to comments and issues raised during the circulation of the Draft EIS and Supplemental Draft EIS and to provide more detailed information on the design of proposed mitigation for unavoidable impacts associated with the project. The information presented in the Final EIS is based on information developed for the Draft EIS and Supplemental Draft EIS and on numerous preliminary technical studies, and reflects comments or suggestions received in the course of public review and agency coordination activities conducted during the evaluation of alternatives.

This Final EIS presents responses to comments received on the Draft EIS and Supplemental Draft EIS and documents any additional analysis required by the comments on the selected LPA. The document will be circulated for agency review, then FTA, as the lead federal agency, will document the completion of the NEPA environmental review process for the project in a Record of Decision (ROD). The Record of Decision will identify the action to be undertaken, environmental findings resulting from the proposed action, and mitigation commitments associated with project implementation.

In addition to FTA, the Federal Aviation Administration (FAA) has been invited and has agreed to participate as a cooperating agency in the Project's NEPA review. A cooperating agency is an agency that has jurisdiction by law or special expertise regarding potential environmental impacts resulting from a proposed action. The FAA is participating as a cooperating agency because construction of project elements on airport property will require a revision to the Airport Layout Plan (ALP) for Washington Dulles International Airport and the use of airport property. An ALP is a planning document used by the FAA to identify proposed new runways, runway extensions, terminal buildings, and other major developments on airport property. A change to an approved ALP and transfer of airport property are considered a Federal action that requires FAA environmental review under NEPA.

The FAA will use this Final EIS to satisfy its NEPA responsibilities, including its approval of project elements shown on the March 2004 revision of the ALP for Washington Dulles International Airport, and its concurrence that it meets the environmental review requirements specified in FAA's Airport Environmental Handbook (Order 5050.4A).

The project elements include the project's alignment, station, ancillary facilities, and S&I yard located on airport property. These project elements have been shown on the ALP since February 2003, pending completion of the NEPA environmental review process.

Following completion of FTA's Record of Decision (ROD) on the project, the FAA will issue its own ROD based on the findings of this Final EIS. The FTA ROD signifies Federal environmental approval to construct the project itself, while the FAA ROD documents FAA's environmental approval of project-related changes to the ALP. FAA's provisions for any conveyance of airport land related to the project will also be addressed in its ROD. Together, the two RODs will document the project's compliance with

NEPA and outline any required mitigation measures. The overall environmental review process and schedule are shown in Figure 1.3-2.

1.3.4.2 Decision-Making Bodies and Required Approvals

Several local deliberative bodies are responsible for making decisions during the preliminary engineering and environmental review phase of project development. The CTB, a 17-member board appointed by the Governor of Virginia, is primarily responsible for locating routes, approving construction contracts, creating traffic regulations, naming highways, and administering and allocating transportation funds in Virginia. The CTB's role on the Dulles Corridor Rapid Transit Project is to select the LPA, as appropriate, prior to the issuance of the Records of Decision by FTA and FAA. Selection is in cooperation with state, regional, and local jurisdictions and agencies. At its December 19, 2002 meeting, the CTB selected the Metrorail Alternative, with Alignment T6 in Tysons Corner and with a S&I yard at Site 15, as the Locally Preferred Alternative based on the information contained within the Draft EIS. On March 18, 2004 the CTB approved the revision of the LPA to incorporate the elements required for phased construction and the design refinements as outlined in the Supplemental Draft EIS and recommended in the Public Hearings Report.

The WMATA Board of Directors is a six-member board consisting, in part, of two principal Directors from each signatory jurisdiction (Virginia, Maryland, and the District of Columbia). In addition, the Board includes six alternate Directors who may act in the absence of the Principal Director. The WMATA Board is responsible for the mass transit plan for the Washington Metropolitan Area Transit Zone, which includes the Dulles Corridor. Concurrent with the CTB's actions, the WMATA Board of Directors selected and revised the same LPA and amended the Adopted Regional System for Metrorail.

The Metropolitan Washington Airports Authority (MWAA) Board of Directors is a 12-member board whose mission is to direct the development and operation of Ronald Reagan Washington National Airport and Washington Dulles International Airport. In addition to Dulles Airport proper, MWAA operates the DIAAH under a long-term lease from the federal government. Use of the airport roadways and land will require approval of the MWAA Board of Directors and FAA. On November 6, 2002, the MWAA Board voted in favor of a Metrorail Alternative as the Locally Preferred Alternative.

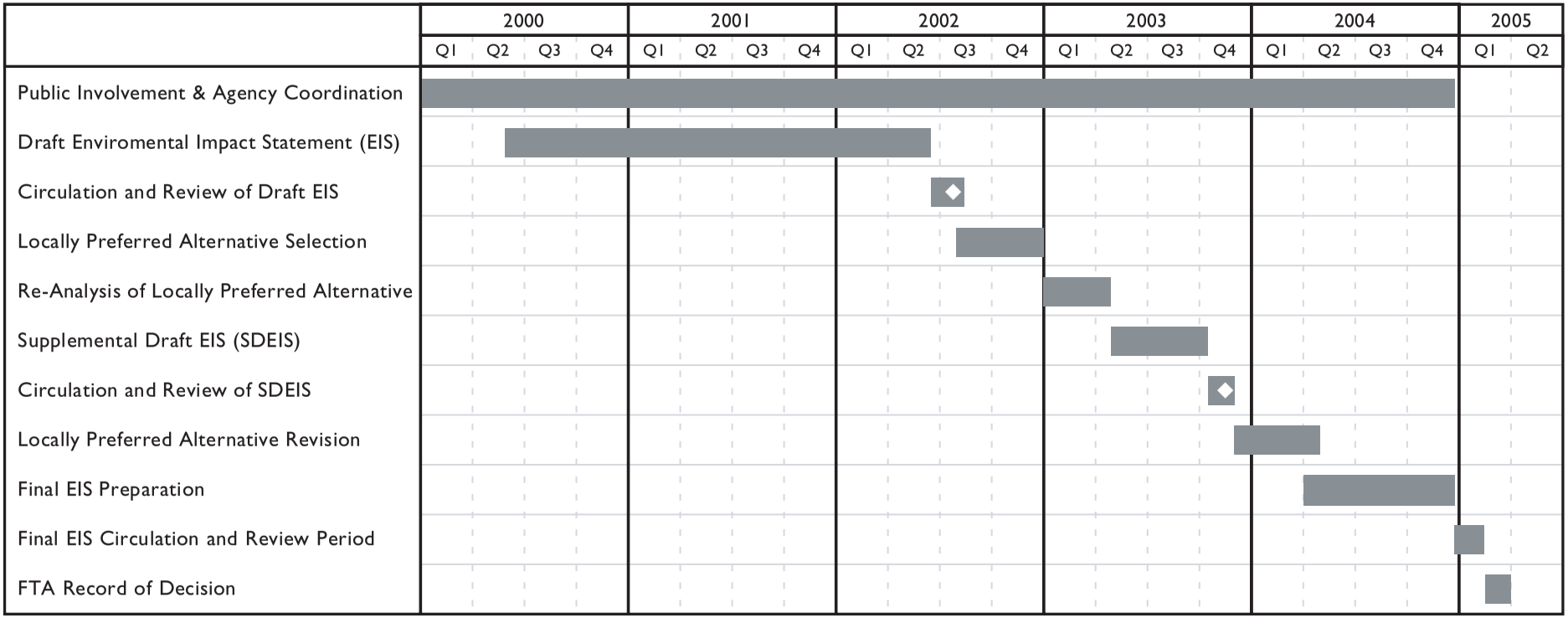
1.3.4.3 Public Involvement

A comprehensive public involvement program has been implemented throughout planning and project development and the environmental review process to support decision-making. A summary of the public involvement process, including agency coordination to date, is included in Chapter 11.

1.4 DESCRIPTION OF THE REGION AND CORRIDOR

From a small collection of communities along the Potomac River, the Washington metropolitan region has grown to an internationally prominent region of more than 4 million people and 2 million jobs. The region has a diversified employment base, with the second-highest concentration of information technology firms in the United States. The region continues to experience growth with a population increase in the last decade of more than 8.5 percent, including more than 350,000 immigrants.

Much of the region's growth is occurring along suburban corridors in Maryland and Northern Virginia. One of the most important and rapidly developing areas in Northern Virginia is the Dulles Corridor, which is characterized by a variety of residential communities, office complexes, retail centers, and a mix of educational, recreational, and leisure facilities.



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LEGEND

Public Hearings

Figure 1.3-2

Environmental Review Process and Schedule

Dulles Corridor
Rapid Transit Project

1.4.1 REGION AND CORRIDOR BOUNDARIES

For the purposes of discussion in this Final EIS, the "region" is defined as the District of Columbia; the Virginia jurisdictions of Arlington County, City of Alexandria, Fairfax County, City of Fairfax, City of Falls Church, Loudoun County, Prince William County, City of Manassas, City of Manassas Park, and Stafford County; and the Maryland jurisdictions of Calvert County, Charles County, Frederick County, Montgomery County, and Prince George's County (see Figure 1.4-1).

Northern Virginia forms the western portion of the Washington metropolitan region (see Figure 1.4-1). The Northern Virginia Transportation Coordinating Council defines Northern Virginia as the jurisdictions of Arlington, Fairfax, Loudoun, and Prince William Counties; the independent cities of Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park; and the towns of Dumfries, Herndon, Leesburg, and Vienna.

The Dulles Corridor is located in Northern Virginia, and is defined as the east-west corridor extending from the vicinity of the West Falls Church Metrorail Station in Fairfax County to Route 772 in eastern Loudoun County. The 23-mile corridor is primarily located in the northern part of Fairfax County. Together, the Dulles Connector Road, DIAAH, Dulles Toll Road, and the Dulles Greenway serve as the corridor's central axis.

1.4.2 CORRIDOR ACTIVITY CENTERS

Several major activity centers are located throughout the Dulles Corridor (see Figure 1.4-2). These activity centers include major employment and commercial centers surrounded by low- to medium-density residential development, as well as tourist destinations and educational facilities.

1.4.2.1 Falls Church

The City of Falls Church is located nine miles west of Washington, D.C. and has well-established residential, shopping, and office developments. The Northern Virginia campuses of the University of Virginia and the Virginia Polytechnic Institute (Virginia Tech) Graduate Center are located near the West Falls Church Metrorail Station. Currently, the East Falls Church and West Falls Church stations on the Metrorail Orange Line provide transit access from Falls Church to the core of the region. However, transit access to the Dulles Corridor is limited to express and local bus service, mostly from the West Falls Church Station.

1.4.2.2 Tysons Corner

Tysons Corner, the "downtown" of Fairfax County, lies adjacent to the Capital Beltway (I-495) between the Dulles Toll Road and Leesburg Pike (Route 7). Today, Tysons Corner is larger, in both geographic size and employment, than many of the central business districts in major U.S. cities, and is one of the largest suburban business districts in the country. Approximately 87,000 people work and 26,000 people live in approximately 3 square miles at Tysons Corner. By 2025, Tysons Corner is projected to provide nearly 124,000 jobs and grow to 30,000 residents.

More than 41 million square feet of commercial and retail space has been developed in Tysons Corner. With Tysons Corner Center and Tysons Galleria as its centerpieces, Tysons Corner has emerged as a regional shopping center. These shopping complexes house more than 350 stores and 5.1 million square

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LEGEND

- Regional Jurisdictions
- Water Bodies
- State Boundaries

Note: Metropolitan Washington Region as defined by MWCOG

0 5 10 15 MILES

Figure 1.4-1

Washington Metropolitan Region and Northern Virginia

Dulles Corridor Rapid Transit Project



LEGEND

- Existing Metrorail Orange Line and Stations
- Limited Access Highways
- U.S. Highways
- Major Arterials
- Dulles Corridor Boundary
- Major Activity Centers

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

0 1 2 3 MILES

Figure 1.4-2

Major Activity Centers and Existing Transportation Network

Dulles Corridor Rapid Transit Project

feet of retail space, attracting 1.9 million visitors annually. Currently more than eight million square feet of new development is under construction or in the planning phase in the core of Tysons Corner.

1.4.2.3 Reston, Herndon, and Dulles Corner

The planned community of Reston is located in northwestern Fairfax County, five miles east of Dulles Airport. Reston encompasses 7,400 acres, and in 2000 had a population of more than 63,000 people. Commercial facilities are clustered along three main arteries—Reston Parkway, Sunrise Valley Drive, and Sunset Hills Road—all with easy access to the Dulles Toll Road. While Reston Parkway is a north-south road, Sunrise Valley Drive and Sunset Hills Road run parallel to the Dulles Toll Road, roughly between Hunter Mill Road and the Fairfax County Parkway.

Within the Dulles Corridor, Reston has emerged as a center for high-technology firms and residential development. The area has the second largest amount of office development in Fairfax County (Tysons Corner has the largest), and Reston Town Center has more than 50 shops and restaurants, a multiplex theater, an outdoor ice rink, a 514-room hotel, and almost 1 million square feet of office space. Additional high-intensity development is planned for the Town Center, including a significant increase in residential uses, much of which is currently under construction.

The Town of Herndon is located in northwestern Fairfax County, three miles east of Dulles Airport, and occupies 2,337 acres. Herndon has experienced increased growth in the last decade, and has maintained a balance of commercial, residential, and recreational components. Growth is projected to continue, with a build-out potential for Herndon commercial properties in excess of 30 million square feet of floor space.

Dulles Corner is an emerging activity center located at the interchange of the Dulles Toll Road and Route 28. New developments planned for the area include Dulles Station, a mixed-use development project located on 63 acres directly south of the Toll Road and east of Route 28. Fairfax County approved Dulles Station for transit-oriented development consisting of 1.5 million square feet of office space and 1.2 million square feet of space for multi-family residential use. The development will be centered on a planned transit parking area. In addition, more than nine million square feet of non-residential development is planned for Dulles Corner as part of the Dulles Suburban Center, which is identified in the adopted Comprehensive Plan for the area.

The Reston, Herndon, and Dulles Corner areas of Fairfax County are projected to grow to more than 119,000 residents and to provide 106,000 jobs by 2025. While many Herndon and Reston residents work in this growing technology hub, most still commute daily to other areas of the region, such as southern Fairfax County and the regional core (downtown Washington, D.C. and eastern Arlington, Virginia communities such as Rosslyn). In addition, many of the Reston-based businesses draw their employees from southern Fairfax County and the outer Northern Virginia suburbs.

1.4.2.4 Dulles Airport

Dulles Airport is an 11,000-acre, full-service, international airport with more than 370,000 annual domestic and international flights to accommodate passengers and air cargo. After several decades of steady growth, activity at the airport increased rapidly in the last several years of the twentieth century. From 1995 to 1998, the number of passengers using the airport increased by 28 percent, from 12.5 million to nearly 16 million. In 1999, Dulles was the fastest growing airport in the nation, serving 19.8 million passengers, a 26 percent increase from 1998, and handling 470,000 aircraft operations, a 23 percent increase from the previous year. More than 20 million passengers used the airport in 2000, including

more than 4 million international passengers. According to the MWAA website, the total number of passengers decreased in both 2001 and 2002 following the events of September 11, 2001. However, it is still anticipated that the airport will be able to accommodate 55 million annual passengers and more than 1 million metric tons of international and domestic freight when all planned facilities are built. Dulles Airport currently employs more than 18,800 people, and as airport passenger and cargo operations increase, employment is projected to increase as well.

Dulles Airport has expanded to accommodate the rapid increase in passengers, and more construction is planned in the future. Expansion of the terminal to twice its former size was completed in 1996, and two new concourses were opened in 1998 and 1999. In 2000, the MWAA launched a six-year, $2.6 billion capital construction program. The program includes construction of an underground people mover between the main terminal and concourses, additional public parking, a new concourse, and two new runways. At full build-out, Dulles will be able to handle 55 million passengers per year (150,000 per day).

The Smithsonian Institution's National Air and Space Museum Steven F. Udvar-Hazy Center is located on the south end of the airport property. The museum, which opened in December 2003, is a 700,000-square-foot facility on a 176-acre site. The Institution estimates that three million people will visit the museum annually. This number is projected to increase to five million annual visitors within a few years.

1.4.2.5 Eastern Loudoun County

Over the past ten years Loudoun County, in the westernmost portion of the Dulles Corridor, has experienced substantial growth spurred by the high-tech industry. America Online/Time Warner, MCI, and Orbital Sciences have added a total of 7,350 jobs to the eastern portion of the county. Nearly 50 percent of these jobs are located in Ashburn, home to the MCI campus. The campus is currently in the second phase of development and employs 3,300 people.

Most of the commercial development in Loudoun County is focused along Route 28, between Dulles Airport and Route 7. Due to its proximity to the airport, this area also includes a large amount of industrial development. In total, eastern Loudoun County is planned to include 9.2 million square feet of industrial space. There are a number of industrial parks to the north of Route 606 and the airport, the largest of which is the Beaumeade Corporate Park. This industrial park has more than 1.8 million square feet of office and industrial development already in place and is approved for a total of 3.5 million square feet in the future. A number of smaller office and industrial developments (existing and planned) are located closer to Route 606.

In addition to job growth, Loudoun County has been experiencing extensive population growth. Between 1990 and 1999, the county's population grew at a rate of roughly seven percent per year, making it the fastest-growing county in Virginia and one of the fastest growing counties in the nation. Much of this residential growth has occurred north of the Dulles Greenway and west of the Route 28 corridor.

Future development is planned for the residential communities of Ashburn Village and Ashburn Farm, which will have more than 9,000 homes and nearly 23,000 residents when completed. Other planned residential developments, which will include a mix of land uses, are Belmont, Broadlands, and Brambleton. Together these communities will include more than 11,000 homes, as well as substantial office and retail development. Much of this future development will be concentrated along the Dulles Greenway, west of the Route 28 corridor. In addition, two adjacent mixed-use developments, Loudoun

Station (awaiting site plan approval) and Moorefield Station, are planned for the areas north and south of the Route 772/Dulles Greenway interchange, near the proposed Route 772 Station.

1.4.3 CORRIDOR TRANSPORTATION SYSTEM

The transportation system in the corridor includes the existing roadway and transit networks. The diverse roadway network ranges from limited access highways to local streets. The transit network includes services from several providers, but is primarily limited to bus transit.

1.4.3.1 Roadway Network

The heart of the Dulles Corridor roadway network is the east-west transportation facility formed by the Dulles Connector Road, the DIAAH, the Dulles Toll Road in Fairfax County, and the Dulles Greenway in Loudoun County (see Figure 1.4-2).

The Dulles Connector Road is a four-lane facility that serves traffic using I-66 to and from the east, the Capital Beltway, Route 123, the Dulles Toll Road, and the DIAAH. In the eastbound direction, the shoulder of the Connector Road has been widened and reinforced, and buses are permitted to use it during periods of severe congestion. The Dulles Connector Road is owned by the federal government, leased by MWAA, and operated by Virginia Department of Transportation (VDOT).

The DIAAH is located in the median of the Dulles Toll Road and is reserved for travelers with business at Dulles Airport, including air passengers, air-freight customers, and employees. In peak periods, this roadway also provides access for express buses serving Fairfax County and Dulles Airport. The DIAAH is owned by the federal government, but is operated by MWAA under a long-term lease agreement with FAA.

The Dulles Toll Road is an eight-lane toll facility that provides direct access between the Capital Beltway, eastern Loudoun County, and various activity centers in between. The Dulles Toll Road is operated by VDOT.

The Dulles Greenway is a four- and six-lane privately owned toll facility that connects to the Dulles Toll Road at Route 28 and extends to the Route 7 Bypass east of Leesburg. Together, the Toll Road and the Greenway form Route 267.

Other regionally essential roadways include Interstate 66 (I-66), Interstate 495 (I-495, Capital Beltway), Route 7 (Leesburg Pike), Route 123 (Chain Bridge Road/Dolley Madison Boulevard), Route 193 (Georgetown Pike), Route 7100 (Fairfax County Parkway), Route 28 (Sully Road), Route 50 (Lee-Jackson Memorial Highway), and the Loudoun County Parkway. Route 7 and Route 193 form the northern boundary of the corridor, while I-66 and Route 50 form the southern boundary. These roadways are primarily oriented east-west. I-495, Route 123, Route 7100, and Route 28 provide north-south passage through the corridor, connecting to its northern and southern boundaries, and, in most cases, extending beyond the corridor.

With the exception of Route 193 and portions of the Loudoun County Parkway, which have two lanes in some locations, these regional roadways are limited-access freeways or arterial routes with at least four lanes. Portions of I-66, Route 7, Route 123, Route 50, and Loudoun County Parkway have six lanes, and Route 28 has six lanes throughout. I-495 is an eight-lane facility. Segments of several of these regional roadways are planned for expansion within the next ten years.

Other key roadways in the corridor that provide access to the DIAAH, the Dulles Toll Road, and the Greenway include Hunter Mill Road, Wiehle Avenue, Reston Parkway, Centreville Road, and Route 606. These roads primarily serve local travelers in north and central Fairfax County and eastern Loudoun County. Hunter Mill Road provides north-south access through most of the corridor, roughly extending between Route 7 in the north and I-66 in the south. Similarly, Reston Parkway allows north-south travel through the corridor, extending between Route 7 and the southern portion of Reston, where it briefly becomes Lawyers Road, then merges into Route 608 (West Ox Road), and eventually connects to Route 50 at the southern end of the corridor. Centreville Road and Route 606 serve travel in the vicinity of Dulles Airport, extending between the Town of Herndon and Route 50. Centreville Road serves travelers on the east side of the airport, whereas Route 606 runs along the northern and western edges of the airport.

Two other roadways of note are Sunset Hills Road and Sunrise Valley Drive. These collector roadways parallel the Dulles Toll Road, and provide access to neighborhoods and office complexes bordering the Toll Road. To some extent, Sunset Hills Road and Sunrise Valley Drive are alternative routes to the Toll Road through Reston.

1.4.3.2 Transit Network

Existing transit services within the Dulles Corridor include Metrorail and Metrobus operated by WMATA, express and local buses provided by Fairfax County, express and local buses provided by Loudoun County, and Washington Flyer buses provided by MWAA. These transit services are integrated with transit centers and park-and-ride lots throughout the corridor.

A. WMATA

WMATA is the Washington, D.C. metropolitan region's primary public transportation provider. Created in 1967 through a congressionally approved interstate compact, WMATA is the public agency responsible for planning, developing, constructing, and operating the regional rail, bus and paratransit systems. The agency now operates a multi-branch network stretching nearly 1,500 square miles of the District of Columbia, Arlington County, Fairfax County, the City of Alexandria, and the City of Fairfax in Virginia; and Montgomery and Prince George's counties in Maryland—an area encompassing approximately 3.2 million residents.

Metrorail is the rapid rail component of WMATA's public transportation system (see Figure 1.4-3). With 103 miles of track and 83 stations, the Metrorail system connects major activity centers within the region's urban core to those within and beyond the Capital Beltway. The system also links to the two regional commuter rail systems: Virginia Rail Express (VRE) and the Maryland Rail Commuter (MARC) service. In 2004, the Metrorail system carries approximately 650,000 weekday passengers. The Metrorail Orange Line serves the southeastern portion of the Dulles Corridor, with stations at East Falls Church, West Falls Church, Dunn Loring, and Vienna (see Figure 1.4-3). These stations primarily serve travel to and from the region's core, and do not adequately serve travel within the Dulles Corridor.

Metrobus, WMATA's regional bus system, operates 322 routes. Systemwide, Metrobus carries 510,000 daily passengers in 2004. Currently, 14 Metrobus routes operate in the Dulles Corridor, primarily providing service between Tysons Corner, the corridor Metrorail stations, and areas to the south and east. Several of the routes also provide feeder service to the Ballston and Rosslyn Metrorail stations in Arlington. One route provides express service between downtown Washington, D.C. and Dulles Airport, with stops at the Tysons-West Park Transit Station and the Herndon-Monroe Park-and-Ride, and another provides express service between downtown and Tysons Corner Center. Though some routes operate



LEGEND

- Red Line • Glenmont to Shady Grove
- Orange Line • New Carrollton to Vienna/Fairfax-GMU
- Blue Line • Franconia-Springfield to Largo Town Center
- Green Line • Branch Ave to Greenbelt
- Yellow Line • Huntington to Mt Vernon Sq/7th St-Convention Center

Station in Service
Planned station
Transfer station
Virginia Railway Express
MARC
Commuter Rail
Parking

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WASHINGTON METROPOLITAN
AREA TRANSIT AUTHORITY

Figure 1.4-3

Regional Metrorail System

Dulles Corridor
Rapid Transit Project

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with 20- or 60-minute headways, most operate with 30-minute headways during the peak period. Many corridor buses are frequently delayed by heavy traffic congestion in Tysons Corner and elsewhere in the region.

B. Fairfax County

Fairfax County provides public transportation via the Fairfax Connector bus system. The system includes 54 regular routes operating throughout the county, some of which provide connections to Falls Church, Arlington, and Alexandria. The Fairfax Connector service also includes four Reston Internal Bus Service (RIBS) routes, which provide circulator service within the Reston-Herndon area. Fairfax Connector had 27,800 average weekday boardings systemwide in 2004.

The Dulles Corridor is served by 28 of the Fairfax Connector routes. This service includes Express Bus Service operating in the DIAAH and Dulles Toll Road, RIBS circulator service in Reston-Herndon, and circulator services operating within Tysons Corner. In general, peak service frequencies range from 15 minutes to 30 minutes. In 2003, Fairfax Connector ridership in the corridor was on average approximately 13,800 weekday passengers.

C. Loudoun County

Currently, Loudoun County contracts to provide 16 peak-period express bus trips from the eastern part of the county to Rosslyn, the Pentagon, the State Department, and other locations in downtown Washington, D.C. The County also provides reverse-peak express trips from West Falls Church Metrorail Station to Dulles North Transit Center and the AOL/MCI campuses in the county (one trip in the a.m. peak, two trips in the p.m. peak). Recently, the County began offering local circulator services along Route 7, in the Sterling and Purcellville areas, and between Dulles Town Center and Dulles Airport. A major hub for the County's express and local service is the 750-space Dulles North Transit Center at the north end of Dulles Airport near the Route 606/Dulles Greenway interchange. In 2004, Loudoun County's Express Bus Service serves about 1,700 average weekday passengers.

D. Transit Centers

An important element of the existing Dulles Corridor transit service is the network of bus transit centers and park-and-ride lots. Overall, there are ten bus transit facilities in the corridor, including the Dulles North Transit Center, the Herndon-Monroe Park-and-Ride lot in Herndon, 3 park-and-ride lots in Reston (Reston South, Reston East, and Reston North), and the Tysons-West Park Transit Station in Tysons Corner, among others. Most of these transit centers provide short-term parking or Kiss & Ride spaces for passengers being dropped off or picked up, and seven centers also provide all-day parking for commuters. Commuter parking is in heavy demand at the eastern end of the corridor. As a result, the parking facilities at the East Falls Church and West Falls Church Metrorail stations, and at the Reston East Park-and-Ride near the Wiehle Avenue/Dulles Toll Road interchange are generally full on an average weekday.

1.4.4 TRAVEL PATTERNS

Historically, the largest segment of travel in the Washington metropolitan region consisted of work travel between suburban homes and jobs in the urban core, and discretionary trips within suburban residential areas. However, continuing growth in employment and retail development in the Maryland and Northern Virginia suburbs shows the changing patterns in which people commute, shop, and travel. Regional travel currently includes a growing number of suburb-to-suburb work trips, core-to-suburb work trips, and discretionary trips to regional entertainment and shopping centers in the suburbs.

As one of the major suburban employment and retail centers in the region, the Dulles Corridor attracts work trips from residences in the core and other suburban areas, as well as shopping and entertainment trips to venues such as Tysons Corner Center, Tysons Galleria, and Wolf Trap National Park. Corridor travel also includes traditional trips from residences in the corridor to jobs in the urban core, trips to work centers in other suburban areas, and discretionary trips from residences to nearby shopping and services.

Though corridor-related trips are projected to increase from 2.2 million to 3.2 million trips per day by 2025, only minor changes in travel patterns are expected within the corridor, because most of the employment and population growth in the corridor is planned for existing and emerging activity centers. The existing and expected patterns for corridor-related travel are summarized in Tables 1.4-1 to 1.4-3. These tables do not present information on travel to and from various areas within the corridor; rather, travel patterns are shown for the corridor as a whole.

Table 1.4-1: Total Weekday Corridor-Related Travel

Movement	2000		2025	
	Corridor Related Trips	Percent of Total	Corridor Related Trips	Percent of Total
Within Corridor	870,000	40%	1,300,000	40%
Between Corridor and Fairfax Other	650,000	30%	830,000	26%
Between Corridor and Virginia Other	270,000	13%	580,000	18%
Between Corridor and Arlington Core	200,000	10%	270,000	9%
Between Corridor and Montgomery Other	160,000	7%	230,000	7%
Corridor-Related Trips	**2,150,000**	**100%**	**3,210,000**	**100%**

Trip totals are rounded to the nearest 10,000 and percentages are rounded to the nearest percent. As a result, some totals do not equal 100 percent.

"Fairfax Other" includes those portions of Fairfax County that are not part of the Dulles Corridor. "Virginia Other" includes the City of Alexandria, outlying portions of Loudoun County, and other outlying Virginia counties. "Core" includes the central portion of Washington, D.C. "Montgomery" is Montgomery County, Maryland. "Other" includes other portions of Maryland and portions of Washington, D.C. outside the core.

Source: Projections prepared using MWCOG Round 6.3 Cooperative Forecasts.

Table 1.4-2: Total Weekday Corridor-Related Work Travel

Movement	2000		2025	
	Corridor Related Work Rips	Percent of Total	Corridor Related Work Trips	Percent of Total
Between Corridor and Fairfax Other	140,000	30%	180,000	26%
Within Corridor	110,000	24%	180,000	26%
Between Corridor and Virginia Other	80,000	18%	160,000	25%
Between Corridor and Arlington Core	70,000	14%	80,000	13%
Between Corridor and Montgomery Other	60,000	13%	80,000	10%
Corridor-Related Work Trips	**460,000**	**100%**	**680,000**	**100%**

Trip totals are rounded to the nearest 10,000 and percentages are rounded to the nearest percent. As a result, some totals do not equal 100 percent.

Source: Projections prepared using MWCOG Round 6.3 Cooperative Forecasts.

Table 1.4-3: Total Weekday Corridor-Related Work Travel by Transit

Movement	2000		2025	
	Corridor Work Trips or Transit	Percent of Total	Corridor Work Trips or Transit	Percent of Total
Between Corridor and Arlington Core	19,000	53%	26,000	47%
Between Corridor and Fairfax Other	5,000	14%	8,000	14%
Within Corridor	4,000	11%	9,000	17%
Between Corridor and Montgomery Other	5,000	14%	8,000	15%
Between Corridor and Virginia Other	3,000	7%	4,000	7%
Corridor-Related Work Trips by Transit	**36,000**	**100%**	**55,000**	**100%**

Trip totals are rounded to the nearest 1,000 and percentages are rounded to the nearest percent. As a result, some totals do not equal 100 percent.

Source: Projections prepared using MWCOG Round 6.3 Cooperative Forecasts.

1.4.4.1 Overall Travel

The majority of travel in the Dulles Corridor is between points within the corridor or between the corridor and other parts of Northern Virginia. According to estimates prepared by the project team, based on MWCOG projections of population and employment, approximately 40 percent of all corridor-related travel in 2000 was between homes and activity centers within the corridor. An additional 30 percent of corridor-related travel was between the corridor and the southern portions of Fairfax County, and approximately 13 percent was from the outer Virginia suburbs (including western Loudoun, Prince William, Fauquier, and Stafford Counties, and other outlying jurisdictions) to the corridor. Approximately ten percent of corridor-related trips are to and from Arlington County and the regional core, while the remaining seven percent of trips are to and from the Maryland suburbs and Washington, D.C.

In the next 25 years, these patterns are expected to change very little, though the number of trips is expected to increase considerably, especially between the corridor and the outer Virginia suburbs. Travel within the corridor is projected to remain the largest share of corridor-related travel. The next largest share of corridor-related travel is expected to be to and from other parts of Northern Virginia, though the percentage of trips to other parts of Fairfax County is expected to decrease to 26 percent, while the share of trips to and from the outer Virginia suburbs is expected to increase to 18 percent.

Travel to and from the Dulles Corridor is currently spread fairly evenly among the various activity centers. Vienna and the southern parts of the corridor produce a slightly larger share of trips due to the greater concentration of residential developments in these areas. Trips go to and come from all parts of the corridor and the region, but most trips in the corridor begin and end within one activity center or involve travel between neighboring activity centers.

Dulles Airport draws travelers from the entire region, including air passengers, airport employees, and freight carriers. Based on 1998 MWAA traffic counts, approximately 60 percent of the airport traffic uses the DIAAH, and 40 percent of travelers access the airport via Route 28. As the overall number of trips to the airport vicinity increases, the share of traffic coming from the Route 28 corridor is also expected to increase.

1.4.4.2 Work Travel

A key component of the overall travel patterns for the Dulles Corridor is work travel. Work trips most directly influence the effectiveness of the transportation system, because they tend to be limited to the morning and evening peak periods, resulting in the maximum traffic volumes experienced by the system.

For current corridor-related work travel, the largest movements are between the corridor and the southern portions of Fairfax County (30 percent) and between residences and jobs within the corridor (24 percent). Nearly 60 percent of the trips between the corridor and southern Fairfax County are from residences in the county to jobs in the corridor; corridor residents who work in the county make up the remaining 40 percent. Approximately 18 percent of corridor-related work travel consists of trips between the outer Virginia suburbs and the corridor; most of these trips are from residences in the outlying areas to jobs in the corridor. Corridor residents who are employed in western Arlington and the regional core make up another 14 percent of corridor-related work trips, and the remaining 13 percent are between the corridor and the Maryland suburbs and non-core portions of Washington, D.C.

By 2025, it is expected that corridor-related work travel patterns would shift slightly. Jobs within the corridor are expected to attract an increasing share of corridor residents and residents of the outer Virginia suburbs. At the same time, the share of work trips between the corridor and other portions of Fairfax County is expected to decrease. Likewise, it is anticipated that the share of corridor residents attracted to jobs in the region's core would decrease.

In 2000, nearly 30 percent of all the work trips attracted to the Dulles Corridor went to Tysons Corner. The remaining trips were distributed uniformly between employment centers in Reston, Herndon, Dulles Airport, eastern Loudoun County, and the southern portion of the corridor near Vienna. By 2025, the anticipated growth in eastern Loudoun County is expected to cause a shift in the distribution of work travel within the corridor. The largest share of corridor work trips (28 percent) is expected to go to eastern Loudoun County and the Tysons Corner share of the market would decrease to 25 percent, though the absolute number of trips to both places are expected to increase substantially (from 45,000 to 132,000 daily trips in Loudoun County, and from 85,000 to 118,000 daily trips in Tysons Corner). Reston and Vienna are also expected to attract a smaller share of corridor work trips. The majority of the eastern Loudoun County employees are expected to live in that portion of the corridor or in the outer Virginia suburbs.

1.4.4.3 Work Travel by Transit

Currently, few corridor residents and employees use transit to travel to work. Based on estimates prepared using the Northern Virginia Major Investment Study Model (NVMISM) and the recent MWCOG population and employment forecasts, only 12 percent (30,000 trips) of the work trips beginning in the corridor are made using transit, and an even smaller percentage of travelers commuting to jobs in the corridor use transit (5 percent or 10,000 trips).

Corridor residents who work in western Arlington and the region's core are far more likely to use transit for their commute than other travelers in the Dulles Corridor. For work travel, residents of the Dulles Corridor who work in western Arlington and the core make 60 percent of all corridor-related transit travel. The next largest share of this travel market are work transit trips between the corridor and southern Fairfax County (15 percent), most of which are made by county residents who work in the corridor. Corridor residents who also work in the corridor make up an additional ten percent of work transit trips. This pattern is not expected to change considerably by 2025, in the absence of the proposed project.

About 53 percent of the corridor-related work transit trips are associated with the West Falls Church and Vienna areas, most likely due to the presence of Metrorail. Most of these trips are made by residents of these areas, rather than by employees. Approximately 23 percent of corridor-related work transit trips are to and from Tysons Corner; however, employees of Tysons Corner rather than residents mostly make

these trips. Residents in the Reston area generate an additional 11 percent of work transit trips in the corridor.

For the baseline condition in 2025, the overall number of work trips made by transit is expected to increase by close to 20,000 trips per day, but the patterns of transit travel are not expected to change substantially. Only 47 percent of the corridor-related work transit trips in 2025 are anticipated to be either to or from West Falls Church and Vienna, whereas Reston transit trips are expected to increase to 14 percent. The share of work transit trips bound for Tysons Corner is not expected to change in 2025.

1.5 NEED FOR IMPROVEMENTS

The transportation needs of the Dulles Corridor have been documented previously in numerous studies and plans (see Section 1.3). The analyses conducted for these studies focused on several interrelated elements.

- **Anticipated Population and Employment Growth.** Growth in the Dulles Corridor is expected to continue at higher rates than the region as a whole.
- **Future Land Use and Development Plans.** Local land use plans call for higher-intensity office, retail, and residential development at existing activity centers in the corridor, and allow for concentrated development on parcels at the emerging activity centers in Dulles Corner and eastern Loudoun County.
- **Increased Travel Demand.** More residents and more job opportunities, when combined with expected increases in passenger and freight operations at Dulles Airport, will result in higher travel demand on highways and streets in the Dulles Corridor and throughout the region.
- **Limitations of the Existing and Planned Roadway System.** Existing travel demand is straining the roadway system to its capacity, resulting in moderate to severe congestion throughout the Dulles Corridor. Despite planned capacity improvements for various corridor roadways, the future highway system will be unable to meet the anticipated increases in travel demand. However, with a limited amount of remaining right-of-way, the corridor will be unable to support further roadway capacity enhancements.
- **Limitations of the Existing Transit System.** Many existing transit services are a poor alternative to auto travel, because they are also affected by increasing roadway congestion and many services have higher travel times between key origins and destinations than travel by private auto. In the future, transit services that continue to operate on congested roadways will not effectively serve growth in travel demand.
- **Air Quality.** The inability to serve the anticipated demand will cause substantial deterioration in highway and transit operations in the Dulles Corridor, contributing to increased air quality problems in the Washington metropolitan region.

The combined effect of these elements creates a need for improved transportation alternatives and connections in the Dulles Corridor.

1.5.1 ANTICIPATED POPULATION AND EMPLOYMENT GROWTH

MWCOG expects that population and employment in the Dulles Corridor will increase more rapidly than the metropolitan regional averages. Analysis of MWCOG's Cooperative Forecast Data on population, employment, and household growth shows that by 2025, the corridor will experience a 63 percent increase in jobs, compared to an average increase of 41 percent throughout the region. Likewise,

population in the corridor is expected to increase 45 percent between 2000 and 2025, compared to 32 percent population growth in the region. MWAA projects that Dulles Airport will experience considerable increases in air travel patronage, air cargo operations, and employment. Growth in passenger use alone is projected to reach 55 million trips by 2035—more than twice the current level.

Given these projected levels of growth, improving corridor mobility and creating better intermodal connections will be key factors in meeting the transportation needs of residents and employees in the corridor, as well as the needs of increasing numbers of visitors to the region.

1.5.1.1 Population

Growth statistics for the Washington metropolitan region indicate that current and anticipated growth in suburban population centers far outpaces residential growth in the region's core, especially for centers in Northern Virginia. According to MWCOG and U.S. Census data, in 1960 Washington, D.C. was the region's largest population center with 764,000 residents, and Fairfax County was the region's fourth largest jurisdiction with 275,000 residents. By 2000 the two jurisdictions had switched places: Fairfax was the largest jurisdiction in the region, with almost 970,000 residents, compared to Washington, D.C.'s 572,000 residents according to census data. The latest MWCOG forecasts indicate that this growth trend is expected to continue, with Fairfax County population totals reaching about 1.2 million residents. This total exceeds not only Washington, D.C.'s projected total (666,000 residents), but also the total for Washington, D.C., Arlington County, and the City of Alexandria combined (1 million residents). Moreover, in this same time frame, the outer suburbs in Northern Virginia are expected to grow at a substantial rate. In Loudoun County alone, the population is expected to increase 150 percent from about 169,000 people to over 422,000 people.

Growth trends in Fairfax County and Loudoun County are reflected in the anticipated growth for the Dulles Corridor. As shown in Table 1.5-1, the regional population is expected to increase from nearly 4.5 million residents to around 5.9 million residents by 2025, an increase of about 32 percent. At the same time, the population in the Dulles Corridor is expected to grow by about 45 percent, from approximately 370,000 residents to about 540,000 residents.

Table 1.5-1: Population within the Region and the Dulles Corridor

	2000	2005	2010	2015	2025
Region					
Population	4,458,797	4,877,851	5,208,832	5,507,071	5,887,286
Persons/Acre	1.60	1.75	1.87	1.98	2.12
Corridor					
Population	371,578	425,295	469,787	500,716	539,294
Persons/Acre	3.23	3.70	4.09	4.36	4.69

Source: MWCOG, Round 6.3 Cooperative Forecasts

The bulk of the population growth in Fairfax County will be concentrated around Tysons Corner, Reston, and Herndon, with densities reaching greater than ten persons per acre. In the Loudoun County portion of the corridor growth is projected to occur primarily in the eastern portion of the county, along the Dulles Greenway and Route 28. Here, the number of residents is expected to increase to almost 167,000 from 2000 to 2025. This is an increase of more than 103,000 residents and represents more than 37 percent of all population growth in Loudoun County.

1.5.1.2 Employment

Despite strong employment growth in the Maryland and Northern Virginia suburbs, MWCOG Cooperative Forecasts show that, in 2000, Washington, D.C. had the single largest concentration of employment, with nearly 680,000 jobs. The urban core is expected to remain the largest regional employment center, as it continues to contain the seat of government and the headquarters of most federal agencies. The next largest employment centers were Montgomery County and Fairfax County, with approximately 545,000 jobs and about 573,000 jobs, respectively. Overall, the combined employment totals for the inner suburbs (1.4 million jobs in Montgomery, Prince George's, and Fairfax Counties, and Rockville, City of Falls Church, and City of Fairfax) were greater than those for the three central jurisdictions (about 978,000 jobs in Washington, D.C., Arlington County, and City of Alexandria).

In 2025, Washington, D.C. is expected to remain the region's largest employment center, with an increase of approximately 153,000 jobs. The largest absolute job growth is anticipated in Fairfax and Prince George's counties, with increases of approximately 205,000 jobs and 190,000 jobs, respectively. However, the largest percentage growth in employment, by far, is expected in Loudoun County with a 158 percent increase in jobs. Throughout the region, nearly two thirds of all new jobs are anticipated to be in the service industry, which includes professions related to engineering, computer and data processing, business services, and medical research, among others.

Reflecting the substantial employment increases in Fairfax and Loudoun counties, the Dulles Corridor is projected to have a similar increase in employment between 2000 and 2025. Table 1.5-2 shows that regional employment is forecast to grow by nearly 41 percent between 2000 and 2025—higher than the rate seen for population and household growth. The number of jobs in the Dulles Corridor is projected to increase by roughly 63 percent, adding nearly 185,000 jobs to the corridor.

Table 1.5-2: Employment within the Region and the Dulles Corridor

	2000	2005	2010	2015	2025
Region					
Employment	2,826,210	3,079,949	3,376,883	3,584,716	3,994,729
Jobs/Acre	1.02	1.11	1.21	1.29	1.44
Corridor					
Employment	292,067	339,679	387,332	413,549	477,047
Jobs/Acre	2.54	2.96	3.37	3.60	4.15

Source: MWCOG, Round 6.3 Cooperative Forecasts

The Fairfax County portion of the corridor is expected to have the largest absolute increase in number of jobs, but it is anticipated that the Loudoun County portion of the corridor will have the largest percent increase in employment. According to MWCOG data, it is anticipated that about 83,000 jobs will be added from 2000 to 2025 in the Loudoun County portion of the corridor, resulting in an average density of more than 4 jobs per acre in the employment zones along the Dulles Greenway, and accounting for almost 60 percent of all employment growth in Loudoun County. A major contributor to job growth in Loudoun County is Dulles Airport, which is one of the largest employers in the corridor with more than 18,800 employees. As passenger and cargo operations at Dulles Airport increase, employment is projected to increase to 65,000 employees by 2035.

1.5.2 FUTURE LAND USE AND DEVELOPMENT PLANS

The economic benefits of new development in the Dulles Corridor are influential not only for Fairfax and Loudoun counties, but for the region as a whole. Improved transportation alternatives and connections are needed to keep pace with the increased travel demand and the patterns of travel created by new development. In response to growing population and employment in the corridor, residential development and commercial real estate activity are occurring at a record pace. More than 23 million square feet of development has recently been constructed or approved for development. As noted in Section 1.4, much of this development is occurring in the vicinity of Dulles Airport at the western end of the corridor. Activity centers such as Dulles Corner and eastern Loudoun County are becoming known as technology and communications centers. Rapidly growing high-tech companies and professional service firms are purchasing and developing large amounts of land in these areas, fueling the region's largest commercial construction boom in a decade.

Most of the planned development in the corridor over the next 25 years is slated to occur in the existing and emerging activity centers. Development in Tysons Corner is expected to intensify, including higher-density infill development and redevelopment. Office development will be supported by retail and services, and in some cases will be intermixed with higher-intensity residential development. Undeveloped land in the Reston-Herndon area is planned for additional office, retail, and residential use. In the vicinity of key interchanges along the Dulles Toll Road, existing commercial development could be intensified. The current development activities in Dulles Corner and eastern Loudoun County will continue, including large-scale regional office development, hotels, industrial parks, higher-density residential development, and mixed-use development with office, residential, and retail space.

New development is also planned at Dulles Airport to accommodate the anticipated increases in passenger and cargo service. This development includes a new concourse, a new runway, and additional parking, all of which will increase travel demand in the corridor.

1.5.3 INCREASED TRAVEL DEMAND

Continued growth in the Dulles Corridor will result in noticeably higher travel volumes throughout the corridor and the region. Between 2000 and 2025, it is estimated that regional travel will increase by 29 percent, growing from 18.2 million person trips per day to 23.5 million person trips per day. Similarly, work trips in the region are expected to increase 32 percent, from 3.7 million trips per day to 4.9 million. The highest concentrations of travel growth for the region will occur in the Dulles Corridor and the outer Virginia suburbs, especially for trips to and from eastern Loudoun County. Between 2000 and 2025, the total number of corridor-related trips is expected to increase 45 percent (from 2.2 million trips to 3.2 million), while the total number of trips to and from eastern Loudoun County is projected to increase nearly 188 percent (from 400,000 trips to 1.1 million). Work trips to and from eastern Loudoun County are also expected to increase 191 percent (from 70,000 trips to 204,000). In addition, substantial growth is projected for work trips to Herndon and the northern Route 28 corridor (a 65 percent increase from 61,000 to 100,600 trips).

As discussed in Section 1.4.4, it is anticipated that eastern Loudoun County will attract a larger share of overall corridor-related travel, including an increasing number of trips made by residents from other parts of the corridor (from 50,000 daily trips in 2000 to 103,000 trips in 2025). However, other corridor activity centers will continue to attract and produce large numbers of trips. For example, employment and shopping opportunities in Tysons Corner and Reston will continue to attract numerous residents from the

Dulles Corridor, other parts of Fairfax County, and the outer Virginia suburbs (more than 550,000 daily trips). Jobs in the region's core will also continue to attract large numbers of corridor residents (nearly 95,000 residents).

The minor changes in corridor travel patterns, combined with increasing numbers of trips, will result in noticeably higher traffic volumes throughout the Dulles Corridor. Based on VDOT estimates and project team projections, it is expected that between 2000 and 2025, eastbound traffic volumes on the Dulles Toll Road will increase from 6,200 vehicles to 8,200 vehicles in the peak hour between Hunter Mill Road and Reston Parkway (excluding the high-occupancy vehicle lanes). Similarly, peak volumes at specific locations along other major arterials within the corridor are expected to increase substantially. For example, westbound volumes on the Dulles Connector Road are expected to increase from 3,600 to 6,200 vehicles, while eastbound traffic on the Dulles Greenway is expected to grow from 3,300 to 8,100 vehicles and westbound traffic on Route 50 is projected to increase from 5,700 to 8,300 vehicles. Increasing volumes on these regional routes will force more vehicles onto local roads, causing increases in delay at many key intersections throughout the corridor. For example, in Tysons Corner project team estimates indicate substantial increases in delay are likely along Route 7, International Drive, and Westpark Drive. For some of these locations, delay is expected to increase by nearly 300 seconds, indicating considerable growth in the number of vehicles on the roadways (see Chapter 6 for more detailed information on traffic volumes and intersection delay).

1.5.4 LIMITATIONS OF THE EXISTING ROADWAY SYSTEM

For much of the Dulles Corridor transportation network, current traffic volumes meet or exceed the capacity of roadways and intersections, causing severe congestion in the corridor. Typically, the level of congestion on a roadway or at an intersection is reflected by a qualitative measure called level of service (LOS). In general, LOS represents the average delay experienced by vehicles traveling along a road or through an intersection. Six letter designations (A through F) are used to represent different levels of service, with LOS A reflecting free flow conditions and LOS E and F representing very congested or gridlock conditions. Many of the facilities in the Dulles Corridor are currently at LOS E and F, and increasing demand is only expected to worsen conditions.

As part of efforts to ease congestion in the corridor several roadway expansion projects are planned over the next 20 years. Additional lanes are planned for many corridor routes—including the DIAAH, the Dulles Greenway, I-495, Route 7, Route 123, Route 7100, Route 28, and the Loudoun County Parkway. Most of these routes will be widened for much of their length through the corridor. Additional capacity enhancements include interchange improvements for I-66, the Dulles Toll Road, and I-495, and plans to convert the existing at-grade intersections along Route 28 into interchanges. All of these improvements are scheduled to be in place by 2025, and many will be implemented sooner.

Anticipated transportation improvements are not expected to improve overall travel conditions in the corridor. Forecasts for 2025, which take the planned improvements into account, show that I-66, I-495, the Dulles Connector Road, the Dulles Toll Road, and Route 50 are projected to continue to operate at LOS E or F in the peak hour. At the same time, traffic conditions on the DIAAH and the Dulles Greenway are expected to deteriorate (from LOS C to D and LOS D to F, respectively). Likewise, as detailed in Chapter 6, numerous intersections throughout Tysons Corner, Reston, and Herndon are expected to remain at, or worsen to, LOS E and F.

Though the transportation system requires additional capacity to serve the ever-increasing travel demands in the Dulles Corridor, expansions to the roadway network are constrained by limitations of right-of-way and development patterns. The existing and planned development in the corridor restricts the amount of land available for roadway expansion projects. The expansion of the Dulles Toll Road to an eight-lane facility in 1998 used its remaining right-of-way; as a result, adding new traffic lanes to the main east-west route through the Dulles Corridor is no longer viable. Other planned roadway improvements in the corridor will use the majority of the remaining right-of-way. Further roadway expansions would likely have impacts on a substantial number of businesses and residents.

1.5.5 LIMITATIONS OF THE EXISTING TRANSIT SYSTEM

Because the existing transit system in the Dulles Corridor operates on the congested roadways described above, it offers a limited alternative to auto travel. Congestion reduces the reliability of transit services and increases transit travel times because, in addition to traveling in slow-moving traffic, transit vehicles have to stop to pick up and drop off passengers. For travel between several key origins and destinations in the corridor and the region, current transit travel times are approximately 20 to 30 minutes more than those for travel by private auto. As a result, transit in the corridor is not an attractive travel alternative—as reflected by the nine percent transit share of all daily work trips (approximately 40,000 trips)—and does little to effectively serve the existing high levels of travel demand.

Over the next 25 years, the share of daily transit travel is expected to remain relatively low. Though the absolute number of corridor-related daily transit trips is projected to increase by more than 30,000 trips per day, the transit share of daily work trips is expected to remain at nine percent between 2000 and 2025. This share is much lower than the 16 percent transit share experienced region-wide for daily work travel.

Though transit improvements are needed in the corridor, the effectiveness of planned expansions to the corridor transit system—including enhancements to Fairfax County bus service and new Express Bus Service for Loudoun County—would be hampered by increasing roadway congestion. With the exception of several express routes that use the DIAAH, nearly all transit routes in the corridor travel on the same general-use traffic lanes and arterial routes that private vehicles use. As a result, many of the enhanced transit services in the corridor will continue to experience increased travel times and reduced schedule reliability, decreasing their attractiveness as an alternative to auto travel in the corridor and limiting their ability to adequately serve the anticipated growth in travel demand. (For some routes, however, increases in express and local service are expected to reduce wait times, improving overall travel times for these routes by five to ten minutes.)

Consequently, in order for transit to be effective in the corridor, it would need to operate in a separate or restricted right-of-way. Through operation in a dedicated right-of-way, transit service would be able to bypass much of the congestion in the corridor, offering travel time savings and providing a viable alternative to auto travel on congested roadways.

The DIAAH is an underutilized transportation resource in the corridor, with the potential for developing additional capacity in a separate or restricted right-of-way. The roadway extends through most of the corridor, is close to all the key activity centers in the corridor, and has limited access with reasonably free-flowing traffic, which aids the existing Express Bus Service. In addition, the median of the DIAAH has been reserved for the last 35 years for a future transit line and is capable of supporting a rail line.

1.5.6 AIR QUALITY

Current traffic congestion in the Dulles Corridor contributes to air quality problems in the Washington metropolitan region. The region has been designated a severe non-attainment area for ozone, one of the six criteria pollutants monitored by the U.S. Environmental Protection Agency (EPA). A severe non-attainment designation indicates that the measured ozone levels exceed the National Ambient Air Quality Standards (NAAQS) for this pollutant. As a severe non-attainment area, the Washington DC region is required to meet standards defined by the Clean Air Act by November 2005.

To ensure compliance with the NAAQS, each state must develop a State Implementation Plan (SIP) demonstrating that every effort is being made to achieve or maintain attainment status. New programs or projects must be in compliance with this SIP. Because emissions from autos are major components in the formation of ozone, the SIP for Virginia includes transportation control measures to reduce vehicle miles traveled. Reducing vehicle miles traveled should lead to a decrease in emissions and, over time, contribute to the attainment of air quality standards in the region.

Accordingly, there is a need to develop improvements along the Dulles Corridor that would reduce vehicle miles traveled and emissions. The transportation improvements currently planned for the corridor will be unable to effectively serve the anticipated increases in demand and, as a result, congestion and emissions would likely increase. To help attain regional air quality goals, additional transportation improvements in the corridor must be able to move high volumes of travelers while generating low pollutant emissions and reducing vehicle miles traveled.

1.6 GOALS AND OBJECTIVES

The LPA evaluated in this Final EIS was developed to meet a specific set of goals and objectives designed to address the transportation needs of the corridor, as well as the transportation goals of the region. Accordingly, the LPA was assessed to determine how well it would:

- Improve transportation service;
- Increase transit ridership;
- Support future development;
- Support environmental quality;
- Provide cost-effective, achievable transportation solutions; and
- Serve diverse populations.

These goals for the Dulles Corridor Rapid Transit Project were originally developed as part of the 1997 MIS. The goals and objectives were reviewed, discussed, and adjusted in response to stated public concerns over the course of project development throughout the MIS process and as part of the preliminary environmental review process for the Draft EIS. The goals and current objectives for the Dulles Corridor Rapid Transit Project are outlined in Table 1.6-1 on the following page. Because several of the goals are interrelated, some of the objectives apply to more than one goal.

Based on these goals and objectives, a set of specific evaluation criteria were developed to determine the relative advantages and disadvantages of each alternative proposed for the Dulles Corridor Rapid Transit Project. The four basic categories of evaluation criteria were: social, environmental, economic, and transportation. In this Final EIS, these criteria and the results are documented to help decision-makers

understand and identify similarities, differences, and trade-offs between the Locally Preferred Alternative and the No Build Alternative and how the LPA was selected.

Table 1.6-1: Goals and Objectives

Goals	Objectives
Goal 1 Improve Transportation Service	▪ Provide more frequent service for trips to the core of the region, Tysons Corner, Reston/Herndon, Dulles Airport, and eastern Loudoun County. ▪ Provide multi-modal access. ▪ Improve travel times within the corridor and the region. ▪ Provide integrated, seamless transit service to Tysons Corner and other major activity centers. ▪ Provide improved transit service in the corridor in the near term.
Goal 2 Increase Transit Ridership	▪ Provide more frequent service for trips to the core of the region, Tysons Corner, Reston/Herndon, Dulles Airport, and eastern Loudoun County. ▪ Provide multi-modal access. ▪ Improve the amenities of the existing transit service within the corridor and the region. ▪ Improve travel times within the corridor and the region. ▪ Provide integrated, seamless transit service to Tysons Corner and other major activity centers. ▪ Provide improved transit service in the corridor in the near term.
Goal 3 Support Future Development	▪ Provide improved accessibility to existing and planned activity centers in the corridor and the region. ▪ Provide transit service that supports and is consistent with the character of the existing and future land use and development. ▪ Provide stations that are compatible with the character of the surrounding neighborhoods and encourage transit use.
Goal 4 Support Environmental Quality	▪ Contribute to the attainment of regional air quality standards. ▪ Minimize negative impacts to traffic patterns. ▪ Minimize negative impacts on neighborhoods and residential land uses. ▪ Minimize negative impacts to ecologically sensitive areas. ▪ Minimize negative impacts to historic and cultural resources. ▪ Minimize negative visual and aesthetic impacts.
Goal 5 Provide Cost-effective, Achievable Transportation Solutions	▪ Develop transportation improvements that are consistent with the funding and financial capacity of the region. ▪ Minimize project-operating costs. ▪ Optimize cost-effectiveness.
Goal 6 Serve Diverse Populations	▪ Balance benefits and impacts to all residents within the corridor. ▪ Improve accessibility to existing and planned employment centers from low-income and minority areas. ▪ Provide transportation improvements that comply with the Americans with Disabilities Act standards. ▪ Minimize and mitigate negative impacts to low-income and minority populations.

2 ALTERNATIVES CONSIDERED

This chapter provides background information on the range of alternatives considered in the Draft Environmental Impact Statement (Draft EIS) and Supplemental Draft Environmental Impact Statement (Supplemental Draft EIS) for the Dulles Corridor Rapid Transit Project, and a definition of the alternatives evaluated in this Final EIS.

The alternative formerly known as "LPA Phase 1" in the October 2003 *Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation* has been renamed the Wiehle Avenue Extension in this Final EIS and is expected to begin operations in 2011. This change reflects the federal approach to the project's funding under the Federal Transit Administration's New Starts program. It will assure consistency among the environmental, engineering and financial documents during the project's development.

In the October 2003 *Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation* as well as this Final EIS, the term "full LPA" represents the Wiehle Avenue Extension and the second phase of the Dulles Corridor Rapid Transit Project. This second phase would extend west from Wiehle Avenue to Washington Dulles International Airport and Route 772 and is expected to begin operations in 2015.

The term "LPA", "proposed action", or "selected LPA" refers to both the Wiehle Avenue Extension and the full LPA collectively.

Section 2.1 provides an overview of preliminary alternatives previously considered but eliminated from further consideration early in the evaluation process.

Section 2.2 provides an overview of the alternatives considered in the Draft EIS and a summary of the Draft EIS findings and recommendations.

Section 2.3 provides an overview of the alternatives considered in the Supplemental Draft EIS and a summary of the Supplemental Draft EIS findings and recommendations.

Section 2.4 presents a description of the alternatives evaluated in this Final EIS, including a comparative summary of the anticipated effects for each alternative.

2.1 ALTERNATIVES PREVIOUSLY CONSIDERED

This section presents an overview of the process that led to the selection of alternatives and includes a brief summary of the reasons why particular alternatives were eliminated from further consideration.

Numerous alternatives were evaluated throughout the environmental review phase of the Dulles Corridor Rapid Transit Project. Consistent with the approach outlined in the *Evaluation Methodology Report* (November 2000), the effectiveness of each alternative was assessed based on social, environmental,

economic, and transportation factors. The evaluation process applied increasingly detailed and comprehensive measures of effectiveness to a decreasing number of alternatives. This process allowed decision-makers to identify similarities, differences, and trade-offs between each alternative, and to carry forward those alternatives that were determined to best achieve the following:

- Improve transportation service;
- Increase transit ridership;
- Support future development;
- Support environmental quality;
- Provide cost-effective, achievable transportation choices; and
- Serve diverse populations.

The initial set of alternatives considered for the Dulles Corridor Rapid Transit Project included various rapid transit modes, alignments, station locations, and ancillary facilities. These alternatives were developed based on recommendations from the *Dulles Corridor Transportation Study* (1997), the *Supplement to the Dulles Corridor Transportation Study* (1999), and the scoping process for the Draft EIS. These initial alternatives were subjected to a two-phase screening process to determine which should be advanced for more detailed evaluation in the Draft EIS. For the initial screening process, most measures were qualitative. Criteria included consistency with land use plans, order of magnitude capital costs, access to activity centers within the Dulles Corridor and the region, and compatibility with existing infrastructure, among others. Alternatives carried forward from initial screening were subjected to a more rigorous evaluation in intermediate screening. In this phase of evaluation, many of the criteria applied during initial screening were measured more quantitatively. Alternatives that performed well were advanced for more detailed evaluation in the Draft EIS. The results of the screening evaluation are documented in detail in the *Final Alternatives Analysis Report* (May 2001).

During the preparation of the Draft EIS and the subsequent public review and comment period, the ongoing development and review of alternatives resulted in several design refinements of existing alternatives, as well as the identification of new alternatives. These refinements and alternatives were evaluated using the methodology developed for the project, and decisions regarding further analysis were based on the same social, environmental, economic, and transportation factors used for initial and intermediate screening. The results of these analyses are documented in post-screening technical memoranda and detailed information on alternatives considered before and after publication of the Draft EIS can be found in the *Addendum to the Final Alternatives Analysis Report* (November 2004).

Based on public comments received, agency coordination, and the evaluation of alternatives documented in the Draft EIS, the Commonwealth Transportation Board (CTB) and the Washington Metropolitan Area Transit Authority (WMATA) Board of Directors selected the Metrorail Alternative as the Locally Preferred Alternative (LPA) for the Dulles Corridor Rapid Transit Project. Later, the two Boards revised the LPA.

Tables 2.1-1 through 2.1-5 present a summary of alternatives that were previously considered during the two-phase screening process, and during the ongoing EIS and public review process. The tables identify the consideration points for the various alternatives and reasons for their elimination from further consideration. Additional information can be found in Appendix H of this Final EIS. More detail about the alternatives considered and the rationale for advancing particular alternatives is presented in the *Final Alternatives Analysis Report*, its *Addendum to the Final Alternatives Analysis Report*, and Attachment A to the *Public Hearings Report Supplement* (November 2002).

Table 2.1-1: Modes Considered

Alternative	Phase During Which Considered	Reason for Elimination
Personal Rapid Transit	Initial Screening	Not a technology intended to provide the long-distance, high-speed service required in the Dulles Corridor.
Light Rail Transit	Initial Screening	Would not be as cost-effective as Metrorail. Would require a transfer, which would reduce ridership. Would have costs similar to Metrorail because it would also require grade separation in Tysons Corner and at Dulles Airport.
Monorail	Initial Screening	Would not be as cost-effective as Metrorail. Would require a transfer, which would reduce ridership. Would have comparable or higher costs than Metrorail.
Feeder System to Metrorail Stations in Tysons Corner (LRT, People Mover)	Initial Screening	Would not be cost-effective. Previous analysis showed feeder system would not enhance ridership on mainline and would substantially add to the cost of the project.
Bus Rapid Transit (BRT) or Express Buses in a Dedicated Lane on the Dulles International Airport Access Highway (DIAAH)	Initial Screening	Current and future traffic projections do not warrant construction of a dedicated lane as part of the project. At worst, during peak periods, traffic flow is expected to be moderately congested.
BRT	Initial Screening, Draft EIS	Would not provide same degree of improvements in transportation service or overall transit ridership as Metrorail. Would be less likely to support focused development patterns. Overall, would not satisfy long-term travel demand in corridor.
Dulles Plan B Proposed a combination of BRT and increased use of the high-occupancy lanes along the Dulles Toll Road, as well as several forms of "private transit," including just-in-time ridesharing (i.e., casual carpooling, slug lanes) and high-occupancy toll lanes.	Public Review and Comment Period	Increased use of High Occupancy Vehicle (HOV) lanes would have benefits, but such an increase would not dramatically increase the person-moving capacity of the corridor. HOV incentives could reduce, rather than enhance, demand for transit in the corridor. "Private" transit modes were determined to be either infeasible in the corridor, or not as beneficial as suggested in Dulles Plan B.

Table 2.1-2: Alignments Considered (Metrorail Only)

Alternative	Phase During Which Considered	Reason for Elimination
Route 7 (T7)	Initial Screening	Would not serve the eastern part of Tysons Corner area as effectively as other alternatives.
Tysons DIAAH Station with Feeder System (T8)	Initial Screening	Previous analysis showed forced transfer would lower ridership, and alternative may have impacts on residences and historic resources near proposed median station.
Partial Double-Track Loop (T10)	Initial Screening	Could provide operational flexibility, but flexibility could be provided by lower-cost options. Additional costs and impacts would yield little or no additional benefits.
Large Aerial Loop (T11) and Beltway Access through Tysons (B1)	Initial Screening	Alignments would have higher costs but no greater benefits than other alternatives. B1 would require substantial right-of-way acquisition, and T11 would provide inferior service coverage compared to other loop alternatives.
Direct Service to Reston Town Center (D2)	Initial Screening	Not consistent with existing or planned land use, and would also preclude continued use of Section 4(f) parkland (Washington and Old Dominion Trail [W&OD Trail]) in certain areas. The DIAAH median is a prudent and feasible alternative to park use.

Alternative	Phase During Which Considered	Reason for Elimination
Dulles, I-66, Route 50, and Route 28 Connection (S1)	Initial Screening	Large loop inconsistent with federal guidelines for defining scope of project. The various segments of proposed alignment should be studied as separate projects.
Western Leg with Service to West Falls Church (O2)	Initial & Intermediate Screening	Would have substantially higher costs, but negligible increases in ridership. Would also have greater impacts on adjacent communities.
Tysons Aerial Loop (T2) and Tysons Underground Loop (T5)	Initial & Intermediate Screening	T2 would have greater potential for noise and visual impacts than a similar alignment. T2 would also have operational difficulties and higher costs, but would offer modest ridership benefits. T5 would have fewer impacts, but much higher costs and greater risk of cost escalation due to extensive underground construction.
Interface with Beltway Rail Line (T3)	Initial & Intermediate Screening	Beltway rail line not developed at a level of detail that would make it appropriate or feasible to conduct detailed coordination efforts. As work progresses, project team will coordinate to the extent feasible on a connection between systems.
Split Service with Local Tysons Leg and Express Leg to Rest of Corridor (T12)	Public Review and Comment Period	Would have greater costs and impacts than Draft EIS alternatives, would not effectively serve corridor activity centers, and would likely result in ridership reductions. Service would be difficult to integrate with existing Metrorail operations.
Underground Version of T6 (T13)	Public Review and Comment Period	Would have much greater costs than Draft EIS alternatives, with no additional transportation service benefits. Reduction of visual and noise effects can be achieved through much lower cost mechanisms.
Variation of T4 with Two Underground Segments (T14)	Public Review and Comment Period	Would have greater costs, increased risks, no additional ridership benefits, and the same operational complexities as T4. However, it is a viable approach for mitigating visual effects of T4. Was eliminated because T4 was not selected as the LPA.
Alignment T1	Initial & Intermediate Screening, Draft EIS	Would have similar impacts to T6, but would include fewer stations and provide less service within the core of Tysons Corner.
Original Alignment T9	Initial & Intermediate Screening, Continued Development of Draft EIS	Revised version of Alignment T9 was carried forward in lieu of alignment advanced from screening. Revised alignment offered cost savings, enhanced structural efficiencies, and reduced visual effects. Though noise effects and right-of-way requirements for revised alignment were greater, it allowed for a wider range of Tysons Corner configurations to be considered in detail.
Alignment T9	Continued Development of Draft EIS, Draft EIS	Would have greater visual effects and less operational flexibility than T6. Would also potentially conflict with improvements planned at the Route 123/Capital Beltway interchange.
Alignment T4	Initial & Intermediate Screening, Draft EIS	Would attract less ridership than T6 (due to one-way track segments in core of Tysons Corner) and would have much greater visual effects.

Table 2.1-3: Station Options Considered

Alternative	Phase During Which Considered	Reason for Elimination
Stations that were only associated with Alignments T7, T8, T11, and D2	Initial Screening	Eliminated because alignments were eliminated.
Addition of Hunter Mill Road Station	Initial Screening	Not consistent with existing or planned land use, and low-density development at proposed site would not generate enough ridership to support station. Strong opposition from public and Land Use Task Force.
Platform connection to West Falls Church Station for O2	Initial & Intermediate Screening	Eliminated because alignment was eliminated.
The MIS Tysons Central Station for T1	Initial & Intermediate Screening	Location proposed in MIS eliminated because shifting station to east would reduce costs, have better connections to existing and planned development, and higher potential for joint development.
Wolf Trap Station as a Special Use Station	Initial & Intermediate Screening	Based on agency coordination, station and access facilities were eliminated. However, project will include provisions to accommodate a station in the future.
Relocation of Wiehle Avenue and Reston Parkway Stations Under or Near Highway Overpasses	Initial & Intermediate Screening	Shifting the stations would increase costs and have substantial impacts, but would offer few benefits. Proposed land use density bonuses would move with stations, therefore ridership potential would not increase above levels for previously proposed station locations.
Accommodation for Route 28 LRT	Initial & Intermediate Screening	Plans for a Route 28 LRT system not developed at a level of detail that would make it appropriate or feasible to conduct detailed coordination efforts. Study for such a system not underway or planned in future.
Five Median Station Convertibility Concepts for Phased Implementation Alternative	Continued Development of Draft EIS	Three concepts eliminated because they violated station width criteria used for analysis. Two other concepts eliminated because they would require reduced running speeds, have the potential to damage the third rail during BRT operations, and would limit rail testing and startup to non-revenue hours.

Table 2.1-4: Yard Locations Considered

Alternative	Phase During Which Considered	Reason for Elimination
Nine potential yard sites in Loudoun County	Initial Screening	Inconsistent with local land use plans or zoning, or constrained/crossed by important water resources.
Two sites for BRT maintenance facility and rail yard near Route 606 interchange (Y6, Y10)	Initial & Intermediate Screening	Topography and presence of water resources restrict suitability of Y6, and Y10 would require extensive property acquisition.
Rail yard site at south end of Dulles Airport property (Y13)	Initial & Intermediate Screening	Inconsistent with approved Airport Layout Plan and may affect environmental resources. Would also result in significantly higher capital and operating costs due to length of yard lead.
Two potential yard sites in Loudoun County and three potential yard sites on Dulles Airport Property	Continued Development of Draft EIS/ Supplemental Rail Yard Study	Eliminated based on environmental constraints, inconsistencies with land use plans, or operational constraints.
Yard Site 7	Initial & Intermediate Screening, Draft EIS	Would be least consistent with existing land use, future land use plans, and existing zoning requirements, and would have greater negative effects on economic development in Loudoun County.

Alternative	Phase During Which Considered	Reason for Elimination
Yard Site 20	Supplemental Rail Yard Study, Draft EIS	Would be less consistent than Y15 with existing land use and future land use plans and would have greater negative effects on economic development in Loudoun County.

Table 2.1-5: Alternatives Considered

Alternative	Phase During Which Considered	Reason for Elimination
Baseline Alternative	Draft EIS	Would not provide improved transit service in the Dulles Corridor as well as Build Alternatives. Would offer lower level of transit service, so would not provide same mobility benefits. Would also be inconsistent with local and regional comprehensive plans, which specifically call for rapid transit improvements in Dulles Corridor.
BRT Alternative	Draft EIS	Would not provide same degree of improvements in transportation service or overall transit ridership as Metrorail. Would be less likely to support focused development pattern. Overall, would not satisfy long-term travel demand in corridor.
BRT/Metrorail Alternative	Draft EIS	Would not perform as well as Metrorail in terms of transportation and land use benefits.
Phased Implementation Alternative	Draft EIS	Would have greater costs, and would not offer a substantial increase in benefits because end state would be identical to Metrorail Alternative.
Original LPA (Metrorail T6/Y15)	Supplemental Draft EIS	Would not include design refinements suggested by the public and by federal, state and local agencies.

2.2 DRAFT EIS ALTERNATIVES AND RECOMMENDATIONS

The Draft EIS evaluated the potential effects of several alternative transit improvements for the Dulles Corridor. In addition to a No Build Alternative, four Build Alternatives that primarily ran along the Dulles Connector Road, the DIAAH, and the Dulles Greenway were evaluated. The alternatives included:

- **No Build (Baseline) Alternative.** The No Build Alternative was consistent with the "no-action alternative" required by the Council of Environmental Quality's (CEQ's) regulations for implementing the *National Environmental Policy Act of 1969* (NEPA), as amended, and provided a baseline for comparison against which the other alternatives were evaluated in the Draft EIS. The No Build Alternative included existing highway and public transportation infrastructure in the Dulles Corridor, and transportation system improvements that were included in the Washington metropolitan region's constrained long-range transportation plan and committed to be implemented by 2025, aside from the Dulles Corridor Rapid Transit Project.
- **Bus Rapid Transit (BRT) Alternative.** BRT is a bus-based transit system that operates like a rail system. Passengers on BRT are provided rail-like amenities such as off-board fare collection, level boarding, enhanced stations, and platforms. Because it often takes advantage of roadway facilities, BRT is generally a lower-cost transit technology than rail. Three alignment options were considered for the BRT Alternative in the Draft EIS.
- **Metrorail Alternative.** Metrorail is the region's rapid rail system. It is powered by an electrified third rail and operates in exclusive rights-of-way. By using multiple-car trains, Metrorail is capable of moving high volumes of passengers. Key features of the Metrorail system include fixed stations, dedicated rights-of-way, advanced fare collection, relatively simple transfers between

different lines, and multiple-door boarding from level platforms. For the Metrorail Alternative, several alignment options were considered in Tysons Corner, and three sites were considered for a Metrorail Service & Inspection (S&I) Yard in Loudoun County.

- **BRT/Metrorail Alternative.** This alternative combined the BRT and Metrorail alternatives. Metrorail would be constructed in the eastern part of the Dulles Corridor as far as Tysons Corner, and BRT would be constructed in the western part of the corridor to Route 772 in Loudoun County.
- **Phased Implementation.** This alternative combined the other three Build Alternatives into a program of rapid transit improvements that would be implemented in stages (BRT, then BRT/Metrorail, then Metrorail). This approach would allow decision-makers to begin to address the travel needs in the corridor with rapid transit in the near term, while allowing for future development of rail.

Each of the Build Alternatives included several stations located in the median of the DIAAH, which were similar to stations on the existing Metrorail system. The BRT stations were designed to allow future conversion to rail stations. The alternatives also included the development of station and ancillary facilities such as parking and bus transfer facilities, a bus maintenance and storage facility, a rail S&I Yard, rail traction power substations and tie-breaker stations, and stormwater management facilities.

Evaluation of alternatives in the Draft EIS showed that the No Build Alternative would not provide the same level of transit benefits to address needs in the Dulles Corridor as the Build Alternatives. Depending on the mode selected, the Build Alternatives would provide a range of transit services with different "trade-offs" relating to quality of service, benefits, and impacts. The advantages of BRT relative to Metrorail included improvements in corridor transit service at an earlier date, fewer impacts on the natural environment, fewer noise and visual impacts to communities, lower traffic impacts in the vicinity of stations (though still higher than the No Build Alternative), lower costs, and higher cost-effectiveness. Metrorail had several benefits relative to BRT, including greater improvements in transportation service and capacity, greater increases in overall transit ridership, more focused support for future development, and enhanced service to diverse populations. While the Metrorail Alternative was predicted to attract more riders than the BRT Alternative overall, the BRT Alternative was found to be less costly to build than the Metrorail Alternative, and therefore the BRT Alternative had a higher cost-effectiveness. The BRT/Metrorail Alternative would have some of the advantages and disadvantages of both BRT and Metrorail, and the Phased Implementation Alternative would have all of the benefits and impacts of BRT and Metrorail combined, at a higher cost due to incremental implementation.

The Metrorail Alternative was the most preferred by citizens submitting comments for the public record. While the BRT and BRT/Metrorail Alternatives would perform better in terms of cost-effectiveness and implementation time, the BRT Alternative would not provide direct service connections to Tysons Corner, and the BRT/Metrorail Alternative would require a mode transfer in Tysons Corner for service to the western portion of the corridor. The Phased Implementation Alternative could be implemented sooner than Metrorail, but would have higher capital costs and no additional ridership or economic development benefits relative to the Metrorail Alternative.

As a result of the Draft EIS technical analysis, public comment, and agency coordination, the Metrorail Alternative on Alignment T6 and with S&I Yard Y15 was selected as the Locally Preferred Alternative (LPA) in late 2002. On November 21, 2002 WMATA's Board of Directors amended the Adopted Regional System (ARS) to include the Metrorail Alternative (T6/Y15), contingent upon the fulfillment of six conditions (a seventh was added April 2004) as noted below:

- Satisfactory completion of the Final Environmental Impact Statement;
- Issuance of a Record of Decision by FTA;
- Board approval of a final financial plan for the construction, acquisition and operation of the new facilities;
- Execution of implementing financial commitments between Virginia Department of Rail and Public Transportation (DRPT) and funding sources in the form of local funding agreements and the Federal full funding agreement;
- WMATA's determination that the project has been completed in accordance with the Final Environmental Impact Statement, approved General Plans and all WMATA system requirements and that the project, as built and tested, is suitable for acceptance into the Adopted Regional System;
- Conveyance to WMATA by DRPT of a property interest in the project property adequate to assure WMATA's continuing control of the project property throughout the useful life of the project; and
- Any indemnification obligation from WMATA to Toll Road Investors Partnership II, the Metropolitan Washington Airports Authority, or any other entity associated with the project is subject to Board approval and any indemnification obligation provided by DRPT to Toll Road Investors Partnership II, Metropolitan Washington Airports Authority, or any other entity associated with the project will be subject to a determination by WMATA that such indemnification does not create a liability or potential liability for WMATA.

On December 19, 2002, the CTB concurred with the WMATA Board and formally selected the Metrorail Alternative (T6/Y15) as the LPA for the project. The Metropolitan Washington Airports Authority (MWAA) endorsed the Metrorail Alternative in late 2002, and the Boards of Supervisors for Fairfax and Loudoun Counties and the Town of Herndon also endorsed the selection of the Metrorail Alternative.

The Metrorail Alternative was recommended as the LPA because relative to the other alternatives, it would:

- Provide for higher ridership and new transit riders, as well as higher transit mode share for most of the corridor;
- Provide better access to corridor activity centers and increase overall mobility in the corridor;
- Offer shorter travel times for trips within the corridor;
- Support the comprehensive plans of Fairfax and Loudoun Counties in a manner consistent with existing transportation infrastructure and planned improvements;
- More likely to support focused transit-oriented development;
- Reduce the potential for neighborhood effects through Tysons Corner;
- Support the region’s air quality plans by contributing to the reduction in emissions thereby improving the region’s air quality; and
- Provide more operational flexibility in Tysons Corner.

2.3 SUPPLEMENTAL DRAFT EIS ALTERNATIVES AND RECOMMENDATIONS

Based on subsequent public and agency coordination after the completion of the Draft EIS and after an LPA was recommended, DRPT and WMATA identified a series of modifications to the project to resolve outstanding design issues, reduce environmental and community impacts, and allow for construction of the project in two phases. The Supplemental Draft EIS was prepared to assist decision-makers and the

public in understanding the effects of the proposed modifications to the selected LPA. A comparative evaluation was presented for the following alternatives:

- **No Build Alternative.** The No Build Alternative for the Supplemental Draft EIS was the same as the Baseline Alternative defined in the Draft EIS. The alternative included existing transportation infrastructure and services, as well as improvements included in the region's constrained long-range plan and planned to be implemented by 2025. The No Build Alternative provided a baseline for comparison against which the other alternatives were evaluated.
- **Metrorail Alternative (T6/Y15).** This alternative was the Metrorail Alternative evaluated in the Draft EIS and originally selected as the LPA (with Alignment T6 through Tysons Corner and a new S&I Yard at Site 15). The alternative would generally follow an alignment between the Metrorail Orange Line near West Falls Church Station and Route 772 in Loudoun County, using the median of the Dulles Connector Road, the DIAAH, and the Dulles Greenway. It would include 11 new stations and ancillary facilities, such as a new Metrorail S&I Yard, traction power substations, tie-breaker stations, and stormwater management ponds. The Metrorail Alternative (T6/Y15) was included in the Supplemental Draft EIS to facilitate understanding of the changes in effects associated with the proposed modifications to the LPA.
- **Proposed LPA.** The proposed LPA would be similar to the Metrorail Alternative (T6/Y15) in terms of alignment, stations, facilities, and operating characteristics. The primary difference between the two alternatives is that the LPA would be implemented in two phases. For the Wiehle Avenue Extension, Metrorail would be constructed from the Metrorail Orange Line through Tysons Corner to Wiehle Avenue, with interim express bus service in the western portion of the corridor until rail service could be extended. The Wiehle Avenue Extension is anticipated to open in 2011 with the full LPA opening in 2015. Other differences between the proposed LPA and the Metrorail Alternative (T6/Y15) include additional improvements at West Falls Church S&I Yard to accommodate operation of the Wiehle Avenue Extension or the full LPA; adjustments to alignment plans and profiles for a variety of purposes including reducing potential noise impacts, visual impacts, costs, or to improve operational efficiency; and design modifications of station site plans and ancillary facilities to address operational changes or to respond to concerns of local jurisdictions and landowners.

Evaluation of alternatives in the Supplemental Draft EIS showed that many of the benefits and potential effects of the proposed LPA were similar to those presented for the Metrorail Alternative (T6/Y15) in the Draft EIS. The proposed LPA would provide a greater degree of improvement in Dulles Corridor transit services than the No Build Alternative, and overall would provide similar support for future development in the Dulles Corridor to the Metrorail Alternative. Relative to the Metrorail Alternative, the design modifications for the proposed LPA would result in slightly higher ridership, reduced visual impacts at the eastern end of the corridor, and an increase in impacts on streams and water quality in the western end of the corridor. The full LPA would provide higher transportation and economic development benefits than the Wiehle Avenue Extension, and the Wiehle Avenue Extension would not be consistent with future land use designations or future land development patterns west of Wiehle Avenue. Although implementation of more express bus service in the western end of the corridor for the Wiehle Avenue Extension would typically have minimal physical effects, this service would also result in fewer transportation and development benefits.

General consensus among elected officials, public agencies, and the general public held that Metrorail should be ultimately extended for the full length of the Dulles Corridor from the existing Orange Line through Tysons Corner to Route 772 in Loudoun County. The proposed LPA was supported by the

majority of the public submitting comments for the public record, although a number of commenters expressed concerns about project phasing, Wiehle Avenue as the interim end-of-the-line station under the Wiehle Avenue Extension, and noise and visual mitigation measures.

Based on the analysis contained in the Supplemental Draft EIS, public comments received on the document, and agency coordination, the CTB approved the revision of the LPA in March 2004 to incorporate the elements required for phased construction and the design refinements outlined in the Supplemental Draft EIS and recommended in the Public Hearings Report. On April 15, 2004 the WMATA Board also approved the revision of the LPA as outlined in the Supplemental Draft EIS and recommended in the Public Hearings Report.

2.4 FINAL EIS ALTERNATIVES

This Final EIS was developed to respond to comments and issues raised during the circulation of the Draft EIS and the Supplemental Draft EIS and to provide more detailed information on the design of proposed mitigation measures for unavoidable impacts associated with the project. This Final EIS presents an evaluation of the following alternatives:

- The No Build Alternative (the baseline for comparison); and
- The Wiehle Avenue Extension and the full LPA, which are assumed to open by 2011 and 2015, respectively.

These alternatives are described in more detail in the following sections.

2.4.1 NO BUILD ALTERNATIVE

2.4.1.1 Introduction

The No Build Alternative includes all existing highway and transit infrastructure and services within the corridor and any that are committed to be implemented by 2025, aside from the Dulles Corridor Rapid Transit Project. The following elements are included:

- Existing highways;
- Existing Metrorail infrastructure;
- Existing WMATA, Fairfax Connector, and Loudoun County bus services;
- Planned highway and transit improvements through 2025 included in the 2003 update to the Metropolitan Washington Council of Government (MWCOG) financially constrained long-range plan (CLRP), which was adopted on December 17, 2003;
- Marginal increases in local transit service and capacity commensurate with forecast population growth in the corridor through 2025; and
- Implementation of eight-car train operations, reconfiguration of lines and longer headways in the Metrorail system to meet travel demand and to improve reliability.

The highway and transit networks defined for the No Build Alternative are also used as a starting point for the LPA. The No Build network differs from the LPA network by the amount of proposed investment in transit services and facilities.

The No Build Alternative evaluated for this Final EIS is an updated version of the No Build Alternative evaluated in the Draft EIS and reflects changes in the existing highway and transit networks and changes in future plans for infrastructure and services. Since the publication of the Draft EIS, several of the

planned projects included in the Baseline Alternative were completed and some transit services have been modified. In addition, plans for future improvements have been amended due to recent events, budget concerns, and changes in priorities.

2.4.1.2 Detailed Description of the No Build Alternative

This section provides a detailed description of the transportation facilities and services associated with the No Build Alternative. As indicated in Section 2.3, the No Build Alternative includes all existing highway and transit infrastructure and services within the corridor and any that are committed to be implemented by 2025, aside from the Dulles Corridor Rapid Transit Project.

The No Build Alternative for the Final EIS is an updated version of the No Build Alternative evaluated in the Draft EIS. Several recent events have affected the range of planned improvements included in the No Build Alternative.

In November 2002, the transportation sales tax referendum that was put to the Northern Virginia voters failed to pass, making funding questionable for some of the projects previously included in long-range plans. The Virginia Department of Transportation (VDOT) and the counties were forced to rethink their long-range plans, and some of the projects included in the Draft EIS No Build Alternative are no longer expected to be implemented by 2025.

Through the current Metro Matters initiative, WMATA is seeking funding from federal sources and its compact jurisdictions for the most crucial elements of the CIP's Infrastructure Renewal Program and its Systems Access Program. The Metrorail sub-element of Metro Matters is most important for the Dulles Corridor Rapid Transit Project since it implements eight-car train operations. Metro Matters would fund the Metrorail improvements of the No Build Alternative for the opening years of the Wiehle Avenue Extension and the full LPA. The evaluation of Build Alternatives in the Draft EIS, Supplemental Draft EIS and this Final EIS have assumed that the No Build Alternative includes eight-car train operations.

The Draft EIS No Build Alternative was based on the projects included in the 2000 CLRP, which was the last comprehensive update of the CLRP (including financial analysis). Federal planning regulations require that the long range plan be updated every three years to reflect changes in funding capacities and anticipated needs. The Final EIS No Build Alternative reflects the planned projects included in the 2003 update to the CLRP, which was adopted in December 2003.

A. No Build Alternative Transit Network

The No Build Alternative includes all existing transit facilities in the region, as well as transit improvements included in local transit plans and in the 2003 update to the CLRP through 2025. The following section summarizes existing and planned transit services and facilities for both the corridor and the greater Washington metropolitan region. The bus network for the No Build Alternative within the Dulles Corridor is shown in Figure 2.4-1 with routes identified by transit service provider. Additional information on planned transit improvements is provided in Chapter 6 of this Final EIS.

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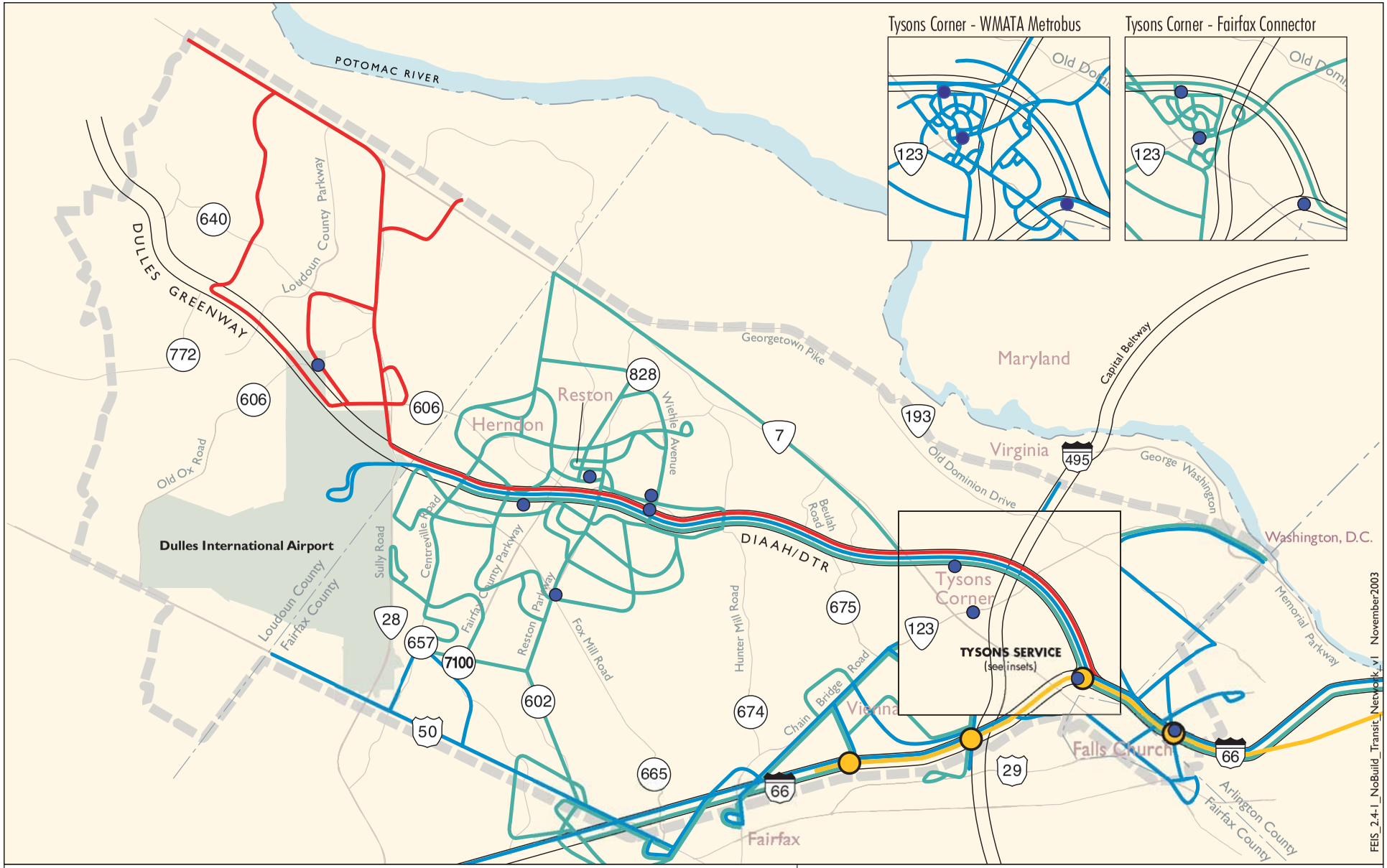


Figure 2.4-1

No Build Transit Network within the Dulles Corridor (2025)

Dulles Corridor Rapid Transit Project

Corridor Transit Services and Facilities

Three transit providers currently serve the Dulles Corridor: Fairfax County, Loudoun County, and WMATA. The range of services in 2003, which are included in the No Build Alternative, are outlined below.

Fairfax County's Connector service operates 28 routes in the corridor, including a) express bus service operating in the Dulles Toll Road and DIAAH, connecting major park-and-ride facilities and other areas of Herndon and Reston with Tysons Corner, the West Falls Church Metrorail Station, and the Pentagon Metrorail Station; and b) feeder bus and circulator services operating within Herndon, Reston, and Tysons Corner. In 2002, Fairfax County enhanced its bus service in the Dulles Corridor by improving peak and midday headways for Reston circulator services, and by increasing peak-period service from Reston to Tysons Corner Center and the West Falls Church Metrorail Station. Fairfax Connector operates approximately 166,000 revenue hours annually in the corridor, with a peak-period requirement of 65 buses. Current service represents a significant increase over 1998 service (65,000 hours of annual revenue service, 43 peak-period buses). Fairfax Connector ridership in the corridor averages approximately 13,800 weekday passengers.

Loudoun County contracts with a private provider to operate express bus trips during the peak period each weekday from communities within the county to Rosslyn, the Pentagon, and Washington, D.C. There are 16 peak-direction trips during the a.m. peak and 15 trips during the p.m. peak. The County recently expanded service to include peak-period, reverse commute trips from West Falls Church Metrorail Station to Dulles North Transit Center and the MCI/AOL campuses (one trip in the a.m. peak, and two in the p.m. peak). New service also includes new local circulator routes: one in the Sterling area, one along Route 7, one between Dulles Airport and the Dulles Town Center, and one in the Purcellville area. Current service results in approximately 12,000 annual hours of revenue service and 1,700 average weekday passengers.

WMATA operates 14 regional bus routes that either begin or end in the Dulles Corridor. Most of this service provides connections to Tysons Corner, with some circulation within the Tysons area.

Several major intermodal facilities are located in the corridor, including the Dulles North Transit Center in Loudoun County at the Route 606/Dulles Greenway interchange; the Herndon-Monroe Park-and-Ride lot in Herndon; three park-and-ride lots in Reston (Reston South, Reston East, and Reston North); and the Tysons-Westpark Transit Station in Tysons Corner, which provides Kiss & Ride access to Fairfax Connector and WMATA service, but no parking. In addition, the Metrorail Orange Line serves the eastern end of the corridor and would have eight-car trains operating at seven-minute headways during the peak period in year 2025, and in the opening year. Parking and bus transfer facilities are located at the East Falls Church and West Falls Church Metrorail Stations. Additional Metrorail Orange Line facilities—the Dunn Loring and Vienna Stations—are located farther west along I-66.

The eastbound shoulder on the Dulles Connector Road between Magarity Road and the West Falls Church Metrorail Station has been reinforced and widened to allow buses to bypass congestion to improve service reliability. Three at-grade ramps allow for bus access between the DIAAH and the Dulles Toll Road to improve safety and schedule reliability. These ramps, located near Beulah Road and Hunter Mill Road, are used by Fairfax Connector and Loudoun County services.

Planned transit improvements in the corridor include all bus and ancillary facilities (e.g., park-and-ride lots) in the update to the 2003 CLRP, minus the Dulles Corridor Rapid Transit Project. The No Build

Alternative also includes bus service enhancements proposed for Fairfax and Loudoun Counties to meet forecast growth in population and employment.

Specific improvements include the Reston Town Center Transit Center, a proposed new transit center for Fairfax Connector service to be located on the south side of Bluemont Drive, between Explorer Street and Library Street. Construction is expected to be completed in the next three to five years.

Loudoun County's longer-term transit expansion plans include the addition of two local routes to improve circulation within the county. In addition, the County plans to add more capacity to their existing express bus routes as demand warrants.

With the exception of the Reston East Park-and-Ride lot, the existing park-and-ride facilities in the corridor will remain at their current size. Fairfax County plans to expand the Reston East Park-and-Ride to include a multi-level garage with 2,300 spaces by 2010.

Regional Transit Services and Facilities

The No Build Alternative also includes several public transportation systems and services that operate outside of the Dulles Corridor. These services and facilities include the 103-mile Metrorail system with 8-car trains, (and line reconfiguration and longer headways), and commuter rail service operated by Virginia Railway Express (VRE) and Maryland Commuter Rail (MARC).

Local bus service provided by WMATA, Montgomery County, MD (Ride-On), the City of Alexandria, VA (DASH), the Prince George's County Bus; and Arlington County Transit are also included in the No Build Alternative.

Transit improvements planned for the larger Washington metropolitan region are also part of the No Build Alternative. Some of these projects are listed below:

- New Metrorail Station at New York Avenue in Washington, D.C.;
- New Metrorail/VRE station at Potomac Yards in Arlington, VA;
- Blue Line Metrorail extension to Largo, MD;
- New VRE station in western Fairfax County, VA;
- New MARC station at Route 355/Randolph Road in Rockville, MD; and
- Bi-County Transitway from Bethesda to Silver Spring to New Carrollton in Maryland.

The proposed extension of the Metrorail Orange Line from Vienna to Centreville, recently studied by VDOT and DRPT, is not in the 2003 update to the CLRP. Therefore it is not included in the No Build Alternative.

Assumed Operational Improvements for Regional Rail

Assumptions for Metrorail operating conditions under the Final EIS No Build Alternative are different than those for the Draft EIS Baseline Alternative. For the Draft EIS, it was assumed that, in the future, Orange Line, Blue Line, and Orange Line Supplemental services would continue to operate with existing service patterns and frequencies (six-minute headways in the peak period, 12-minute headways in the off-peak period). For the Final EIS No Build Alternative, Metrorail services were adjusted.

Peak-period service frequencies on the Orange and Blue lines would be reduced from six-minute headways (ten trains per hour) to approximately seven minutes (eight to nine trains per hour), and half of the peak-period Blue Line trains would be diverted from the Rosslyn tunnel to the Yellow Line to

accommodate additional Orange Line service from Vienna. Supplemental Orange Line service would continue to operate from Vienna and West Falls Church. The four to five diverted Blue Line trains would continue to Greenbelt, while four to five Orange Line trains would be diverted to Largo and the eastern end of the Blue Line.

Supplemental peak hour service on the Orange Line would be modified to operate to Stadium-Armory rather than New Carrollton. Service would operate in both directions between West Falls Church and Stadium-Armory and Vienna and Stadium-Armory, rather than in the peak direction only. In addition, service would be expanded to operate for the full peak period, rather than in the peak hour only.

In addition, the No Build Alternative assumes improvements that would allow the regional Metrorail system to continue to meet passenger demand for rail transit service through 2025, with passenger loads as close as possible to desired standards. These improvements, which are in WMATA's adopted 10-Year Capital Improvement Plan (CIP), include the expansion of train operations from six- to eight-car trains for 75 percent (by the year 2025) of the trains operating in the peak period, the associated upgrade of traction power systems, and the upgrade of train control systems to allow for precise stopping of eight-car trains at stations. For the No Build Alternative in 2011, Metro Matters, which is a subset of the CIP, would fund the expansion of trains to eight cars for 33 percent of trains operational in the peak period.

At the time the Draft EIS was published, it was anticipated that the CIP would also include an upgrade of the train control system that would allow trains to run closer together along the mainline tracks in the system's core. However, it was determined that the funding capacities of WMATA Compact member jurisdictions could not support this system upgrade and as a result, WMATA adjusted its planned future operating plans for the Metrorail system.

B. No Build Highway Network

The baseline highway network includes existing highways and other major roadways in the region, as well as all regionally significant highway capacity improvements currently included in the approved list of projects for the region's 2003 update to the CLRP. This baseline highway network is assumed for the No Build Alternative, the Wiehle Avenue Extension and the full LPA. The following sections summarize the major highways, arterials, and other important roadway facilities within the Dulles Corridor. These roadways are depicted in Figure 2.4-2. Additional information regarding existing roadways and planned improvements is provided in Chapter 6 of this Final EIS.

Existing and Planned Highway Facilities in the Corridor

The major highway facilities within the Dulles Corridor, their existing capacity, and planned improvements included in the 2003 update to the CLRP are outlined in Figure 2.4-2.

Interstate 66 – Inside the Capital Beltway, I-66 is a four-lane, limited-access facility connecting Washington, D.C. with Arlington and eastern Fairfax County. High Occupancy Vehicle restrictions (HOV-2) are in effect on both inbound lanes each weekday morning and on both outbound lanes each evening peak period. Outside of the Beltway, I-66 is a six-lane facility in non-peak periods. The shoulder of the roadway is open to traffic in the a.m. (inbound) and p.m. (outbound) peak periods. HOV-2 restrictions (two persons per vehicle) are also in effect for one lane in the a.m. (inbound) and p.m. (outbound) peak periods. The I-66/I-495 and I-66/US 29 interchanges are planned to be reconstructed by 2011.

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Figure 2.4-2

Major Roadways in Baseline Highway Network (2025)

Dulles Corridor Rapid Transit Project

Dulles Connector Road – This four-lane facility serves traffic using I-66 to and from the east, the Capital Beltway, Route 123, the Dulles Toll Road, and the DIAAH. In the eastbound direction, the shoulder of the Connector Road has been widened and reinforced, and buses are permitted to use it during periods of severe congestion. The Dulles Connector Road is owned by the federal government, leased by MWAA, and operated by VDOT.

Interstate 495 (the Capital Beltway) – This is an eight-lane circumferential facility serving the entire metropolitan area. Within the corridor, I-495 links Tysons Corner with westbound I-66, the Dulles Toll Road, and with communities to the south and east of the corridor. Widening of the I-495/Dulles Toll Road interchange was completed in 2003. Capacity improvements, including the addition of an HOV lane in each direction, are planned for I-495 between the American Legion Bridge and the I-395/I-495/I-95 interchange, including ramps providing direct HOV access through Tysons Corner at Route 123. HOV improvements are expected to be implemented between the Dulles Toll Road and I-66 by 2011, between I-66 and the I-395/I-495/I-95 interchange by 2012, and between the American Legion Bridge and the Dulles Toll Road by 2013.

Dulles Toll Road – This eight-lane toll facility serves the communities of Vienna, Reston, and Herndon between Tysons Corner and the Fairfax/Loudoun County border. Peak-period HOV-2 restrictions are in effect on one lane in the a.m. (inbound) and p.m. (outbound) peak periods. Toll collection improvements were implemented at the Spring Hill Road interchange in 2003, and interchange improvements are planned at Hunter Mill Road by 2010. The current toll on the Toll Road ranges from $0.25 to $0.85 for passenger vehicles. Bonds used to construct the Toll Road are set to expire in 2016.

Dulles International Airport Access Highway (DIAAH) – This is a four-lane facility in the median of the Dulles Toll Road. The DIAAH is owned by the federal government and operated by MWAA. Use of the DIAAH is restricted to passengers, customers, and personnel of Dulles Airport. MWAA is planning to add an additional lane in each direction on the DIAAH after 2010, or when average daily traffic on the facility reaches an unacceptable level of service; the improvements have not yet been programmed.

Dulles Greenway – This is a four- to six-lane privately owned and operated toll facility extending west to Route 7 in Leesburg, Virginia. Tolls on the Greenway range from $0.75 to $2.00, depending upon point of entry and method of payment. A third lane in the eastbound direction between Route 772 and the mainline toll plaza opened in December 2000, and a third lane in the westbound direction was completed in 2003. Construction of two new interchanges at Route 653 and Battlefield Parkway is expected to be complete by 2004, and the Greenway will be widened to six lanes between Route 901 and its western terminus at the Routes 7/15 Bypass by 2006.

Other Significant Regional Roadways

In addition to the highways described above, several other major arterials serving regional travel patterns are located within the Dulles Corridor.

Route 7 (Leesburg Pike) – This is a four- to six-lane facility generally parallel with the Dulles Connector Road from the West Falls Church Metrorail Station into and through Tysons Corner, where it interchanges with the Dulles Toll Road and continues northwest into northern Fairfax and Loudoun Counties. Route 7 within Tysons Corner is planned for expansion from six to eight lanes by 2013. Route 7 is also planned for expansion from four to six lanes between Reston Parkway and the Dulles Toll Road by 2009, and Rolling Holly Drive and Reston Parkway by 2015.

Route 123 (Chain Bridge Road/Dolley Madison Boulevard) – This is a four- to six-lane facility linking Tysons Corner with the communities of McLean to the east and Vienna to the west. Within Tysons Corner, Route 123 is planned for expansion from six to eight lanes between Route 7 and I-495 by 2010.

Route 193 (Georgetown Pike) – This is a two- to four-lane facility connecting Route 123 in eastern McLean with Route 7 in Great Falls. Route 193 serves as the northern boundary of the corridor study area.

Route 7100 (Fairfax County Parkway) – This is a four-lane arterial that runs north-south through the corridor study area between I-66 and Route 7. Route 7100 is planned for expansion from four to six lanes between I-66 and Sunrise Valley Drive by 2015. Additional lanes will function as HOV lanes in the peak period.

Route 28 (Centreville Road/Sully Road) – This is a six-lane, north-south arterial running parallel to the eastern boundary of Dulles Airport between Route 50 and the Dulles Toll Road, continuing north to Route 7. Several improvements are planned on Route 28 within the corridor by 2015, including widening the road to eight lanes and upgrading it to a freeway between Route 7 and I-66. New or upgraded grade-separated interchanges at Route 625, Sterling Boulevard, Route 606, McLearen Road, the National Air and Space Museum, and Westfields Boulevard are expected to be complete by 2006.

Route 50 (Lee-Jackson Memorial Highway) – This is a four- to six-lane, east-west arterial running between I-66 and Route 28, forming the far southwest boundary of the corridor study area.

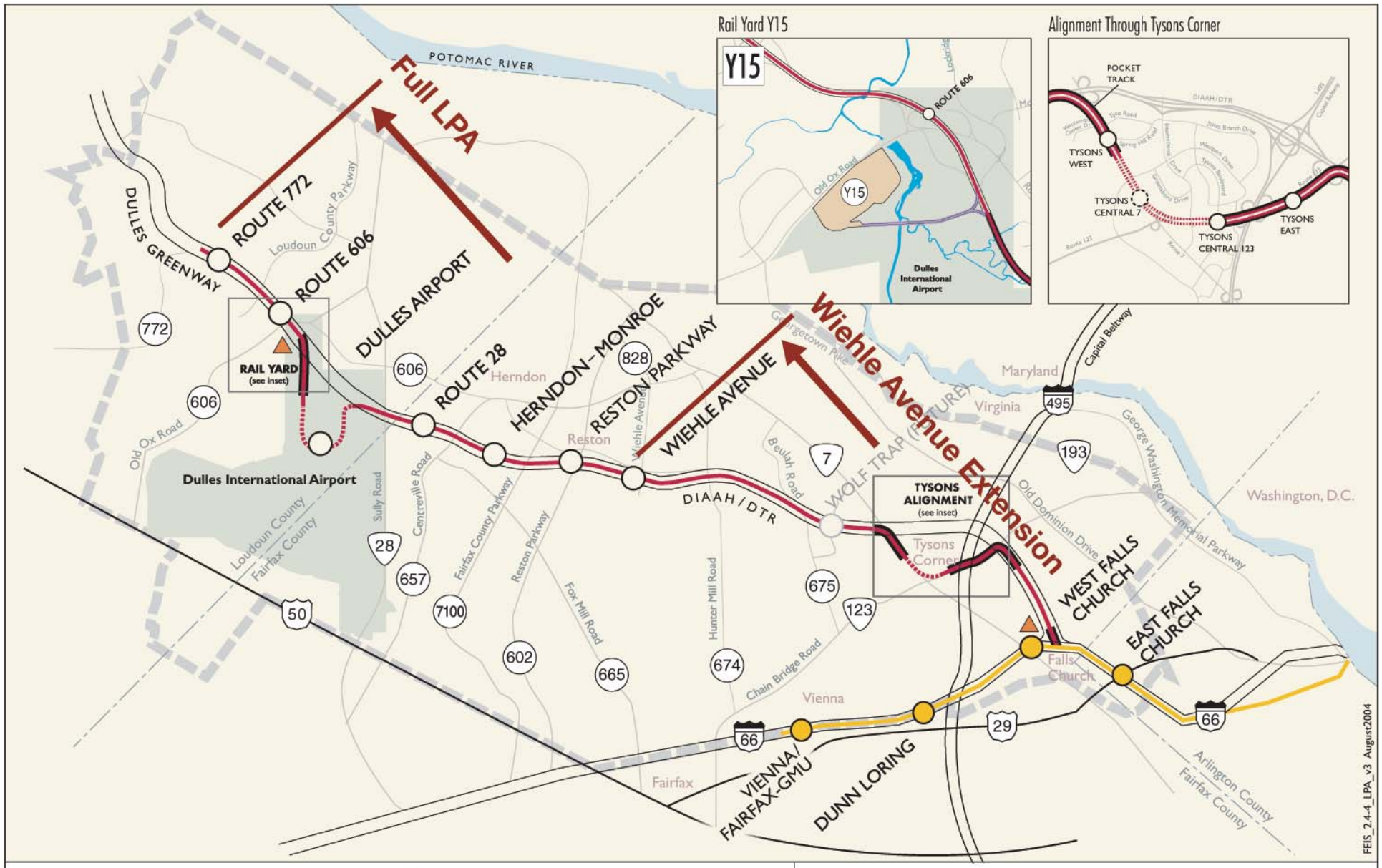
Loudoun County Parkway – This is a two- to four-lane, north-south roadway, which will link the Dulles Greenway and Route 7, and be widened to a four- to six-lane facility, by 2007. The road will also be extended south, connecting the Greenway to I-66 and Route 234. This southern extension is expected to be complete by 2025.

2.4.2 LOCALLY PREFERRED ALTERNATIVE

2.4.2.1 Introduction

The LPA for the Final EIS generally follows an alignment between the Metrorail Orange Line near the West Falls Church Station and Route 772 in Loudoun County, using the median of the Dulles Connector Road, the DIAAH, and the Dulles Greenway (see Figure 2.4-3). The alignment diverges from these routes to serve Tysons Corner and Dulles Airport. The LPA would include 11 new stations, as well as ancillary facilities, such as a new Metrorail S&I Yard on Dulles Airport property, traction power substations, tie-breaker stations, and stormwater management ponds.

Initially, Metrorail service would be provided from the existing Orange Line (between the East Falls Church and West Falls Church stations) through Tysons Corner to Wiehle Avenue (the Wiehle Avenue Extension) (see Figure 2.4-4). Interim express bus service, operated by Fairfax and Loudoun counties, would be provided between Wiehle Avenue and the western portion of the corridor. It is anticipated that the Wiehle Avenue Extension would begin operations in 2011. As part of the full LPA, Metrorail service would be extended west of Wiehle Avenue to Dulles Airport and Loudoun County and is expected to begin operations by 2015.



LEGEND

- Major Arterials
- Limited Access Highway
- U.S. Highways

Proposed Metrorail Alignment

- At-grade/Retained Fill
- Aerial
- Underground
- Aerial Yard Lead

- Existing Metrorail Orange Line and Stations
- Proposed Station
- Proposed Underground Station
- Future Station
- Rail Yard
- Dulles Corridor Limits

0 1 2 3 MILES

Note: Short bridge crossings for highway and culvert overpasses/underpasses not shown.

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

Figure 2.4-3

Locally Preferred Alternative

Dulles Corridor Rapid Transit Project

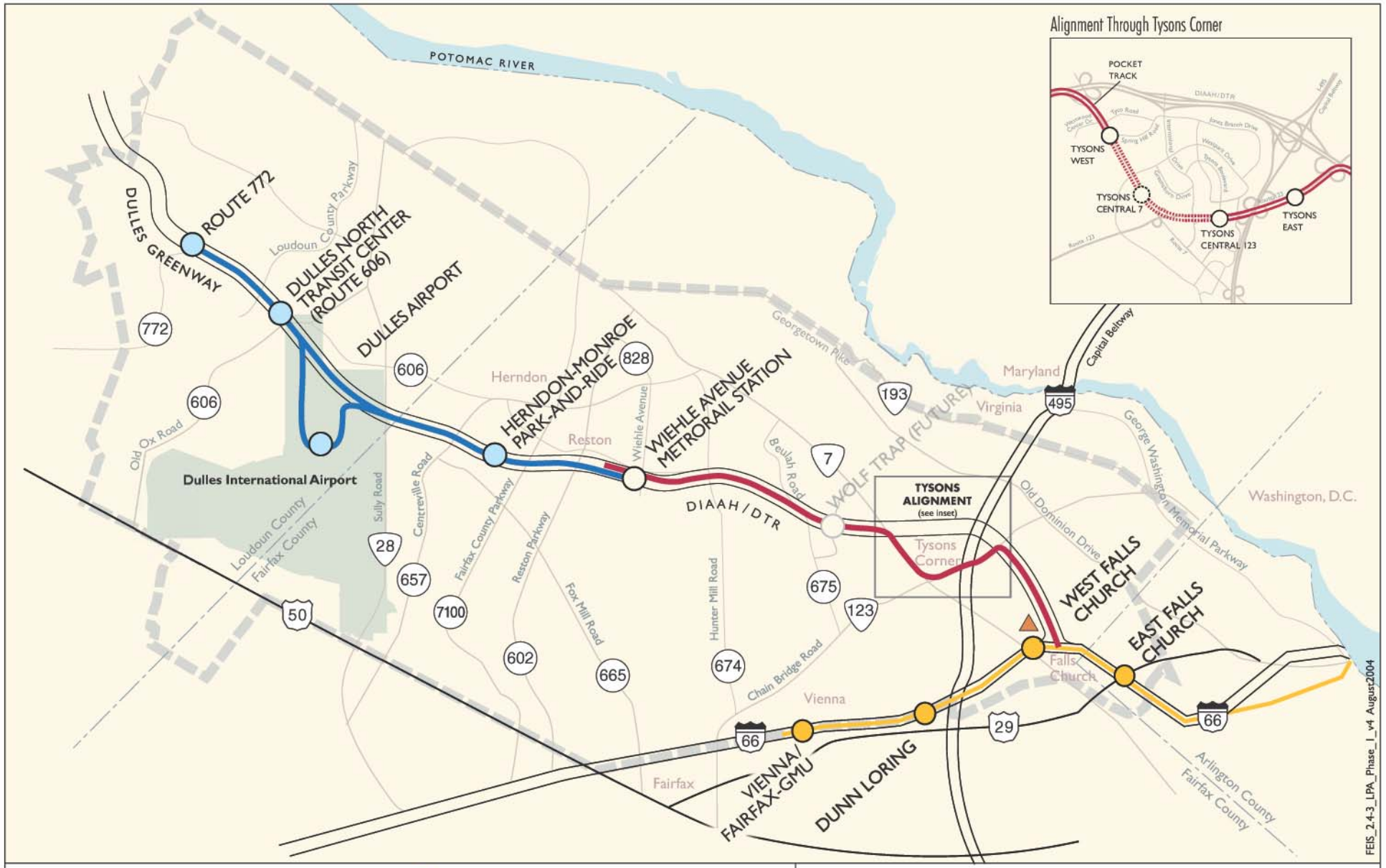


Figure 2.4-4

Wiehle Avenue Extension

Dulles Corridor Rapid Transit Project

This implementation schedule assumes that the remainder of Federal funding for the Wiehle Avenue Extension is provided in the pending Congressional transportation reauthorization; that Federal funding for the remainder of the LPA is provided in the subsequent transportation reauthorization; that all State and local funding is fully available when needed to meet the construction schedule; that there would be timely FTA approvals to advance to final design and construction for each phase; and that Virginia's design-build approach Public-Private Transportation Act of 1995 (PPTA) for project delivery would be used. The schedule for the Wiehle Avenue Extension and full LPA requires a period of up to 12 months for DRPT conveyance, WMATA acceptance, and WMATA operations start-up and testing, after substantial completion of PPTA construction activities. A more detailed implementation schedule will be developed during preliminary engineering for each project phase.

A. The Wiehle Avenue Extension Summary

Metrorail stations associated with the Wiehle Avenue Extension would include the following:

Tysons East Station would be an aerial facility located at the intersection of Scotts Crossing Road/Colshire Drive and Route 123.

Tysons Central 123 Station would be an aerial facility located in the central core of Tysons Corner at the intersection of Route 123 and Tysons Boulevard.

Tysons Central 7 Station would be an underground facility located near the Pike 7 Plaza between the Route 7/Westpark Drive intersection and the Route 123/Route 7 interchange.

Tysons West Station would be an aerial facility located on Route 7 between Westwood Center Drive/Tyco Road and Spring Hill Road.

Wiehle Avenue Station would be an at-grade facility in the median of the DIAAH west of the Wiehle Avenue overpass.

For the Wiehle Avenue Extension, the Wiehle Avenue Station would serve as an interim terminal station. The number of bus bays at the station would be increased, and Kiss & Ride spaces may be increased. No additional long-term parking would be provided for the interim terminal station beyond the 2,300 spaces included in the full LPA. The Wiehle Avenue Extension would include construction of interim tail tracks with a pocket track located west of Wiehle Avenue Station.

The Wiehle Avenue Extension would operate with a mix of six- and eight-car trains at approximately seven-minute headways during the peak period (eight to nine trains per hour), and four-car trains at 12-minute headways in the off-peak period (five trains per hour). To accommodate these operations, the Wiehle Avenue Extension would require improvements to the West Falls Church S&I Yard including construction of eight storage tracks and expansion of the maintenance building. Improvements to the maintenance building include the addition of two service tracks with four maintenance bays, which can service up to eight rail cars. Improvements at West Falls Church S&I Yard would also include a new yard lead from the Dulles Corridor Metrorail line and construction of a sound attenuation box over the existing yards loop track and a portion of the new yard lead. All improvements would be developed within the public right-of-way.

The Wiehle Avenue Extension would also include express bus service between Wiehle Avenue Station and transit centers/stops in the western end of the corridor, providing a level of service meant to closely

replicate Metrorail service. Five routes or route families would provide service at frequencies comparable to Metrorail headways to the following stations/stops:

Wiehle Avenue Station would be an at-grade facility in the median of the DIAAH west of the Wiehle Avenue overpass.

Reston Town Center Transit Center is a new transit center by Fairfax County on the south side of Bluemont Drive, between Explorer Street and Library Street.

Herndon-Monroe Park-and-Ride is an existing facility located adjacent to the Dulles Toll Road between the Fairfax County Parkway and Monroe Street overpasses.

Dulles Airport Stop would consist of a curbside bus stop located along the existing ground transportation roadway in front of the terminal.

Dulles North Transit Center is an existing facility located north of the Dulles Greenway near the Route 606 interchange.

Route 772 Stop would consist of a curbside stop and a 300 space park-and-ride facility located along new roadways to be provided by development. In combination with the existing 750 spaces located at the adjacent Dulles North Transit Center, total parking after the completion of the Wiehle Avenue Extension would be 7,632 spaces.

The Wiehle Avenue Extension would also include operating plans for bus routes feeding into rail stations within the corridor, as well as regional routes running the full length of the corridor.

B. Full LPA Summary

Completion of the full LPA would extend Metrorail service from Wiehle Avenue Station through Dulles Airport to Route 772 in Loudoun County (see Figure 2.4-4). Metrorail operations for the full LPA would be the same as those for the Wiehle Avenue Extension. The following stations would be developed during the second phase of construction:

Reston Parkway Station would be an at-grade facility located in the median of the DIAAH, west of the Reston Parkway overpass.

Herndon-Monroe Station would be an at-grade facility located in the median of the DIAAH adjacent to the existing Herndon-Monroe Park-and-Ride.

Route 28 Station would be an at-grade facility located in the median of the DIAAH, between Centreville Road and the Dulles Toll Road/Route 28 interchange.

Dulles Airport Station would be an underground facility located beneath the surface parking in front of the airport's main terminal.

Route 606 Station would be an at-grade facility located in the Greenway of the DIAAH, west of the Route 606/Dulles Greenway interchange.

Route 772 Station would be an at-grade facility located in the median of the Dulles Greenway, east of the Route 772/Dulles Greenway interchange.

Under the full LPA, the Herndon-Monroe Park-and-Ride facility would be expanded from the existing 1,750 spaces to 3,500 spaces by 2025. A new parking structure, with 2,000 spaces, would also be constructed at the proposed Route 606 Station for the full LPA. Total parking under the full LPA would be 16,382 spaces by 2025.

The new S&I Yard would be constructed on Dulles Airport property. The yard would occupy roughly 70 to 90 acres and would be designed for 250 rail vehicles but initially built for 184.

As shown in Figure 2.4-5, both construction phases would include construction staging areas at multiple locations throughout the Dulles Corridor, as appropriate to the portion of the alignment under construction.

2.4.2.2 Detailed Description of the LPA

This section provides a detailed description of the alignment and facilities associated with the Wiehle Avenue Extension and the full LPA. As described in previous sections, DRPT intends to construct the LPA in two major phases (see Figure 2.4-6). The Wiehle Avenue Extension would be constructed from the Metrorail Orange Line in the vicinity of the West Falls Church Station to Wiehle Avenue, which would function as an interim terminal station. The remainder of the LPA would be constructed from Wiehle Avenue Station to Dulles International Airport and Loudoun County. The Wiehle Avenue Extension is anticipated to be completed by 2011, and completion of the full LPA is anticipated by 2015.

A. The Wiehle Avenue Extension

This section provides a detailed description of the alignment and facilities included in the Wiehle Avenue Extension, as well as Metrorail operations and capital and operating costs associated with the alternative. Engineering and architectural drawings showing the LPA alignment, stations and facilities, including the phasing of construction, are presented in the *Final General Plans Line and Systems & Facilities, FEIS Volumes IV and V* (General Plans). The Metrorail operating plan reflects the WMATA Capital Improvement Plan (November 2002), described in Section 1.3.2.2, and thus differs from the operating plan of the Supplemental Draft EIS.

The Wiehle Avenue Extension Metrorail Alignment and Stations

The Wiehle Avenue Extension would connect to the Orange Line between the East Falls Church and West Falls Church stations. The tracks would diverge from the Orange Line tracks on flyover structures, turning north and first passing over the westbound lanes of I-66, then over the outbound bus ramp between the West Falls Church Station and the Dulles Connector Road. The tracks would continue on an aerial structure to the median of the Dulles Connector Road, returning to grade just south of Idylwood Road.

The Wiehle Avenue Extension would diverge from the Dulles Connector Road at the Route 123 interchange, transitioning to an aerial structure near Chain Bridge Road and passing through the Route 123 interchange on flyover bridges. The aerial alignment then proceeds along the north side of Route 123 to the Capital Beltway, with an aerial station (Tysons East Station) located in the northwest quadrant of the intersection of Scotts Crossing Road/Colshire Drive and Route 123. The Tysons East Station would be accessible from the street level on the north side of Route 123, and from a pedestrian bridge touching down on the south side of Route 123 near Colshire Drive. The station facilities along Colshire Drive would include bus bays and Kiss & Ride spaces.

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LEGEND

- Construction Staging Areas
- Existing Metrorail Orange Line and Stations
- Proposed Metrorail Station
- Future Station
- Dulles Corridor Limits
- Limited Access Highway
- U.S. Highways
- Major Arterials
- Proposed Metrorail Alignment

Note: All proposed station facilities areas are potential contractor work areas.

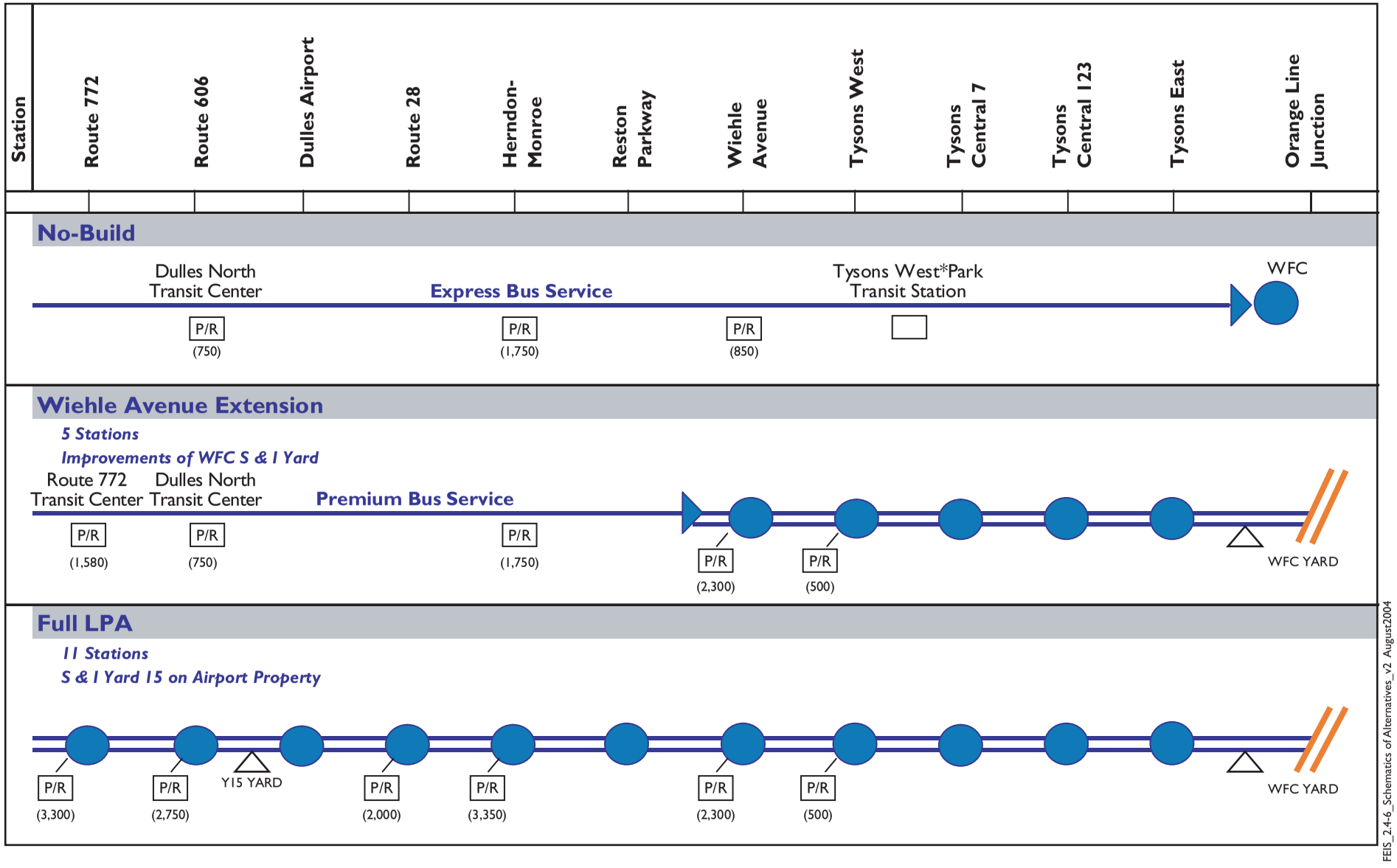
DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

0 1 2 3 MILES

Figure 2.4-5

Potential Construction Staging Areas

Dulles Corridor Rapid Transit Project



LEGEND

- P/R — Park-and-Ride Lot
- Express Bus/Premium Bus Service
- Metrorail Station
- Service & Inspection (S & I) Yard

Figure 2.4-6

Schematics of Alternatives

Dulles Corridor Rapid Transit Project

From the Tysons East Station, the Wiehle Avenue Extension alignment would proceed west, passing over the Capital Beltway and continuing to the core of Tysons Corner. The alignment would include two stations in the central core of Tysons Corner: Tysons Central 123 and Tysons Central 7. Neither of these stations would have Kiss & Ride or park-and-ride facilities, because the stations are intended to facilitate pedestrian access to and from the surrounding activity centers in the core of Tysons Corner and reduce automobile dependence.

The Tysons Central 123 Station would be located along Route 123 at the intersection with Tysons Boulevard and would operate partially aerial and partially on retained fill. The station would have two entrances, one in the northwest quadrant of the intersection of Tysons Boulevard and Route 123 and one at Tysons Corner Center mall on the south side of Route 123. The north station facilities would include bus bays and a new bus-only turn lane along the west side of Tysons Boulevard. The south station facilities would include bus facilities on the north side of the mall to provide feeder bus service to the station.

The Wiehle Avenue Extension alignment would transition underground approximately 400 feet west of the Tysons Central 123 Station. It would travel underground along the north side of Route 123 to the Route 123/Route 7 interchange, curve westward, and then continue underground along the south side of Route 7 to the Tysons Central 7 Station. The Tysons Central 7 Station would be underground near Pike 7 Plaza on the south side of Route 7, between the Route 7/Westpark Drive intersection and the Route 123/Route 7 interchange. The station would be approximately 75 feet below ground with entrances on the north and south sides of Route 7. Underground walkways would provide access to the station. The Tysons Central 7 Station does not include off-street bus bays.

West of Westpark Drive, the Wiehle Avenue Extension would transition from an underground to an aerial alignment, running along the south side of Route 7 to an aerial station, Tysons West Station, at the western edge of Tysons Corner. The Tysons West Station would be located on the south side of Route 7 between Westwood Center Drive and Spring Hill Road with station entrances at the south end of the station near Spring Hill Road with a pedestrian overpass over Route 7. Bus bays and the Kiss & Ride would be located between Tyco Road and Spring Hill Road, with access into the facilities via Tyco Road. This would be a new entrance and would be protected by a new traffic signal on Tyco Road.

A 500-space park-and-ride facility may be constructed near the bus bays and short-term parking as part of future redevelopment. The specific location and design of the park-and-ride facility is not known at this time. The Tysons West Station would also include a pocket track west of the station platform. Pocket tracks are located between the main tracks and are used to store out-of-service trains or equipment, and to provide trains turn-around capability for short-run service.

West of the Tysons West Station, the Wiehle Avenue Extension aerial alignment would continue along Route 7. At the DIAAH, the alignment would pass over the interchange ramps and continue west on the DIAAH, transitioning to grade approximately 1,600 feet west of Route 7.

The Wiehle Avenue Extension would continue west at-grade in the median of the DIAAH. In the vicinity of Trap Road, the alignment would include provisions to accommodate a future median station at Wolf Trap National Park for the Performing Arts (Wolf Trap) to minimize the cost of construction and disruptions to transit operations should a station be built in the future. The initial design and construction of the Dulles Corridor Rapid Transit Project would incorporate a 1,700-foot-long section of retained fill to support the tracks.

The Wiehle Avenue Extension would continue at-grade in the DIAAH median to the Wiehle Avenue Station; a median station located approximately 500 feet west of the Wiehle Avenue overpass, where the Dulles Toll Road was previously realigned to accommodate a transit station. The DIAAH would be similarly realigned for the station and its tail tracks. Station facilities on the south side of the Dulles Toll Road would include five bus bays on the eastbound exit ramp, an entrance pavilion and a paved walkway extending from the pavilion to Wiehle Avenue. On the north side of the Dulles Toll Road, the pedestrian bridge would connect to station facilities including twelve revenue bus bays, Kiss & Ride spaces, and a multi-level park-and-ride structure with 2,300 spaces. The station facilities would use the Reston East Park-and-Ride and would be designed to accommodate future development. A second vehicular entrance to the station facilities would be provided by an extension of the present access road and conversion of a private road to public use.

Fairfax County will solicit joint development proposals that may modify the site plan of the station facilities but not the requirements of the bus bays, Kiss & Ride, and park-and-ride spaces.

The Wiehle Avenue Extension alignment would end at a point approximately 2,000 feet west of the Wiehle Avenue Station. This section includes tail tracks with pocket track.

The Wiehle Avenue Extension Metrorail Yard Facilities

The Wiehle Avenue Extension would include a new yard lead into the West Falls Church S&I Yard. The yard lead would connect to the loop track on the north side of the yard, extending eastward and passing under the eastbound travel lanes of the Dulles Connector Road before surfacing in the median of the Connector Road. Here, the lead would be located between the inbound and outbound revenue tracks.

In addition, for the Wiehle Avenue Extension, eight storage tracks would be added within the loop track of the existing West Falls Church S&I Yard, and a sound attenuation “cover box” would be constructed over the yard’s existing loop track and a portion of the new yard lead. The storage tracks would have the capacity to store 42 rail cars, with room to maneuver an additional 6 cars, for Metrorail operations in the Dulles Corridor. The Wiehle Avenue Extension would also require expansion of the maintenance building. Improvements to the maintenance building include the addition of two service tracks with four maintenance bays, which can service up to eight rail cars. Expansion of the maintenance building would require relocation of the current vehicle access road and construction of a retaining wall adjacent to the westbound lanes of I-66. Some employee parking, loading docks, and ramps would also be relocated within the yard. These yard improvements would be located within existing public right-of-way.

The Wiehle Avenue Extension Metrorail Ancillary Facilities

The Wiehle Avenue Extension would include additional ancillary facilities, such as traction power substations, tie-breaker stations, and stormwater management facilities. Traction power substations are typically one-story buildings of approximately 8,100 square feet that house facilities to supply direct current power for the rail system. Tie-breaker stations are one story buildings of approximately 900 square feet that house equipment to break the rail line into sections, allowing power in one or more sections to be shut down for maintenance without affecting the power supply to the rest of the system.

The traction power substations and tie-breaker stations included in the Wiehle Avenue Extension were sited based on systems engineering requirements, environmental, and right-of-way constraints. A power analysis was conducted to determine the number and size of substations required and the optimal spacing for these stations. Based on this analysis, the Wiehle Avenue Extension would include 11 traction power substations and 4 tie-breaker stations (see Figure 2.4-7).



LEGEND

- Existing Metrorail Orange Line and Stations
- Proposed Metrorail Station
- Future Station
- Dulles Corridor Limits
- Proposed Metrorail Alignment
- U.S. Highways
- Major Arterials
- Limited Access Highway

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

- Traction Power Substations (TPSS)
- Tie - Breakers (TB)
- Proposed Stormwater Facilities
- TB & TPSS outside the Right-of-Way

0 1 2 3 MILES

Figure 2.4-7

Traction Power Substations, Tie Breaker Stations and Proposed Storm Water Management Facilities

Dulles Corridor Rapid Transit Project

The Wiehle Avenue Extension would also require 11 stormwater management facilities, most located along the Dulles Toll Road. The locations of these facilities are also shown in Figure 2.4-7.

The Wiehle Avenue Extension Operations

The Wiehle Avenue Extension would include operating plans for trains running on the Dulles Line, on the existing Orange Line between Vienna and New Carrollton, and on the Orange Line between West Falls Church and New Carrollton. It would also include operating plans for bus routes feeding into rail stations within the corridor, as well as regional routes running the full length of the corridor.

Dulles Corridor Metrorail service would operate between Stadium-Armory Station on the Orange Line in the region's core and Wiehle Avenue in Fairfax County and would be integrated with the existing Orange Line service.

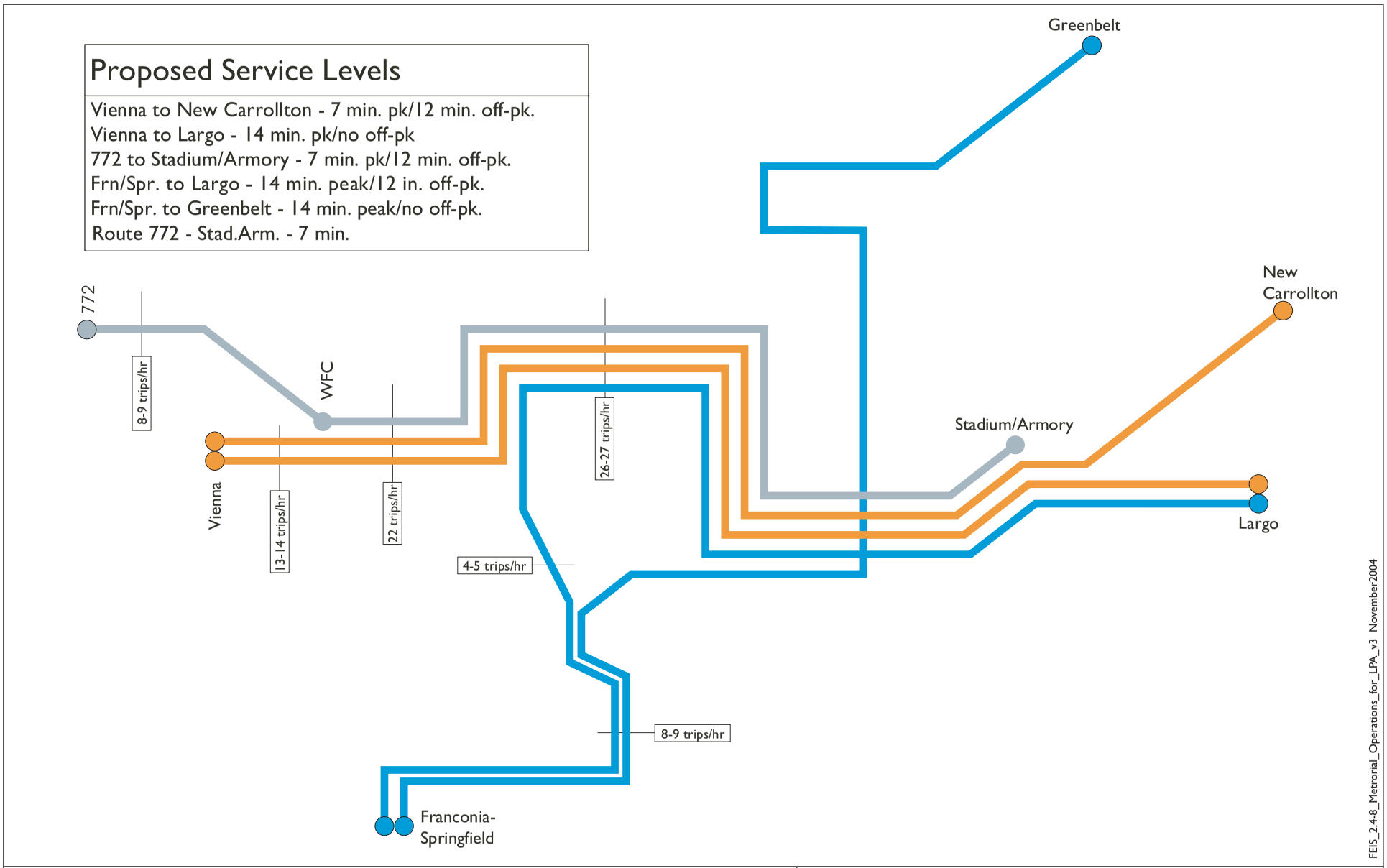
Orange Line trains currently operate between Vienna and New Carrollton on six-minute headways (ten trains per hour) in the peak hours (6:00 to 9:30 a.m. and 3:30 to 6:30 p.m. weekdays) and 12-minute headways (five trains per hour) during off-peak hours, except after 10 p.m., when trains run every 20 minutes. Orange Line service is supplemented by a peak-hour service in the morning and afternoon peak direction, to provide extra capacity during the "peak of the peak" when the heaviest passenger volumes on the Orange Line occur. These supplemental trains, or "trippers," also operate with six-minute headways (ten trains per hour), some between Vienna and New Carrollton and some between West Falls Church and New Carrollton. The combination of Orange Line, Blue Line, and tripper service results in approximately 29 to 30 trains per hour through the Rosslyn portal into the region's core in the a.m. and p.m. peak hour (for a combined two-minute headway, on average).

In the future, peak period service on the Orange and Blue lines would be reduced to approximately seven-minute headways (eight to nine trains per hour), and approximately half of the Blue Line trains would be diverted to the Yellow Line, resulting in four to five Blue Line trains per hour continuing to Rosslyn. When operations begin on the Dulles Corridor line, supplemental Orange Line service would be discontinued and Dulles Corridor trains would operate with approximately seven-minute headways. The combination of Orange Line, Blue Line, and Dulles Corridor service would result in approximately 26 to 27 trains per hour through the Rosslyn portal during peak periods (approximately two- to three-minute headway, on average) (see Figure 2.4-8). During the off-peak hours and over weekends, Orange Line, Blue Line, and Dulles Corridor service would run on 12-minute headways (five trains per hour).

Dulles Corridor service would be different than the existing supplemental service because it would enter the Orange Line between the West Falls Church and East Falls Church stations and would terminate at the Stadium-Armory Station rather than running all the way to New Carrollton, as the supplemental service now does. Moreover, this service would operate in both directions throughout the entire day, as opposed to operating only in the peak direction during the peak hour, as is the case today.

In the peak period of the opening year of 2011, Orange Line, Blue Line and Dulles Corridor service would operate with a mix of six- and eight-car trains. In the off-peak period, Dulles Corridor and Blue Line service would use four-car trains, and the Orange Line would use a mix of four- and six-car trains. Service would operate during the same hours of the day as current Metrorail service. The Dulles Corridor service would not require changes to the existing Metrorail system that are not included in the No Build Alternative. The No Build has changes funded by the Metro Matters, namely eight-car train operations.

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LEGEND

- Orange Line
- Blue Line
- Silver Line

Figure 2.4-8

Metrorail Operations for LPA (2025)

Dulles Corridor Rapid Transit Project

The Wiehle Avenue Extension would also include an interim, more express bus service for the western end of the corridor to provide enhanced transit service to travelers that would be ultimately served by the full LPA. The operating plan would consist of several routes that provide connections between Wiehle Avenue Station, Herndon-Monroe transit center, Dulles Airport ground transportation, Dulles North transit center and a new transit center in the locale of the future Route 772 Station. Service would have frequencies comparable to proposed Metrorail headways. These routes would feed the interim terminal station at Wiehle Avenue and in lieu of service to Reston Parkway, the operating plan for express bus service would connect to the planned transit center at Reston Town Center. No service would be provided to the Route 28 Station included in the full LPA because access to the proposed station facilities from the highway is indirect, making it very difficult to serve this area effectively with rail-like bus service.

The feeder and corridor bus network for the Wiehle Avenue Extension consists of a complex system of routes that would be run by WMATA, Fairfax County, Loudoun County and possibly MWAA's Washington Flyer. The routes operated by each provider are shown in Figure 2.4-1 in Section 2.4.1 for the No Build Alternative. The existing bus network would be modified to accommodate the Wiehle Avenue Extension. Several routes would be realigned to provide better service to the proposed Metrorail stations in the corridor, and numerous routes would be eliminated and replaced by the modified routes or the Wiehle Avenue Extension service. The service frequencies would be modified for other routes to be more consistent with the new transit service in the corridor, reduce duplication of service, and in some cases to better coincide with Metrorail headways.

The Wiehle Avenue Extension Construction Activities

The Wiehle Avenue Extension would connect with the Orange Line at a point between the East and West Falls Church Metrorail stations. This connection would require new special track work including turnouts and a double crossover, and some realignment of the existing Orange Line track. Due to the proximity of the new track construction to the eastbound lanes of I-66, during construction there may be limited closures of the inside shoulder and potentially the inner lanes of I-66 during off-peak and overnight periods. WMATA would be able to maintain Orange Line operations by single-tracking trains to implement such improvements. If construction would require closure of both tracks, most likely on weekends, then bus service would be provided between East Falls Church and West Falls Church stations.

Improvements at the West Falls Church S&I Yard would affect yard operations during construction. In addition, yard modifications would require work within the north concrete embankment of I-66; however, use and conveyance of I-66 right-of-way would not preclude potential improvements for I-66. The new yard lead for the Wiehle Avenue Extension would cross under the eastbound lanes of the Dulles Connector Road and connect to the Dulles main line in the median of the Connector Road (roughly 1,000 feet north of the West Falls Church Station). Construction of this lead track would most likely use a cut-and-cover technique that would require building a Dulles Connector Road temporary detour for the eastbound lanes.

At the eastern edge of Tysons Corner, construction of the aerial structure transitioning from the Dulles Connector Road to Route 123 would require temporary lane closures on both the Connector Road and Route 123. The pier placements for the aerial structure crossing Route 123 will be coordinated to not preclude future improvements to Route 123.

In Tysons Corner, the Wiehle Avenue Extension requires 1.1 miles of underground structure (including the Tysons Central 7 Station). This underground section may be mine-tunneled or excavated using cut-

and-cover techniques, except at the underground station, which would be constructed with cut-and-cover techniques only. Maintenance of traffic plans for cut-and-cover construction would require significant staging to limit extended lane closures and keep as many lanes open to traffic as possible. Temporary roadways, structures, and detours may be required to direct traffic through this area during construction along Route 7. Construction of the western portal for the underground section would require detouring the service roadway adjacent to Route 7 during construction and realigning the service road after the portal is built.

Construction of feeder bus bays and Kiss & Ride facilities associated with the Tysons Corner area Metrorail stations is expected to have minimal impacts. Construction of Kiss & Ride and bus facilities on the south side of Route 123 at the Tysons East Station may require occasional lane closures on Route 123 and Colshire Drive. At Tysons Central 123 Station, the construction of the bus bays and the bus lane on the north side of Route 123 may require brief closures of some lanes of Route 123 and Tysons Boulevard. Similarly, construction of facilities at the Tysons West Station could require occasional lane closures on Tyco Road. For all stations in Tysons Corner, construction of pedestrian bridges would include some temporary closures of lanes in the vicinity of stations. The construction of the aerial flyover segment across the eastbound lanes of the DIAAH and Dulles Toll Road would also involve limited partial closures of these roadways.

Construction of the Wiehle Avenue Extension between the DIAAH/Route 7 interchange and Wiehle Avenue would require DIAAH realignment at both the Wiehle Avenue Station and its tail track. Realignment activities, as well as construction of pedestrian bridge and station site facilities, would require occasional lane closures along the DIAAH. West of the Wiehle Avenue Station, construction of facilities for express bus service would have limited transportation effects. The Route 772 transit center would have no significant construction effect. In the long-term, if the LPA is not implemented in its entirety, the expansion of parking at the Herndon-Monroe Park-and-Ride could cause temporary disruptions to adjacent roadways and access to these facilities. Additional bus facilities at Dulles Airport would have minor disruptions to adjacent roadways.

The Wiehle Avenue Extension Costs

The estimated total capital costs (excluding any required financing costs) of the Wiehle Avenue Extension are approximately $1.5 billion (Year of Expenditure [YOE]). The incremental annual operations and maintenance costs for the Wiehle Avenue Extension in 2011 and 2025 (over the No Build Alternative) are estimated to be $47.47 million and $67.64 million in YOE, respectively. The costs for the Wiehle Avenue Extension would be less than those for the full LPA due to the shorter alignment under this phase.

B. Full LPA

This section provides a detailed description of the alignment and facilities included in the full LPA, as well as Metrorail operations and capital and operating costs associated with the alternative. Engineering and architectural drawings showing the full LPA alignment, stations and facilities, including the phasing of construction, are presented in the *General Plans: Line and Facilities, July 2004, FEIS Volume IV and V* (General Plans).

Full LPA Metrorail Alignment and Stations

The full LPA Metrorail alignment, stations and facilities are the same as those described for the Wiehle Avenue Extension for the area east of and including the Wiehle Avenue Station.

From the Wiehle Avenue Station, the full LPA would proceed west, at-grade in the median of the DIAAH, with median stations at Reston Parkway, Herndon-Monroe, and Route 28. There would be small areas of cut and fill along the alignment, predominantly in the vicinity of these stations, to allow for level platforms. In addition, portions of the DIAAH would need to be realigned to accommodate the median stations. At Herndon-Monroe and Route 28, the Dulles Toll Road would be realigned once the DIAAH was widened to six lanes.

The Reston Parkway Station would be located where the Dulles Toll Road was previously realigned to accommodate a transit station, approximately 1,000 feet west of the Reston Parkway overpass. The station would include a pedestrian bridge to pavilions on the north and south sides of the Toll Road with feeder bus bays and Kiss & Ride spaces. No park-and-ride spaces would be provided at the Reston Parkway Station.

The Herndon-Monroe Station would be located east of the Monroe Street overpass. The project would provide a pedestrian walkway between Herndon Parkway and the north entrance pavilion. On the south side of the Dulles Toll Road, an entrance pavilion would be located at the existing Herndon-Monroe Park-and-Ride, which includes feeder bus bays, Kiss & Ride spaces, and a parking structure with 1,750 park-and-ride spaces. The structure would be expanded to approximately 3,500 spaces as part of the full LPA. The DIAAH realignment would cause the reconstruction of one pier and two spans of the existing bridge that serves Herndon-Monroe.

The Route 28 Station would be located east of the Dulles Toll Road/Route 28 interchange, north of the proposed Dulles Station development along Fox Mill Road. Fairfax County has proposed an overpass at a location just west of the station site. The location of this future overpass has been coordinated with Fairfax County to accommodate the entrance pavilions for the station. Station facilities on the north side of the Dulles Toll Road would include feeder bus bays and Kiss & Ride facilities. The facilities on the south side would cover a larger area and would include bus bays, Kiss & Ride spaces, and a park-and-ride structure of 2,000 spaces.

At Dulles Airport, the full LPA would transition underground in the median of the DIAAH west of the Route 28 overpass. The underground alignment would turn south toward the terminal, then turn west to access an underground station located in front of the terminal and under its surface parking lot, then turn north and rise to the surface, transitioning to an aerial structure between Package Court and Rudder Road. The elevated tracks would follow Autopilot Drive, heading toward the northwest corner of Dulles Airport property and the Dulles Greenway in the vicinity of Route 606. This section includes an aerial pocket track.

The underground station at the airport terminal will be designed to not preclude future construction of a station for an airport landside people-mover planned by MWAA. Access to the Metrorail station mezzanine would be provided via existing pedestrian tunnels that extend from the center of the existing terminal to the parking structure north of the surface parking lot.

In Loudoun County, the full LPA would extend along the Dulles Greenway to a point near the Route 772 interchange. From the Dulles Airport area, the alignment would transition to grade in the median of the Greenway just east of the Route 606 overpass. The at-grade tracks would extend westward, crossing Broad Run on an elevated structure between the existing Dulles Greenway bridges. The tracks would continue westward to the west side of the Route 772 overpass. A tail track, which would be available for

storage and maneuvering of vehicles outbound of the Route 772 Station, would extend beyond the Route 772 overpass.

The full LPA's two stations along the Dulles Greenway would be located in the median, with pedestrian bridges connecting to station facilities. To accommodate these median stations, portions of the Greenway would need to be realigned.

The Route 606 Station would be located just west of the Route 606 overpass and the Dulles North Transit Center. The at-grade station would connect to new station facilities on the north side of the Greenway, including bus bays, Kiss & Ride spaces, and a park-and-ride structure of 2,000 spaces. In addition, the LPA would include a pedestrian connection to a proposed transit-related employment center north of the station facilities.

The Route 772 Station would be located one-half mile east of the Route 772 overpass and would connect to station facilities on the north and south side of the Dulles Greenway. Both the north and south facilities would include an entrance pavilion, a feeder bus loop, Kiss & Ride spaces, and a park-and-ride structure. Combined, the north and south parking structures would have 3,300 spaces. New roads, to be built by the sites' developers, would provide access to the station facilities.

Full LPA Metrorail Yard Facilities

Improvements at the West Falls Church S&I Yard would be the same as those discussed for the Wiehle Avenue Extension. In addition, the full LPA includes a new Metrorail S&I Yard, located south of Route 606 and west of Horsepen Lake. The site—evaluated as Site 15 in the Draft and Supplemental EIS—is on Dulles Airport property, north of an existing and a future runway. Approximately half of the site is within designated runway approach surfaces. To be consistent with MWAA policies, occupied buildings on the yard site would be located outside the approach surface.

S&I Yard Site 15, which would occupy roughly 70 to 90 acres, would be used for storage, maintenance, inspections, and repairs of Metrorail vehicles. The S&I Yard would be designed to accommodate 250 rail vehicles but initially built for 184. It would have several buildings, including an operations and field base building, a service and inspection shop, and a car wash. The yard would also include a traction power substation, a tie-breaker station, stormwater management facilities, and storage areas for materials. Metrorail vehicles would access the proposed yard sites via lead tracks from the mainline.

Full LPA Metrorail Ancillary Facilities

The LPA would include 21 traction power substations, 7 tie-breaker stations, and 24 stormwater management ponds. The locations of these facilities are shown in Figure 2.4-7.

Full LPA Metrorail Operations

Metrorail operations under the LPA would be similar to those discussed for the Wiehle Avenue Extension, except that service would be provided between the Stadium-Armory Station on the Orange Line and the Route 772 Station, and Dulles Corridor service would use a mix of six- and eight-car trains during the peak period and a mix of four- and six-car trains during the off-peak period.

Full LPA Construction Activities

Construction of the full LPA, east of and including the Wiehle Avenue Station, would be the same as the construction activities described for the Wiehle Avenue Extension. Construction of the full LPA beyond the Wiehle Avenue Station would require road realignment in the vicinity of the DIAAH median stations,

as well as construction of pedestrian bridge and station site facilities. These activities would occasionally close lanes in off-peak hours.

The full LPA would include an underground alignment at Dulles Airport with a portal well north of the terminal so as not to interfere with airport vehicular traffic. However, construction would displace parking spaces close to the airport terminal during construction of the underground station and alignment. The current assumption is that construction would proceed using cut-and-cover methods. Under this approach, construction would affect parking, some vehicular and pedestrian traffic, and the Signature Flight Support facilities. Minor disruptions would be expected to continue for at least two years. Temporary roadways, structures, and detours will be used during this period to maintain traffic. The possibility of using mined-tunneling methods for constructing the underground alignment will be studied during preliminary engineering. Regardless of which method is selected for the underground alignment, the underground station is likely to be constructed using the cut-and-cover method.

The western end of the Dulles Airport section is an aerial segment with a pocket track and crosses from the airport property into the Dulles Greenway median. Construction of this elevated structure is not anticipated to impact Greenway operations except for minimal off-peak lane closures of eastbound lanes during work over and adjacent to this area.

Realignment of the lanes on the Dulles Greenway would be necessary around the Route 606 and Route 772 stations and where the yard lead tracks connect, possibly causing some disruption of traffic. If the Dulles Greenway were realigned to accommodate stations prior to construction of the Route 606 and Route 772 stations, temporary lane closures along the Dulles Greenway would be minimized during construction of these stations.

Full LPA Costs

The estimated total capital costs (excluding any required financing costs) of the full LPA are estimated to be $3.5 billion (YOE). The incremental annual operations and maintenance costs for the LPA in 2015 and 2025 (relative to the No Build Alternative) are estimated to be $93.92 million and $117.88 million, respectively, in YOE dollars, respectively.

2.4.3 COMPARATIVE EVALUATION OF ALTERNATIVES

All the alternatives have been evaluated for the forecast horizon year of 2025. Because certain predicted effects of the Wiehle Avenue Extension vary depending on the year in which they are analyzed, the impacts and benefits of the Wiehle Avenue Extension are described for both opening year (2011) and the forecast horizon year (2025) to facilitate comparison across all alternatives.

Table 2.4-1 summarizes the major characteristics of these alternatives. The alignment, stations, ancillary facilities, operational characteristics, and costs associated with each of the alternatives are discussed in more detail in the following sections.

Table 2.4-1: Alternatives Evaluated

Characteristics	No Build Alternative (2025)	Locally Preferred Alternative		
		Wiehle Avenue Extension Opening Year (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
New Metrorail Line	–	11.6 miles	11.6 miles	23.1 miles
New Metrorail Stations	–	5	5	11
Yard Facilities	–	Improvements to West Falls Church S&I Yard	Improvements to West Falls Church S&I Yard	Site Y15 and Improvements to West Falls Church S&I Yard
Ancillary Facilities	–	11 substations, 4 tie-breaker stations, 11 stormwater facilities	11 substations, 4 tie-breaker stations, 11 stormwater facilities	21 substations, 7 tie-breaker stations, 24 stormwater facilities
Metrorail Operating Characteristics	7 minute peak period service	7 minute peak period service	7 minute peak period service	7 minute peak period service
	12 minute off- peak period service	12 minute off- peak period service	12 minute off- peak period service	12 minute off- peak period service
Capacity and Reliability Improvements to Metrorail System	8-car train operations, line reconfiguration, longer headways	No improvements beyond those included in the No Build Alternative	No improvements beyond those included in the No Build Alternative	No improvements beyond those included in the No Build Alternative
Express Bus Service	Fairfax and Loudoun Counties planned transit improvements (Express Bus) in the Dulles Corridor to West Falls Church Station	More Express Bus Service provided between Wiehle Avenue and points west	More Express Bus Service provided between Wiehle Avenue and points west	No Express Bus Service provided
Highway	Existing highways and planned highway improvements through 2025 included in the 2003 update of the MWCOG constrained long-range transportation plan (CLRP)	No improvements beyond those included in CLRP	No improvements beyond those included in CLRP	No improvements beyond those included in CLRP
Other Bus Service	Existing Metrobus, Fairfax Connector and Loudoun County Bus Services; marginal increases in local transit service to meet demand	Bus Service improvements provided	Bus Service improvements provided	Bus Service improvements provided

Table 2.4-2 provides a summary of the anticipated effects of the alternatives evaluated in the Final EIS. Results are summarized for the No Build Alternative and the LPA, including the Wiehle Avenue Extension. These effects and proposed mitigation measures are discussed in more detail in Chapters 3 through 9. Table 2.4-3 provides a summary of mitigation measures proposed to address the anticipated effects identified in Table 2.4-2.

Table 2.4-2: Summary of Effects

	No Build Alternative (2025)	Locally Preferred Alternative		
		Wiehle Avenue Extension Opening Year (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
Transit Operations				
Opening Year Total Ridership[1]	Base	62,800	Not Applicable	Not Applicable
Opening Year Metrorail Ridership	Base	59,000	Not Applicable	Not Applicable
Opening Year New Trips[1]	Base	29,100	Not Applicable	Not Applicable
Forecast Year Total Ridership[1]	Base	Not Applicable	73,300[2]	91,200
Forecast Year Metrorail Ridership[1]	Base	Not Applicable	68,500	91,200
Forecast Year New trips[1]	Base	Not Applicable	34,400	47,800
Peak Period Headways (minutes)	7	7	7	7
Off Peak Period Headways (minutes)	12	12	12	12
Costs[3]				
Capital Costs (YOE)	$0	$1.5B	$1.5B	$3.5B
Capital Funding Sources[4]	Not Applicable	50% Federal 50% Non Federal	50% Federal 50% Non Federal	50% Federal 50% Non Federal
Incremental Annual O&M Costs (YOE)	Base	$47.5M	$67.6M	$117.9M
Social Effects				
Land Use				
Compatible with Existing Land Use	Yes	Yes	Yes	Yes
Consistent with Comprehensive Plans	No	Partially	Partially	Yes
Compatible with Planned Development	No	Partially	Partially	Yes
Compatible with Local Zoning	Yes	Yes	Yes	Yes
Neighborhood Effects				
Community Facility Impacts	None	1	1	1
Residential Displacements (No.)	0	0	0	0
Residential Properties Partially Acquired (No.)	0	11	11	11
Shifts in Population and Employment	Unlikely	Likely	Likely	Likely
Community Cohesion	Continues Current Conditions	No Effect	No Effect	No Effect
Noise and Vibration (No. of Neighborhoods Affected)	0	12	12	13
Commercial Displacements (No.)	0	3	3	3
Commercial Properties Partially Acquired (No.)	0	37	37	64
Property Values	Continues Current Conditions	Likely to Increase Near Station Areas	Likely to Increase Near Station Areas	Likely to Increase Near Station Areas
Visual Effects				
Tysons Corner	Continues Current Conditions	Minimal	Minimal	Minimal

	No Build Alternative (2025)	Locally Preferred Alternative		
		Wiehle Avenue Extension Opening Year (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
Dulles Airport Historic District	Continues Current Conditions	No	No	Substantial
Effects on Archaeological Sites[5]				
Potential Adverse Effect (No.)	–	0	0	0
Adverse Effect (No.)	–	0	0	0
Effects on Historic Architectural Properties				
Potential Adverse Effect (No.)	–	0	0	0
Adverse Effect (No.)	–	0	0	1
Effects on Public Parklands (Section 4(f) and 6(f) Lands)				
Section 4(f) Direct Use (No.)	0	0	0	1
Section 6(f) Conversion of Use	0	0	0	0
Disproportionate Impacts to Minority/ Low Income Populations				
Neighborhoods Without Rail Service	6	4	4	0
Physical Impacts	None	None	None	None
Environmental Effects				
Effects on Geologic Resources				
Prime and Unique Farmland Soils (Acres)	None	None	None	Minor
Groundwater	None	Minor	Minor	Minor
Effects on Water Resources				
Streams/Water Quality (linear feet)	0	0	0	245
Wetlands (Acres)	0	0	0	5.2
Floodplains (No. of 100-year crossings)	0	3	3	5
Effects to Habitat and Biota				
Stormwater Runoff	Continues Current Conditions	More Impervious	More Impervious	More Impervious
Aquatic Habitat	Continues Current Conditions	Minimal	Minimal	Minor
Diabase Glade Habitat	Continues Current Conditions	None	None	None
Effects on Rare, Threatened, and Endangered Species	Continues Current Conditions	None	None	None
Air Quality				
Reduced Vehicles Emissions	Yes	Yes	Yes	Yes
Contribution to Regional Goals	No	Partially	Partially	Yes
Reduction in Regional VMT (Miles)	–	251.6M	153.8M	401.7M
NAAQS Violations	No	No	No	No
Noise and Vibration[7]				
Noise Receptors Above FTA Criteria Before Mitigation	–	184	184	183
Vibration Receptors Above FTA Criteria Before Mitigation	–	7	7	7

	No Build Alternative (2025)	Locally Preferred Alternative		
		Wiehle Avenue Extension Opening Year (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
Groundborne Noise Receptors Above Criteria	–	15	15	15
Hazardous Materials Generators Potentially Affected	–	4	4	11
Energy Usage (Percent change from No Build)	–	-0.27%	+0.04%	-0.49%
Economic Effects				
Total Transit Employees	6,942	7,424	7,424	7,489
Corridor Population[8]	339,497	+2.1%	+4.5%	+11.0%
Corridor Employment[8]	403,857	+3.0%	+6.3%	+16.0%
Corridor Development (in Million Square Feet)[8]	304.6	n.a.	+5%	+13%
Property Values Near Station Areas	Continues current condition	Likely to increase	Likely to increase	Likely to increase
Transportation Effects				
Number of Intersections at LOS F – a.m.[9]	11	2	3	14
Number of Intersections at LOS F – p.m. [9]	16	3	6	16
Consistent with Transportation Plans	Partially	Partially	Partially	Yes
Secondary and Cumulative Effects				
Potential for Effects Related to Secondary Development				
Population Increase at Stations	–	13% - 329%	13% - 986%	0% - 986%
Employment Increase at Stations	–	7% - 29%	16% - 29%	13% - 236%
Additional Demand for Public Services	–	Less than full LPA	Less than full LPA	Yes
Change in Visual Character at Stations	–	East of Wiehle Ave.	East of Wiehle Ave.	Yes
Contribution of Project to Cumulative Effects				
Change in Development Character	–	East of Wiehle Ave.	East of Wiehle Ave	Yes
Effect on Undeveloped Land in Loudoun County	–	No	No	Yes
Linkage Between Transportation and Secondary Development	–	Weaker than with Full LPA	Weaker than with Full LPA	Strong
Effect on Transportation Demand Management Strategies	–	Weaker than with Full LPA	Weaker than with Full LPA	Strong

1 Average weekday riders.

2 Includes 3,800 express bus riders with no transfer to Metrorail.

3 "B" – Billions, "M" - Millions.

4 Non federal refers to monies that would come from local jurisdictions as well as the Commonwealth of Virginia.

5 Likely that resources destroyed by previous construction. Potential effects if resources remain.

6 Prime uplands include areas of mature or pristine deciduous or other forest types that support wildlife populations.

7 Planned mitigation measures will reduce impacts below FTA criteria.

8 Changes in population, employment, and development potential calculated for areas within 1/2-mile radius of proposed stations except in Tysons Corner, where a 1,600-foot radius was used. Changes added to totals for all TAZs in corridor.

9 LOS - Level of Service; Measure of performance of intersections: A being the best and F being the worst.

Table 2.4-3: Summary of Proposed Mitigation Measures

Area	Proposed Mitigation Measures
Land Use and Socioeconomics	Continue coordination with Fairfax County, Loudoun County and Town of Herndon to encourage appropriate transit-oriented development. Incorporate Tysons West park-and-ride requirements (500 spaces) into Fairfax County Comprehensive Plan. Assist Fairfax County in pursuing joint-development opportunities at the Wiehle Avenue station.
Neighborhood, Community Services, and Community Cohesion	See proposed mitigation measures for Noise, Visual, Traffic, and Construction effects.
Property Acquisition and Displacements	All property acquisitions would be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act, as amended.
Visual and Aesthetic Conditions	Consider designs for Metrorail stations, aerial structures, and portals that are compatible with the surrounding environment. Provide landscaping at stations. Using established WMATA designs, design traction power substations and tie-breaker stations to be compatible with surrounding environment.
Cultural Resources/Section 4(f)	Lower the at-grade Metrorail alignment in the DIAAH median to preserve historic "peekaboo" view sequence of main terminal control tower. Develop treatment plan and implement specific measures (e.g., interpretive exhibits, public artwork, or photo documentation) to highlight Dulles Airport's unique historic characteristics. Consider the historic characteristics and other contributing elements of the Dulles Airport historic district in the design of the tunnel portals and their security barriers.
Parklands	Design and construct Metrorail overpass of the W&OD Railroad Regional Park in accordance with the *NVRPA Guideline for the Development of W&OD Trail Bridge Crossings*. Maintain use and access to the W&OD Railroad Regional Park during construction. Minimize disruption to Pimmit Run Stream Valley Park, Scotts Run Stream Valley Park, and Difficult Run Stream Valley Park during construction.
Safety and Security	Update WMATA Safety and Security Program with elements required by Transportation Security Administration or the Metropolitan Washington Airports Authority. Develop mutual aid agreements for emergency response with local jurisdictions. Locate tunnel exits of any kind, including vent shafts, emergency access shafts or any other kinds of openings outside the secure zone of the airport.
Environmental Justice	No mitigation measures are proposed.
Geological Resources	No mitigation measures are proposed.
Water Resources	**Surface Waters/Water Quality** Plant riparian buffers near the affected areas for two streams [Tributaries W-50 and W-51] converted to culvert or pipe. **Wetland Systems** Provide compensatory mitigation for unavoidable wetlands impacts associated with the S&I Yard on Dulles Airport property and at the Route 28 station by purchasing additional credits at an existing regional wetland bank. A 1:1 replacement ratio for impacts to emergent wetlands and 2:1 replacement ratio for impacts to forested wetlands would be used. **Floodplains** Avoid changes in floodplain elevation(s) of more than 1 foot. **Critical Areas** Coordinate design of new crossings with Fairfax and Loudoun Counties to ensure consistency with stream protection policies. **Other**

Area	Proposed Mitigation Measures
	Coordinate with the Federal Aviation Administration to ensure compliance with FAA Advisory Circular No. 150/5200-33 and control potentially hazardous wildlife from interfering with airport operations and safety.
Aquatic Biota and Habitat	See proposed mitigation measures for Water Resources, above.
Terrestrial Biota and Habitat	No mitigation measures are proposed.
Rare, Threatened, and Endangered Species	No mitigation measures are proposed.
Air Quality	No mitigation measures are proposed.
Noise	Install parapet and trackside noise barriers at locations near sensitive receptors to address noise impacts from Metrorail operations. Extend 4-foot noise barrier 1,000 feet near Baldwin Drive to reduce noise due to Metrorail passbys over 2 single switches west of Pimmit Run. Enclose new lead track and existing loop track at the West Falls Church Yard to reduce noise impacts from yard operations. Analyze reflective highway noise impacts to the Hallcrest Heights residential community during preliminary engineering and/or final design. Comply with WMATA guidelines, Federal law (for Wolf Trap Farm Park) and local noise ordinances during construction activities.
Vibration	Utilize dampening materials or devices under switches and crossovers near sensitive receptors.
Economic Effects	No mitigation measures are proposed.
Transportation Effects	**Station Access** Construct roadway improvements specified in the General Plans necessary for access to stations and facilities: *Tysons Central 123 Station* – Dedicated right turn lane for buses on Tysons Boulevard and acceleration lane on Route 123. *Wiehle Avenue Station* – New left turn lane northbound on Wiehle Avenue; new left turn lane to the eastbound Dulles Toll Road exit ramp at Wiehle Avenue; widen eastbound Sunset Hills Road between Wiehle Avenue and Isaac Newton Square and provide new left turn lane; and improve private roadway south of Sunset Hills Road to VDOT standards. New entry for bus ingress to the northside station facilities from the westbound Dulles Toll Road entry ramp; new acceleration lane for bus egress from the station facilities onto the westbound Dulles Toll Road; addition of bus bays on eastbound Dulles Toll Road exit ramp. *Route 606 Station* – New left turn lane to northbound Route 789 at both the north and south station entrances. *Yard Site 15* – New right turn and acceleration lanes on Route 606 for vehicular access to yard facilities. **Station Vicinity** Construct additional roadway improvements to mitigate opening year traffic impacts in the vicinity of Metrorail stations: *Tysons East Station* – Add second left turn lane from Old Meadow Drive to southbound Route 123. *Wiehle Avenue Station* – Improve right turn lane from eastbound Sunset Hills Road to southbound Wiehle Avenue and improve right turn lane from westbound Sunrise Valley Drive to northbound Wiehle Avenue. *Reston Parkway Station* – Add northbound through lane on Reston Parkway at Sunrise Valley Drive intersection and improve right turn lane from southbound Reston Parkway to westbound Sunrise Valley Drive. *Herndon-Monroe Station* – Add left turn lane from southbound Monroe Street to eastbound Sunrise Valley Drive; improve right turn lane from eastbound Sunrise Valley Drive to southbound Fairfax County Parkway; and modify lane configuration at the Van Buren (Monroe) Street and Herndon Parkway intersection.

Area	Proposed Mitigation Measures
	Route 606 Station – Add right turn lane from southbound Route 789 to westbound Route 606.
Secondary and Cumulative Effects	Any secondary or cumulative effects to the built and natural environment resulting from additional station area development would be mitigated through compliance with Fairfax and Loudoun counties' land use policies and development permitting processes.
Construction Effects	Develop Erosion and Sediment Control Plan. Develop Stormwater Management Plan and comply with applicable federal, state and local regulations and ordinances. Use Best Management Practices for stormwater management and groundwater protection during construction. Comply with federal, state, and local regulations governing construction in floodplains. Comply with the terms of the federal Coastal Zone Management Act consistency determination. Comply with local regulations governing noise and vibration during construction and use construction methods that minimize vibration. Comply with VDEQ requirements for fugitive dust and emissions outlined in 9 VAC 5-50-90. Prepare maintenance of traffic plans to address construction-related traffic management and detours. Maintain access (pedestrian and vehicular) to existing businesses during construction. Communicate with affected businesses and residents in order to minimize construction effects. Engage affected stakeholders to participate in the development of mitigation measures for construction effects and maintenance of traffic plans. Coordinate construction activities with VDOT for Commonwealth-owned roadways and MWAA for the Dulles Airport property, including the DIAAH. Comply with federal, state, and local regulations governing the use and handling of hazardous materials during construction.

3 SOCIAL EFFECTS

This chapter provides a general description of the existing demographics of the study area, and the living and working environments of people within it. The social aspects and built environment of the Dulles Corridor were studied in detail, and the project's No Build Alternative and the Locally Preferred Alternative (LPA) were analyzed to identify and assess the potential effects of each on the study area's population, housing, places of employment, land use, neighborhoods, and community services and facilities.

The alternative formerly known as "LPA Phase 1" in the October 2003 *Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation* has been renamed the Wiehle Avenue Extension in this Final EIS and is expected to begin operations in 2011. This change reflects the federal approach to the project's funding under the Federal Transit Administration's New Starts program. It will assure consistency among the environmental, engineering and financial documents during the project's development.

In the October 2003 *Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation* as well as this Final EIS, the term "full LPA" represents the Wiehle Avenue Extension and the second phase of the Dulles Corridor Rapid Transit Project. This second phase would extend west from Wiehle Avenue to Washington Dulles International Airport and Route 772 and is expected to begin operations in 2015.

The term "LPA", "proposed action", or "selected LPA" refers to both the Wiehle Avenue Extension and the full LPA collectively.

Each section in this chapter defines a study area, the methods used to make the assessments, and the existing conditions in each area. Study area definitions vary according to the issues under evaluation. For topics such as displacements and relocations, the study area is the limit of disturbance for the proposed improvements. For visual effects, the extent of the study area changes along the corridor depending on the nature of views and the locations of those viewsheds.

The LPA is evaluated against the No Build Alternative in terms of potential long-term and construction (short-term) effects and, where appropriate, measures to mitigate effects are identified. The assessment includes the following elements:

Section 3.1 provides a description of existing and planned land uses within the Dulles Corridor. Regional, county, and local land use characteristics are presented and corresponding regulations and county plans are described. In addition, projections of population, household, and employment growth due to land use changes in the corridor are assessed.

Section 3.2 provides a description of each neighborhood in the corridor and its associated community facilities (schools, places of worship, and recreation areas, etc.).

Section 3.3 provides a discussion of the residential, commercial, and institutional properties that are likely to be displaced or relocated by construction of the proposed alternatives.

Section 3.4 provides a description of the existing views and aesthetic conditions in the corridor and the potential of the alternatives to affect the visual character of the corridor.

Section 3.5 documents the historic and archeological resources in the study area. The discussion includes regulations that govern cultural resources, an overview of the history of the study area, identifies archaeological and historic resources within the study area, and the status of each resource. This section also presents the effects of each of the alternatives on these cultural resources.

Section 3.6 provides a physical and graphic description of the publicly owned parklands and recreation areas in the study area and assesses the potential effects of the proposed alternatives on these facilities.

Section 3.7 provides a description of the safety and security issues with the existing Metrorail system, and how these issues would be addressed for the LPA to provide a safe and secure environment for transit patrons in the Dulles Corridor.

In **Section 3.8**, to comply with Executive Order 12898, this section provides a description of minority and low-income populations, their location relative to the alternatives, and the results of the analysis. Particular focus is placed on any minority or low-income group or neighborhood that would be disproportionately affected by the project.

3.1 LAND USE AND SOCIO-ECONOMICS

As described in Chapter 1, population, housing, and employment in the Dulles Corridor are growing rapidly. This section discusses existing and future land use, major development activities, and land use controls within the Dulles Corridor. It also addresses changes in current land use that would result from the direct conversion of land within the corridor as well as changes in population, household characteristics, and employment that would occur in the corridor as land is developed. Changes in the corridor associated with increased densities or changes in the land use mix that are permitted under the *Fairfax County Comprehensive Plan* and the *Loudoun County Revised General Plan* if transit improvements are made, are discussed in Chapter 5.

3.1.1 METHODOLOGY

Potential changes in land use were determined by interpreting aerial photographs and reviewing comprehensive plans. Land use data provided by Fairfax and Loudoun counties were incorporated into a Geographic Information System (GIS) database for the project and then updated through field verification.

The study area for this analysis was defined as land within 300 feet of either side of the centerline of the No Build Alternative and the LPA and within a half-mile radius of the proposed station areas. This area was selected based on review of the anticipated limit of disturbance of the proposed improvements and was determined to be of sufficient size to capture the potential land use effects. Land use was assessed at the regional, county, and corridor level. Projections of land use changes included direct conversion of land for transit facilities.

Historic U.S. Census data, including data from Census 2000, were reviewed to obtain population and employment information. The Metropolitan Washington Council of Governments' (MWCOG) forecasts of growth in population, households, and employment documented in Round 6.3 Forecasts (Round 6.3) were used to project growth through year 2025. MWCOG is the Metropolitan Planning Organization (MPO) for the Washington metropolitan region. The Round 6.3 data are provided in regular intervals through year 2025. The Round 6.3 forecasts do not provide data for the opening year of the Wiehle Avenue Extension in 2011, however data for the year 2010 and for the opening year of the full LPA in 2015 is included.

The effects of secondary development within the half-mile station areas associated with the No Build Alternative, the Wiehle Avenue Extension, and the full LPA are described in Chapter 5. Chapter 5 also includes the effects of population and employment changes within the station areas.

3.1.2 EXISTING CONDITIONS AND FUTURE PROJECTIONS

This section describes current land use, population, housing, and employment characteristics within the Dulles Corridor and is divided into regional and corridor-level analyses. The regional-level discussion includes analyses for the Washington, D.C. metropolitan area and for Fairfax and Loudoun counties. The corridor-level analysis focuses on the land use characteristics of the Dulles Corridor.

3.1.2.1 Regional Characteristics

Land use within the Washington metropolitan region follows the same pattern found in many major U.S. metropolitan areas. At the heart of the region is downtown Washington, D.C. Surrounding this urban core is a series of rings of suburban development with decreasing densities, surrounded by a series of outer suburbs that are rural in nature.

While every major classification of land use exists within the region, some characteristics are unique to specific geographic areas. To meet its high employment and space requirements in the vicinity of the nation's capital, the federal government has more land defined as government or publicly owned than most other regions. Although the majority of federally owned land lies within Washington, D.C., government uses have recently expanded into Arlington County, the City of Alexandria, and Fairfax County. Metrorail corridors, such as the Rosslyn-Ballston Corridor in Arlington County, have extensive mixed-use land classifications. These mixed-uses have developed over time as the land around Metrorail stations has been developed according to local comprehensive plans that support increased densities and a mix of uses.

Regional activity centers are located throughout the Washington metropolitan region. Major regional activity centers include the District of Columbia, Bethesda, Chevy Chase, and Silver Spring in Maryland; and Tysons Corner, Springfield, Centreville, and Reston in Virginia. Each of these activity centers contains a mix of retail, office, industrial, commercial, and residential land uses that support major employment and residential bases. Several of these major regional activity centers are located within the Dulles Corridor, including the City of Falls Church, Tysons Corner, Reston, Herndon, Dulles Corner, Dulles International Airport and Eastern Loudoun County.

Development in the region over the last 50 years has occurred along radial transportation corridors, such as I-270, I-95, I-66 and the Dulles Toll Road, and along the Capital Beltway. Activity centers, such as Tysons Corner and Springfield, have developed at major crossroads. As development along these corridors has intensified, suburban development has spread to fill in the areas between these corridors.

MWCOG is responsible for maintaining and updating the regional population and employment model, which is used by the region for planning purposes. MWCOG has defined the region to include Washington, D.C., Montgomery, Prince George's, Arlington, Fairfax, Loudoun, Prince William, Frederick, Charles, Calvert, and Stafford counties; and the cities of Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park. For air quality conformance, this definition of the region and the MWCOG model projections are used throughout this Environmental Impact Statement (see section 4.6).

As shown in Table 3.1-1, the region's population is expected to grow steadily through year 2025, at an average of approximately 58,000 more persons per year. Population growth is expected to be spurred by the long-term strength of the region's economy, high rates of migration into the region from other U.S. and international locations, and less-rapid declines in average household size than were previously anticipated in prior forecasts. The region's population that is 65 years of age and older will more than double between 2000 and 2025, while the number of children will increase by approximately 30 percent during the same period.

Table 3.1-1: Expected Growth in Regional and County Population

	2000	2005	2010	2015	2025	Total Change (2000 - 2025)	Percent Increase
Region							
Population	4,458,797	4,877,851	5,208,832	5,507,071	5,887,286	1,428,489	32%
Persons/Acre	1.60	1.75	1.87	1.98	2.12	0.52	32%
Fairfax County							
Population	987,919	1,065,896	1,136,325	1,172,569	1,210,815	222,896	23%
Persons/Acre	3.72	4.01	4.28	4.42	4.56	.84	23%
Loudoun County							
Population	168,748	238, 409	299,571	350,333	422,190	253,442	150%
Persons/Acre	0.51	0.71	0.90	1.05	1.27	0.76	150%

Source: MWCOG Round 6.3 Forecasts; MWCOG projections for Fairfax County include the cities of Fairfax and Falls Church.

The greatest population growth in the region will be in Loudoun, Fairfax, and Montgomery counties. Outer jurisdictions that will experience the fastest rates of growth and greatest total amounts of growth are led by Loudoun (150 percent), Charles (62 percent), and Frederick (55 percent) counties. The region's central jurisdictions will grow more slowly. In Arlington County and the City of Alexandria, population will increase by 16 and 17 percent, respectively. Washington, D.C. will experience an end to its recent short-term population loss and is expected to grow by 24 percent during the 2000 to 2025 forecast period.

MWCOG predicts an increase of more than 587,000 households in the region during the 2000 to 2025 forecast period, reflecting the growth in jobs and the migration of new residents moving into the region. The largest number of new households will be in Loudoun and Fairfax counties (shown in Table 3.1-2), and Montgomery County, which collectively will contribute nearly 50 percent of the household growth during the forecast period. Loudoun County will grow the most rapidly of all corridor jurisdictions, adding approximately 90,000 households to a year 2000 base of 59,900 households.

Table 3.1-2: Expected Growth in Regional and County Households

	2000	2005	2010	2015	2025	Total Change (2000 - 2025)	Percent Increase
Region	1,710,808	1,868,254	2,005,977	2,132,867	2,298,269	587,461	34%
Fairfax County	363,734	395,433	422,869	436,373	449,885	86,151	24%
Loudoun County	59,900	84,855	106,572	124,553	149,985	90,085	150%

Source: MWCOG Round 6.3 Forecasts; MWCOG projections for Fairfax County include the cities of Fairfax and Falls Church.

Regional employment projections, shown in Table 3.1-3, predict an increase of 41 percent from 2000 to 2025, with employment experiencing a slightly higher rate of growth than both population and households.

Table 3.1-3: Expected Growth in Regional Employment and Employment within Corridor Juridisctions

Area	2000	2005	2010	2015	2025	Total Change (2000 - 2025)	Percent Increase
Region							
Employment	2,826,210	3,079,949	3,376,883	3,584,716	3,994,729	1,168,519	41%
Jobs/Acre	1.02	1.11	1.21	1.29	1.44	0.42	41%
Fairfax County							
Employment	573,027	635,428	694,622	720,163	778,498	205,471	36%
Jobs/Acre	2.16	2.39	2.62	2.71	2.93	0.77	36%
Loudoun County							
Employment	87,044	109,926	137,083	166,214	224,453	137,409	158%
Jobs/Acre	0.26	0.33	0.41	0.50	0.67	0.41	158%

Source: MWCOG Round 6.3 Forecasts: MWCOG projections for Fairfax County include the cities of Fairfax and Falls Church

Fairfax County, Prince George's County, Loudoun County, and Washington, D.C. are projected to add the largest numbers of new jobs to the region's employment base during the 2000 to 2025 forecast period, followed by Montgomery, Arlington, Frederick, and Prince William counties. As with population and household growth, the largest percentage increases in employment will occur in the outer suburbs of Virginia and Maryland. Despite the tremendous growth in suburban employment indicated in the forecasts, Washington, D.C. will continue to have the largest number of jobs of any single jurisdiction and will account for more than one-fifth of the region's employment.

3.1.2.2 Local Characteristics

Land use along the Dulles Corridor is controlled by Fairfax County, the Town of Herndon, and Loudoun County.

A. Fairfax County

Fairfax County encompasses 399 square miles. Over the past 50 years, Fairfax County has changed from a rural and agricultural area to an urbanized metropolitan area. The county, particularly the eastern portion, is now largely developed and includes a mixture of low-density residential, commercial, industrial, and public land uses. About 54 percent of the land in Fairfax County is used for residential purposes. Industrial and commercial land uses each account for almost 4 percent of the total developed acreage. Other major land uses include parklands (12 percent) and public facilities or institutions (11 percent). About 16 percent of the land in Fairfax County is now vacant or undevelopable open space.

With more than 100 million square feet of office space, and more than 500,000 employees, Fairfax County is one of the nation's largest commercial real estate markets (Fairfax County Economic Development Authority, 2003). The majority of this development has taken place along the major transportation corridors in the county: the Dulles Toll Road, I-66, I-495 (Capital Beltway), I-395/I-95, and Route 28.

The highest growth rates in Fairfax County occurred during the 1940s and 1950s. While the rate of growth has slowed since that time, the county is continuing to grow and is home to more than one million residents, making it the most populous jurisdiction in the region. MWCOG projections show the county population increasing by approximately 15 percent between 2000 and 2010, and 24 percent between 2000 and 2025. In 2025, Fairfax County will still be the most populous jurisdiction in the region and will be one of only two in the region with more than one million residents.

Fairfax County has more than 380,000 housing units, of these, approximately 50 percent are single-family homes, 26 percent are multi-family units, and 24 percent are townhouses.

Employment in Fairfax County has increased and will continue to increase rapidly. As shown in Table 3.1-3, employment in Fairfax County is estimated to increase by 36 percent between 2000 and 2025, adding more than 200,000 jobs and outpacing population in the county.

B. Loudoun County

Loudoun County encompasses 517 square miles and is much more rural than Fairfax County. More than 60 percent of the total land area in the county is used for agricultural purposes, and 24 percent is in residential use. Industrial and commercial uses account for 6 percent of the total acreage, with public and open space uses accounting for the remaining 9 percent.

Like Fairfax County, commercial development is focused along the county's major transportation corridors: Route 7, Route 28, and the Dulles Greenway. The county contains 12.6 million square feet of office space and 14 million square feet of industrial and flex space for more than 100,000 employees. Almost all commercial development in the county is focused in the eastern portion of the county, leaving the remainder of the county largely agricultural, with a few small towns located at major crossroads.

The rapid growth in Loudoun County is part of a second wave of suburban expansion. From 1900 to 1960, the population of the county remained relatively stable. However, starting in the 1960s, the county began three decades of approximately 50 percent growth per decade. According to the most recent U.S. Census, the county increased in population by more than 95 percent in the past decade.

Loudoun County population is expected to increase 78 percent between 2000 and 2010, and by 150 percent between 2000 and 2025. The vast majority of new development is planned for the eastern third of the county, resulting in significantly higher densities in that area.

Although Fairfax County has far more residential units than Loudoun County, Loudoun County's housing stock is growing at a faster rate. Loudoun County has approximately 73,000 units, representing an increase of 17.4 percent over 2000. Of these, 54 percent are single-family, 26 percent are townhouses, and 20 percent are multi-family.

As shown in Table 3.1-3, employment in Loudoun County is estimated to increase by more than 158 percent by 2025, four times as fast as Fairfax County. This reflects the job growth occurring in the existing and emerging activity centers in the county.

3.1.2.3 Land Use Controls and Comprehensive Planning

Current comprehensive plans and zoning ordinances for the study area were reviewed to determine their land use objectives and transportation policies in relation to the project. The proposed land use as defined in these comprehensive plans for the entire Dulles Corridor area is shown in Figure 3.1-1, and reflects the mix uses that are currently permitted in the corridor.

The study area for determining potential long-term land use effects of the alternatives was defined as land within 300 feet of either side of the centerline of the No Build Alternative and the full LPA and within a half-mile radius of the proposed station areas. Fairfax County, the Town of Herndon, and Loudoun County regulate land use within these areas through comprehensive planning and zoning ordinances. A brief summary of the comprehensive plans of these three jurisdictions follows.

A. Fairfax County Comprehensive Plan

The *Fairfax County Comprehensive Plan* has three components: the Policy Plan, Area Plan, and the Comprehensive Plan Map. The Policy Plan explains the county's goals, objectives, and policies regarding land use, transportation, housing, environment, and other planning areas. The Area Plans are site-specific, and are divided into Planning Districts, Community Planning Sectors, and special areas, such as the Tysons Corner Urban Center and several Suburban Centers. The third component, the Comprehensive Plan Map, is a generalized depiction of the pattern of future land use, transportation, public facilities, and other planned features.

The Area Plans implement the Policy Plan's goals and objectives at the more detailed Planning District and Community Planning Sector levels. The Area Plans contain detailed recommendations for a wide range of planning areas. The Dulles Corridor includes the McLean, Vienna, and Upper Potomac planning districts, the Tysons Corner Urban Center, the Reston-Herndon Suburban Center, and the Dulles Suburban Center. Based on the work of the Dulles Corridor Land Use Task Force, appointed by the Fairfax County Board of Supervisors to review the *Fairfax County Comprehensive Plan* as part of the County’s commitment to transit supportive policies in the corridor, revisions to the Comprehensive Plans for Reston, the Herndon area outside of the Town of Herndon, and the Dulles Corner area have been adopted by Fairfax County, and have been incorporated into this analysis.

In addition, the Dulles Corridor Land Use Task Force recommended that covenants that are in effect in Reston be lifted. These covenants restrict residential development within close proximity to the Dulles Toll Road and would have to be lifted in order for Fairfax County to implement mixed-use development at the Transit Station Areas in Reston.

B. Town of Herndon Comprehensive Plan

The *Town of Herndon's Comprehensive Plan*, adopted June 1990, sets goals for land use, parks and recreation, public facilities, transportation, and heritage preservation. The Transportation Element of the plan was updated in 1997 and reflects rapid transit in the Dulles Corridor. All land within the town is assigned to one of four land use categories: neighborhood conservation, services and industry, community facilities, and adaptive areas. Each of these categories has general land use goals established for large areas of the town, with specific uses and densities specified in the zoning regulations.

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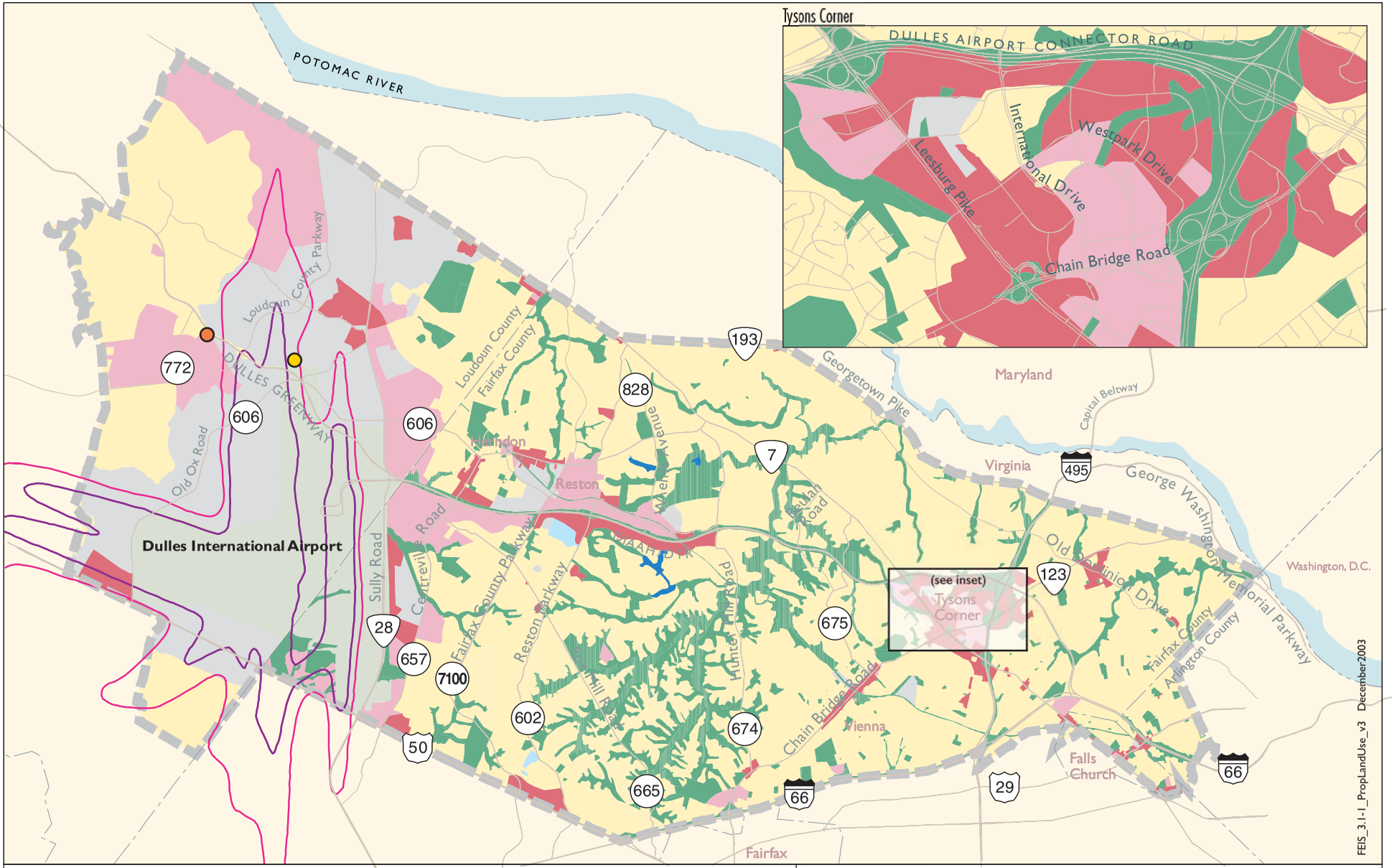


Figure 3.1-1

Proposed Land Use in the Dulles Corridor

Dulles Corridor Rapid Transit Project

C. Loudoun County Revised Comprehensive Plan

On July 23, 2001, the Loudoun County Board of Supervisors approved a *Revised Comprehensive Plan*, which will guide development in the county for the next 20 years. Adoption of the *Revised Comprehensive Plan*, which includes the *General Plan* and the *Countywide Transportation Plan*, came after a year-and-a-half of extensive study and public input, including community meetings, public hearings, and public comment.

The *Revised Comprehensive Plan* includes several refinements that promote the development of efficient and convenient local commuter transit services, including rail in the Dulles Greenway Corridor. The plan refines recommended uses within the corridor, including more detail on transit nodes located in the vicinity of the proposed stations at Route 606 and Route 772. As part of the implementation of the *Revised Comprehensive Plan*, the Loudoun County Board of Supervisors adopted changes to the county's zoning ordinance and developed a new zoning map. The revisions include changes to land use in the proposed station areas that would allow for transit-oriented development with increased densities, mixed-uses, pedestrian amenities, and reductions in automobile parking requirements.

D. Loudoun County Toll Road Plan

During the development of the General Plan, the Loudoun County Planning Commission and Board of Supervisors identified the need to formulate more specific land use policies for land adjacent to the Dulles Greenway. In 1995, the county issued the *Toll Road Plan*, with the goal of maximizing the economic benefit from development within the corridor. The *Toll Road Plan*, although separate from the General Plan, is part of the County's comprehensive plan. In Loudoun County, the Dulles Corridor falls within the Toll Road Plan's area.

The land use strategy for the Dulles Toll Road area is designed to promote compact development at interchange and transit facilities. The highest intensity development in the planning area would occur at nodes, which are planned around the Route 606 and Route 772 interchanges with the Dulles Greenway. Nodes are intended to be areas of dense, compact development centered on a transit station with densities tapering from the core. The *Toll Road Plan* states that nodes will be mixed-use in character in all locations, except for those located within Business Employment areas, which will not have a residential component.

3.1.2.4 Corridor Characteristics

The Dulles Corridor is expected to experience substantial growth (nearly 50 percent) in population and employment (nearly 70 percent) over the next 25 years. However, land use patterns throughout the corridor are expected to remain largely as they are today, with most new growth occurring at existing and emerging activity centers including the City of Falls Church, Tysons Corner, Reston/Herndon, Dulles Corner, Dulles International Airport and Easter Loudoun County.

A. Existing and Future Land Uses

This section discusses existing and future land uses within the project corridor. Details regarding neighborhoods, community services, cultural resources and parks are located in Sections 3.2, 3.5 and 3.6 of this chapter. Future growth in commercial or mixed-use development is expected to occur in Tysons Corner, Reston, Herndon (near the Route 28 interchange), and in Loudoun County near the intersection of Route 772 and the Dulles Greenway.

Land use in the area surrounding the Dulles Connector Road between West Falls Church and Tysons Corner is almost entirely residential in nature. According to the *Fairfax County Comprehensive Plan,*

development in the area surrounding the Dulles Connector Road will continue to be residential in the future. Infill and redevelopment is expected to generate small increases in population and employment in this section.

East of the Capital Beltway, the Tysons Corner area consists primarily of offices with areas of residential development located on the fringe. The *Fairfax County Comprehensive Plan* calls for this area of Tysons Corner to maintain roughly the same proportion of land uses, but at a more intense level. Commercial uses in this area are to continue their development as office parks. The vacant parcels would infill with additional office use; low-rise buildings would redevelop to mid-rise and high-rise office buildings with supporting retail and service uses. In the residential areas, the plan calls for continued residential use at the existing scale with redevelopment of existing low-rise garden apartments to mid-rise, multi-family dwelling use to encourage more housing adjacent to employment locations.

West of the Capital Beltway, Tysons Corner is divided into several areas of development with various types of land use. The West*Park area is located north of Westpark Drive and east of International Drive and includes more than five million square feet of office space in more than 25 buildings. Residential land use in the West*Park area includes the Lincoln Apartments complex adjacent to International Drive. The West*Park area is planned to continue as an office park, with supporting retail and services, and the option of residential uses.

Immediately south of West*Park is the Tysons II area, bounded by Westpark Drive, International Drive, and Route 123. It includes the Galleria at Tysons II shopping mall (with more than one million square feet of retail space) and a significant amount of office, hotel, and residential land uses. Adjacent to the mall are several large office towers and a hotel. To the north of the shopping mall are two residential developments. In 2003, Fairfax County approved up to 6.8 million square feet of mixed-use development for the area between the Galleria shopping mall and Route 123. The development would consist of nine high-rise towers, four of which would stand 30 stories. It would also include pedestrian bridges, small plazas, wide sidewalks, structured parking, and a park with an amphitheater.

The Tysons I area is bounded by Route 123, Route 7, and the Capital Beltway. This area contains the largest shopping mall in the region (eighth largest in the country), the Tysons Corner Center, as well as several office buildings and smaller retail land uses. The Tysons Corner Center area is to continue its regional shopping focus, but could add convention or recreation uses. West of International Drive, the area surrounding the Route 7 and Route 123 interchange is envisioned to gradually redevelop from the existing strip retail development to mid-rise and high-rise office buildings that would include support retail and service uses.

International Drive, Westpark Drive, Route 123, and Route 7 bound the Greensboro Drive area, which features much of the prominent office development in Tysons Corner. The most prominent feature in the area north of Greensboro Drive is the Rotonda Condominium Complex, which has more than 1,100 units. In contrast to the large shopping malls to the east, retail land use within this portion of Tysons Corner is focused along Route 7 and consists primarily of car dealerships and an assortment of service and convenience retail outlets. Adjacent to the Dulles International Airport Access Highway (DIAAH) and Dulles Toll Road, the Tyco Road area includes the majority of the industrial uses in the Tysons Corner study area, including several automobile repair shops, two storage facilities, and a flex industrial building.

In the future, the Greensboro Drive area would continue to be the office core of Tysons Corner. Because no undeveloped land is available, infill and redevelopment opportunities would be encouraged. Some

surface parking lots could be redeveloped into office space with structured parking. In addition, the *Fairfax County Comprehensive Plan* encourages the development of pedestrian-oriented plazas and courtyards in the Tysons Corner area. The high-density residential uses to the north and east of Greensboro Drive are anticipated to remain, while the industrial area to the north of Spring Hill Road could either remain industrial or be redeveloped for mixed-use. The retail uses along Route 7 are planned for redevelopment with mid-rise and high-rise office buildings that include retail and support services.

West of Route 7, the study area includes a mixture of office parks, strip retail, hotels, and other uses. Major commercial development is centered on Spring Hill Road and Westwood Center Drive, generally in multi-building office parks near the DIAAH and Dulles Toll Road. West of the retail land use on Route 7 are a number of residential uses, including townhouse communities, providing a buffer for the single-family neighborhoods farther west. Within the section of the corridor generally bounded by the Route 7 interchange with the DIAAH and the Dulles Toll Road, no changes in land use are projected by 2025 for the majority of residential areas.

Tysons Corner has transformed from a rural crossroads with a general store in the 1950s to the urban center of Fairfax County today. Tysons Corner has roughly 26,000 residents and 87,000 employees. Although Tysons Corner contains less than 2 percent of the county's population, it has approximately 15 percent of the county's jobs. By 2025, population in Tysons Corner will increase by 36 percent and employment will increase by 42 percent.

Land use in the section of the corridor that extends from Tysons Corner to Route 28 varies from purely residential neighborhoods in the east to suburban office parks in the west. West of Tysons Corner and east of Reston are single-family detached homes on half-acre to 1-acre lots. West of Hunter Mill Road, the section includes parts of Reston, Herndon, and Dulles Corner, an area comprised of suburban office parks adjacent to the DIAAH and the Dulles Toll Road, with residential areas, primarily single-family neighborhoods, at the periphery.

Within the area generally bounded by the Route 7, the Dulles Toll Road and Hunter Mill Road, the dominant land use is single-family residential, with some small institutional uses such as churches, as well as the Wolf Trap Center for the Performing Arts. Reston, a planned community located on either side of the DIAAH and Dulles Toll Road, extends from the Hunter Mill Road interchange on the east to the Fairfax County Parkway on the west. Residential areas are located north of Sunset Hills Road and south of Sunrise Valley Drive, with an approximately equal number of residents on either side.

Residential development was prohibited from parcels immediately adjacent to the Dulles Toll Road between Sunset Hills Road and Sunrise Valley Drive until recent changes in the *Fairfax County Comprehensive Plan*. However, it is still prohibited by existing land covenants. In general, land between Sunrise Valley Drive and Sunset Hills Road has been developed with retail and commercial office space. North of Sunset Hills Road, the Reston Town Center features more than 900,000 square feet of office space in three towers and one low-rise building, and approximately 270,000 square feet of retail space. Several medium- to high-density residential uses are currently being developed in the area just west of the Town Center. More retail space is located west of the Reston Town Center on Sunset Hills Road. South of the DIAAH and the Dulles Toll Road, there is a cluster of small retail outlets adjacent to the Reston International Center. A number of undeveloped parcels in Reston are located near Wiehle Avenue. Two are located on Michael Faraday Court, another is adjacent to Isaac Newton Square, and several small parcels used as a power easement are adjacent to the W&OD Railroad Regional Park.

The Town of Herndon, and portions of Fairfax County known as Dulles Corner, lie west of Reston. Office development exists north of Sunrise Valley Drive and along both sides of Herndon Parkway in Herndon and in the Dulles Corner area. Office use in this area also includes the Dulles Technology Center and Dulles Corner Park on Fox Mill and Horse Pen Roads. The Dulles Technology Center contains low- and mid-rise office/flex development. The Dulles Corner Park is located between Horse Pen Road and the Dulles Toll Road/Route 28 interchange.

The Herndon-Monroe Park-and-Ride lot, owned and operated by Fairfax County, is located south of the DIAAH and Dulles Toll Road. The facility has 1,745 parking spaces and provides connections to a number of local and express buses. Residential land use in the Herndon/Dulles Corner area consists of single-family homes with some townhouses, condominium units, and apartments.

As part of recent revisions to the *Fairfax County Comprehensive Plan*, the county has defined some portions of the corridor as Transit Station Areas. Within these Transit Station Areas, located at Wiehle Avenue, Reston Parkway, Herndon-Monroe, and Route 28, proposed changes in land use mix are now incorporated into the latest revisions in the Comprehensive Plan. The changes in land use mix are now permitted without the construction of Metrorail, but at lower densities, and could result in a change of land uses from office to mixed-use, allowing for residential development to occur in the study area by 2025. As stated previously, covenants must be lifted in order for residential development to occur in close proximity to the DIAAH/Dulles Toll Road in Reston. Additional density bonuses are permitted if Metrorail is implemented.

Despite language in the *Fairfax County Comprehensive Plan* allowing residential development in this area, the Reston Center for Industry and Government Declaration of Protective Covenants and Restrictions prohibits residential development of any kind in areas that have been zoned for industrial or commercial uses.

Land in the Reston/Herndon area is projected to continue to develop into office, residential, and mixed-use classifications as undeveloped parcels are developed. However, the recent changes to the *Fairfax County Comprehensive Plan*, covenant issue not withstanding, are likely to encourage the introduction of residential uses along the DIAAH and Dulles Toll Road, and the intensification of residential and commercial development by 2025. Most growth in this portion of the corridor is anticipated to occur in the Reston, Herndon, and the Center for Innovative Technology/Dulles Station areas. Reston is projected to add more than 15,000 residents and nearly 20,000 employees, while the Herndon/Dulles Corner area is expected to add nearly 20,000 residents and 22,000 employees.

Dulles Airport, as shown in Figure 1.1-1, encompasses 11,000 acres of land within both Fairfax and Loudoun counties west of Route 28. The terminal buildings have more than 50 shops and restaurants. No residential facilities are present on airport property, but hotel and office buildings are present.

The Metropolitan Washington Airports Authority (MWAA) recently completed a new master plan for improvements to Washington Dulles International Airport (Dulles Airport). The plan calls for $3.4 billion in improvements, including the construction of a new circulator people mover system, two new parking garages, an additional concourse, and an additional runway, all of which are to be completed by 2007. This expansion is needed to accommodate projected increases in passengers and employment at the airport. As part of their planning efforts, MWAA projects that employment will grow to 30,000 by 2010 and as much as 65,000 by 2035. In comparison, the MWCOG projections in Table 3.1-3 are much lower.

The segment of the project corridor located in Loudoun County is bounded by Route 7 to the north, Fairfax County to the east and Route 659 and Goose Creek to the west, exclusive of Dulles Airport property. This portion of the corridor has industrial, residential, and undeveloped land. The eastern portion of this section, nearest Dulles Airport, is largely industrial in nature and dominated by several large warehouse facilities. The western portion of the study area, where developed, is residential, ranging from multi-family complexes to large-lot, single-family homes.

The *Loudoun County Revised Comprehensive Plan* calls for the development of "keynote employment" and industrial land uses in the eastern portion of the Dulles Greenway north of the airport. In general, the area south of the Dulles Greenway and outside the airport property is planned for industrial use. North of Dulles Greenway plans call for large-scale regional office development and the creation of a high-density node immediately north of the airport property. Due to its proximity to the airport, county regulations prohibit residential development in this node.

Along the Dulles Greenway near Route 772, the planned land use is a high-density, mixed-use node for office, residential, and retail development. The area north of the Dulles Greenway is planned for a regional office node that could include 15 to 25 percent residential land uses. South of the Dulles Greenway, the *Revised Comprehensive Plan* calls for development of a mixed-use node. Land north of the station is designated for high-density residential development. On January 6, 2003, the Loudoun County Board of Supervisors adopted revisions to the county's zoning ordinance and a new zoning map that included changes within the Route 772 Station area. The permitted zoning in the area will now allow for the development of a mix of compatible, compact, high-density, transit-oriented uses. This area is expected to receive much of Loudoun County's growth over the next 25 years.

3.1.3 LONG-TERM EFFECTS

This section discusses the long-term (2025) effects to land use that would result from the No Build Alternative, the Wiehle Avenue Extension, and the full LPA. Table 3.1-4 presents a summary of these effects. These effects are defined as the compatibility of the No Build Alternative, the Wiehle Avenue Extension, and the full LPA with existing land uses in the corridor, zoning of the parcels in which the project facilities would be located, planned development, and locally adopted comprehensive plans. Secondary development effects, such as increased densities, population and employment changes are discussed in Chapters 5 and 9.

The land use plans adopted by local governments within the Dulles Corridor all contain guidelines to support higher densities, mixed-use development, and walkable, bicycle-friendly development in close proximity to transit stations.

Table 3.1-4: Land Use Compatibility

Land Use Elements	No Build Alternative (2025)	Locally Preferred Alternative		
		Wiehle Avenue Extension (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
Compatible with Existing Land Use	Yes	Yes	Yes	Yes
Compatible with Zoning	Yes	Yes, although special exceptions would be required at some station areas.	Yes, although special exceptions would be required at some station areas.	Yes, although special exceptions would be required at some station areas.
Compatible with Planned Developments	No	Partially	Partially	Yes
Consistent with Comprehensive Plans	No. All plans assume high-capacity transit improvements in the Dulles Corridor.	Partially. Plans assume the high-capacity transit improvements included in the full LPA.	Partially. Plans assume high-capacity transit improvements for the full LPA.	Yes

3.1.3.1 No Build Alternative

Under the No Build Alternative land use would continue to be directed by existing comprehensive planning guidelines with no transit-based density bonuses. Local land use and transportation plans reflect any improvements included in the No Build Alternative. Therefore, the No Build Alternative is consistent with existing land use and zoning in the corridor.

However, the No Build Alternative is not compatible with planned developments, many of which have been designed to accommodate higher density in build-out years that would be allowed should high-capacity transit be implemented in the corridor. The No Build Alternative is also inconsistent with locally adopted comprehensive plans. The comprehensive plans for all localities include the provision of transit within the Dulles Corridor as a critical element of their transportation systems by 2025.

3.1.3.2 Wiehle Avenue Extension

The Wiehle Avenue Extension would be consistent with planned developments in Tysons Corner that have anticipated the presence of high-capacity transit in the corridor, however, it would be inconsistent with planned developments near Reston Parkway, Herndon-Monroe, Route 28/Dulles Corner, and Route 772 in Loudoun County that were designed in anticipation of high-capacity transit improvements. Similarly, the Wiehle Avenue Extension would be partially consistent with the *Fairfax County Comprehensive Plan*, but it would not provide the high-capacity transit improvements envisioned in the Loudoun County portion of the corridor.

Because Wiehle Avenue Extension would be constructed primarily within existing transportation rights-of-way, direct land use conversions and conflicts with surrounding land uses would be minimal. The extension of Metrorail within existing transportation corridors would be consistent with existing and future land uses. The Wiehle Avenue Extension would be consistent with existing zoning along the proposed alignment, except in some cases where special exceptions would be required for the construction of station facilities. Station facilities typically consist of entrance pavilions, parking facilities, bus bays, Kiss & Ride areas, park-and-ride lots, and new access roads. Ancillary facilities would also be located at several areas along the corridor and convert small areas of land with minimal effect. Ancillary facilities include traction power substations, stormwater management ponds, and tie-breaker stations.

Direct land use conversions that would result from the Wiehle Avenue Extension are described starting from the Orange Line connection and extending west.

Beginning from the east, the Wiehle Avenue Extension would add a new lead track to connect with the existing rail yard at West Falls Church. New facilities, including more rail car storage spaces, would be added within the existing rail yard area.

Existing residential land would be converted for ancillary facilities for a tie-breaker station, located on the south side of the Dulles Connector Road and an access road from Plainfield Street. Further west, residential land along the property line between two residences on the cul-de-sac at the south end of Baldwin Drive would be converted for use as an access road to a new substation located within the right-of-way of the Dulles Connector Road. In addition, a traction power substation would be added within the Dulles Connector Road right-of-way via an access road provided off of Olney Road.

After turning off the Dulles Connector Road Corridor, the alignment would require right-of-way that would convert some commercial land along the north edge of Route 123, but would not displace any businesses or impact any structures. At the Tysons East Station, undeveloped land has been proffered for station facilities. The station platform, mezzanine, and bus bays would be constructed on the north side of Route 123, while a stormwater management pond, a Kiss & Ride facility and bus bays would be constructed on the south side of Route 123. Construction of these facilities would not cause the removal of any existing or planned structures, nor would it preclude permitted uses on the remaining portion of the site.

At the Tysons Central 123 Station, land currently zoned for commercial use would be converted for station facilities. On the north side of Route 123, undeveloped land would be converted for the station mezzanine, platform, an entrance pavilion, and bus bays. A portion of the land required for these facilities has been proffered to Fairfax County. South of Route 123 undeveloped land would be converted for more bus bays and another entrance pavilion that would connect to the station platform via a pedestrian bridge across Route 123.

The alignment would go below ground immediately west of the Tysons 123 Station. The next station, Tysons Central 7, would be underground with entrance pavilions on both sides of Route 7. The south entrance pavilion would be located in the current parking lot for the Tysons Square Center shopping center and would require the conversion of approximately 35 parking spaces. The entrance pavilion located north of Route 7 would displace one business and an auto repair shop. In addition, ventilation and emergency equipment shafts would be added to the sidewalks along the side of Route 7 above the station.

The alignment would continue underground for about 1,600 feet until emerging above ground and proceeding along the west side of Route 7 converting some existing access roads and the edges of some parking areas for the facility. At the Tysons West Station, a portion of the parking area for an existing auto dealership located on the south side of Route 7 would be converted for station facilities.

On the north side of Route 7, an existing auto collision center and car rental office zoned for commercial use would be converted to station facilities, including a Kiss & Ride facility bus bays. Special exceptions to the existing zoning may be required for the construction of station facilities.

The alignment would continue along Route 7 before turning westward onto the DIAAH. A substation would be located on commercial property located adjacent to the DIAAH and a stormwater management

pond would be constructed on undeveloped land zoned for commercial use located between the DIAAH and Sunset Hills Road.

Recently adopted comprehensive plan amendments allow for mixed-use development in conjunction with the implementation of high-capacity transit at the Wiehle Avenue Station area. Changes to the land use at the Wiehle Avenue Station area would be dependent upon the progress of joint development being pursued for the site. Under the current plans (without joint development), station facilities would replace an existing park-and-ride lot and a portion of a storage business located north of the DIAAH/Dulles Toll Road. On the south side of the DIAAH/Dulles Toll Road, the landscaped buffer that is currently part of an office development on Sunrise Valley Drive would be converted to bus and sidewalk facilities that would connect to a pedestrian bridge leading to the station mezzanine, which would be located in the center of the DIAAH/Dulles Toll Road.

A tie-breaker station would be located just west of the station between a parking lot and the DIAAH/Dulles Toll Road. Express bus service west of the Wiehle Avenue Extension would include conversion of undeveloped land at the Route 772 station area, located in Loudoun County, to accommodate a transit center with approximately 300 parking spaces.

3.1.3.3 Full LPA

The full LPA is consistent with the *Fairfax County Comprehensive Plan* and the *Loudoun County Revised Comprehensive Plan*, which discuss the potential for Metrorail service in the corridor. The full LPA is also consistent with existing and future land uses in the corridor. A mix of existing land uses along the corridor and several major activity centers could support transit, particularly in Fairfax County. By year 2025, the land use mix would remain generally the same, although intensities would increase and new land uses would be created as Loudoun County develops and converts currently undeveloped land to industrial, office, and residential uses.

Because the full LPA would be constructed primarily within existing transportation rights-of-way, direct land use conversions and conflicts with surrounding land uses would be minimal. The extension of Metrorail within existing transportation corridors would be consistent with existing and future land uses. The full LPA would be consistent with existing zoning along the proposed alignment, except in some cases where special exceptions would be required for the construction of station facilities. Station facilities typically consist of entrance pavilions, parking facilities, bus bays, Kiss & Ride areas, park-and-ride areas, and new access roads. Ancillary facilities would also be located at several areas along the corridor and convert small areas of land with minimal effect. Ancillary facilities include traction power substations, stormwater management ponds, and tie-breaker stations.

Direct land use conversions that would result from the full LPA would be similar to those described for Wiehle Avenue Extension in areas east of the Wiehle Avenue station area.

The Reston Parkway Station facilities would be located partially on land that has been proffered for transit facilities. The facilities on the north side of the Dulles Toll Road would displace some parking spaces in the existing TRW parking lot, which were not proffered for transit facilities. The facilities would include the north entrance pavilion, bus bays, and a Kiss & Ride area. On the south side, approximately 70 parking spaces at the Nextel building on Edmund Halley Drive would be displaced and about 1.25 acres currently used for drainage would be used for station facilities. Land for station facilities (1.5 acres) has been proffered at this location. The facility would include bus bays, a Kiss & Ride area, and station entrance

pavilions. A traction power substation would be located west of the station between the Dulles Toll Road and Sunset Hills Road, near the intersection with Town Center Parkway.

Facilities at the Herndon-Monroe Station would require land north of the DIAAH and Dulles Toll Road. Approximately 10 parking spaces in the President's Plaza office development would be displaced by the station entrance pavilion. South of the DIAAH and Dulles Toll Road, touchdown facilities would be incorporated into the existing Herndon-Monroe park-and-ride garage.

Most of the area that would be used for the Route 28 Station facilities has been proffered for transit facility uses. On the north side, the land required for the station touchdown, bus bays, and a Kiss & Ride area is currently undeveloped. South of the DIAAH and Dulles Toll Road, undeveloped land, planned for mixed-use development, would be converted to bus bays and a parking structure with approximately 2000 parking spaces. These proposed station facilities are consistent the approved development plan for the area.

The Dulles Airport Station would be located underground, as would the alignment near the station. The construction of a Storage & Inspection Yard (S&I) on Site 15 (see Figure 2.3-1) and a stormwater management pond would involve the conversion of land owned the Federal Aviation Administration (FAA) and operated by MWAA from part of a designated buffer zone around the airport to another land use designation. In 2001, the *Airport Land Use Plan* was amended to include a category of "Regional Facilities," which could include major transportation facilities.

The Loudoun County section of the full LPA would place Metrorail tracks in the median of the Dulles Greenway and would include two stations in the vicinity of Route 606 and Route 772.

The Route 606 Station facilities would convert undeveloped land for station facilities. North of the Dulles Greenway, these facilities would include bus bays, a stormwater detention area, a Kiss & Ride facility, and a park-and-ride with approximately 2,000 spaces, in addition to the existing 750 parking spaces. The station of the adjacent Dulles North Transit Center platform and mezzanine would be constructed in the median of the Dulles Greenway.

The Route 772 station would convert undeveloped land for station facilities. On the north side of the Dulles Greenway, facilities would be constructed on currently undeveloped land and would include bus bays, a Kiss & Ride area, and a park-and-ride structure with approximately 1,650 parking spaces. On the south side of the Dulles Greenway, facilities would be constructed on currently undeveloped land and would include bus bays, a Kiss & Ride area, and a park-and-ride structure with approximately 1,650 parking spaces. The station platform, mezzanine, and a tie-breaker station would be located in the median of the Dulles Greenway.

Southwest of the intersection of the Dulles Greenway and Route 772, currently undeveloped land would be converted for use as a possible stormwater management detention pond.

3.1.4 CONSTRUCTION EFFECTS

The following sections detail the short-term construction effects to land use that would result from the alternatives under consideration.

3.1.4.1 No Build Alternative

The No Build Alternative is not anticipated to result in construction-related impacts to population, housing and employment. However, some effects to population, housing, or employment could occur as a result of some of the projects assumed under this alternative. Identification of these effects would be the responsibility of the agencies and jurisdictions implementing the improvements.

3.1.4.2 Wiehle Avenue Extension

Several construction staging areas would be required for the project in Tysons Corner; potential staging areas are shown in Figure 2.3-3. These would result in temporary uses of land along the corridor, although the effects would be minimal. Details regarding the parcels that would be temporarily acquired for these areas are described in Section 3.3.

Construction associated with the Wiehle Avenue Extension would not result in impacts to levels of population or create a need for housing. Construction would generate short-term employment opportunities. The number of person-years of jobs that could be created by construction of the Wiehle Avenue Extension is described in Chapter 5 of this Final EIS.

3.1.4.3 Full LPA

There could be temporary uses of land along the corridor associated with construction staging areas of the stations, but this effect would be minimal. Temporary uses of land could also be required for the construction of the LPA through Tysons Corner and Dulles Airport.

Construction associated with the full LPA would not result in population growth or create a need for housing. Construction would generate short-term employment opportunities. The number of person-years of jobs that could be created by construction of the full LPA is described in Chapter 5 of this Final EIS.

3.1.5 MITIGATION

To mitigate the long-term effects of the Wiehle Avenue Extension and the full LPA on changes in land use associated with the project, DRPT and WMATA would continue to coordinate with Fairfax County, Loudoun County and the Town of Herndon to encourage appropriate transit-oriented development in the station areas. DRPT and WMATA would also work with Fairfax County to ensure that the park-and-ride requirements at the Tysons West station (500 spaces) are incorporated into Fairfax County's Comprehensive Plan, and would also assist Fairfax County in pursuing joint-development opportunities at the Wiehle Avenue station.

3.2 NEIGHBORHOOD, COMMUNITY SERVICES, AND COMMUNITY COHESION IMPACTS

3.2.1 METHODOLOGY

This section covers potential impacts to neighborhoods, social groups, community services, and community cohesion in the study area defined for the Dulles Corridor Rapid Transit Project. Sources of information about neighborhoods and community facilities included Fairfax and Loudoun county governments, field surveys, Alexandria Drafting Company (ADC) street maps, and U.S. Census data. Changes in neighborhoods and community facilities were identified through review of comprehensive

plans, real estate development proposals, and through coordination with Fairfax and Loudoun county officials and local community organizations.

Neighborhoods within 300 feet of the centerline of the LPA and within one half-mile of the proposed station areas were included in the study area. This initial study area was selected after a review of the anticipated limits of disturbance (a half mile at stations) for the proposed improvements. Additional neighborhoods and community facilities were added to this study area based on the outcome of the noise, vibration, air quality and visual impact analyses. The study areas for noise, vibration, air quality and visual effects were not dependent on the project's anticipated limit of disturbance. For example, noise impacts were analyzed within 1,000 feet of the proposed alignment. Generally, noise impacts from the types of facilities proposed are not expected to exceed 200 to 400 feet, depending on the topography. However, the study area for noise was broadened to ensure that all potential effects would be captured. Traffic analyses were also conducted for areas outside of the 300-foot boundary including intersections and routes that provide access to the stations. For the visual effects analysis the study area changes along the entire length of the corridor based on topography and the type and scale of existing development (see Section 3.4 for details). The 300-foot buffer and half-mile radii were the starting point and focus for the direct community impact assessment. Any other neighborhoods that were projected to have dispersed effects outside of this boundary were added to the neighborhood analysis.

Impacts to neighborhoods, communities and community services were assessed using techniques described in the *Federal Highway Administration's Community Impact Assessment: A Quick Reference for Transportation*. Areas of assessment and their effects on communities include:

- Changes in population and employment;
- Community cohesion and interaction;
- Isolation effects;
- Social values – social groups benefited or harmed;
- Barrier effects;
- Noise and vibration;
- Physical intrusions – dust, odor, light;
- Access changes – bicycle, pedestrian, transit, and vehicular;
- Community facility impacts;
- Displacements;
- Safety – pedestrian and bicyclists, crime, and emergency response; and
- Property values.

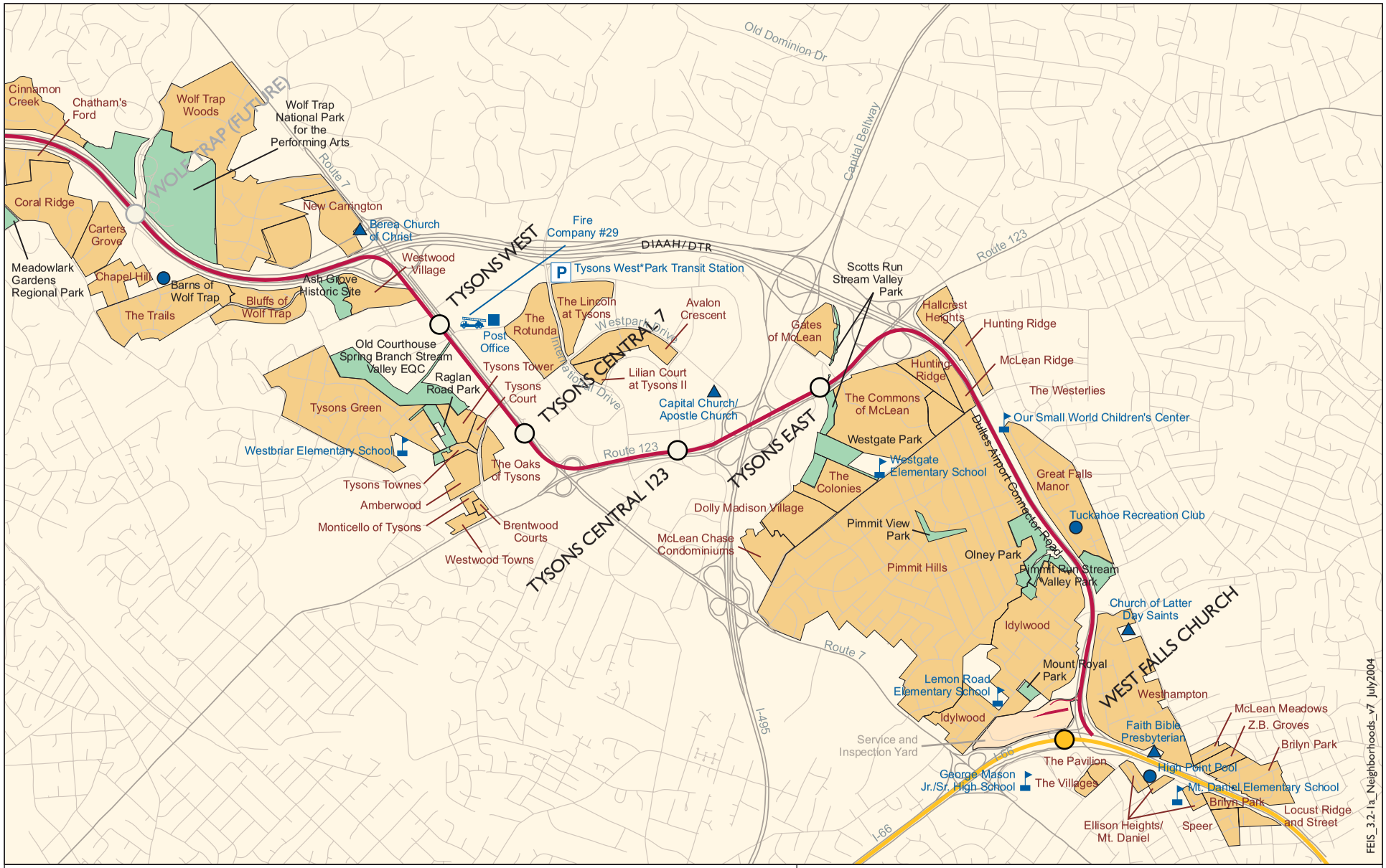
In many cases, details on specific impacts, such as noise and vibration, traffic access, and property value impacts are detailed in other sections of this Final EIS. In this section, overall impacts to the communities within the corridor are assessed. This assessment also addressed the requirements of Executive Order 13045, *Protection of Children from Environmental Health Risks.* This Order requires federal agencies, as part of their programs and policies, to consider such risks and ensure that federal standards take into account special risks to children. Profiles of the study area were prepared to identify the presence of social groups and persons over the age of 65 or less than 18 years old. No concentrations of these two groups was identified in the study area.

3.2.2 EXISTING CONDITIONS

The Dulles Corridor includes neighborhoods within Fairfax and Loudoun counties, as well as the Town of Herndon. Many of the neighborhoods are located close to the Dulles Connector Road, the DIAAH, and Dulles Toll Road. In Tysons Corner, Reston, and Loudoun County, the neighborhoods studied are generally located within a half-mile of the station areas.

3.2.2.1 Neighborhood Characteristics

The neighborhoods within the study area are depicted on Figures 3.2-1 (a-c). The characteristics of these neighborhoods are described further in Table 3.2-1, as they occur along the corridor from east to west.



LEGEND

- Project Area Neighborhoods
- Parks
- Transportation Land Uses
- Proposed Metrorail Alignment

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

- Recreation/Sport/Arts Facility
- Transit Center/Park-and-Ride
- Church/Religious Institution
- Existing Metrorail Orange Line and Stations
- Proposed Station
- Post Office
- School
- Firehouse

0 2000 4000 FEET

Figure 3.2-1a

Study Area Neighborhoods and Community Facilities

Dulles Corridor Rapid Transit Project

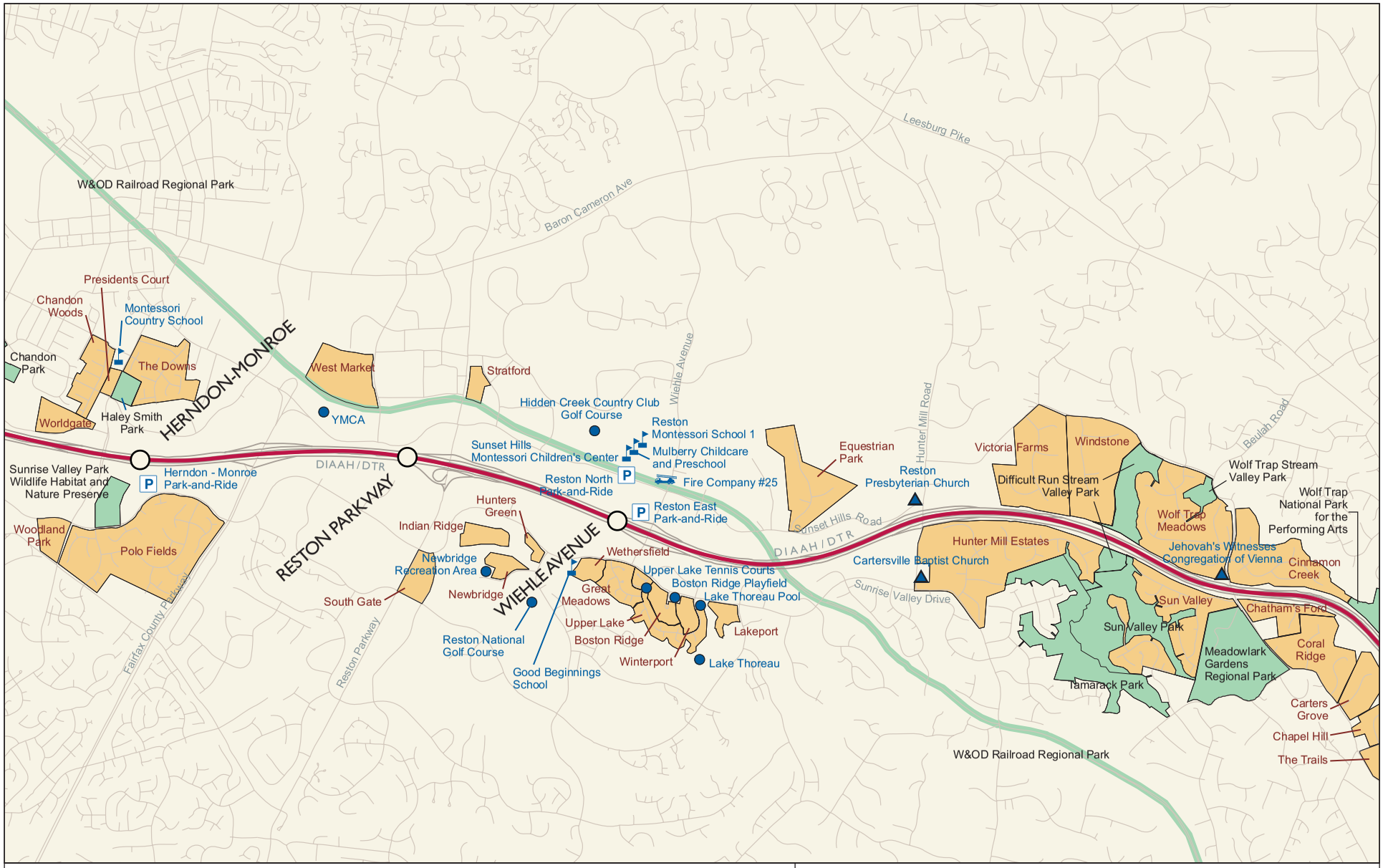
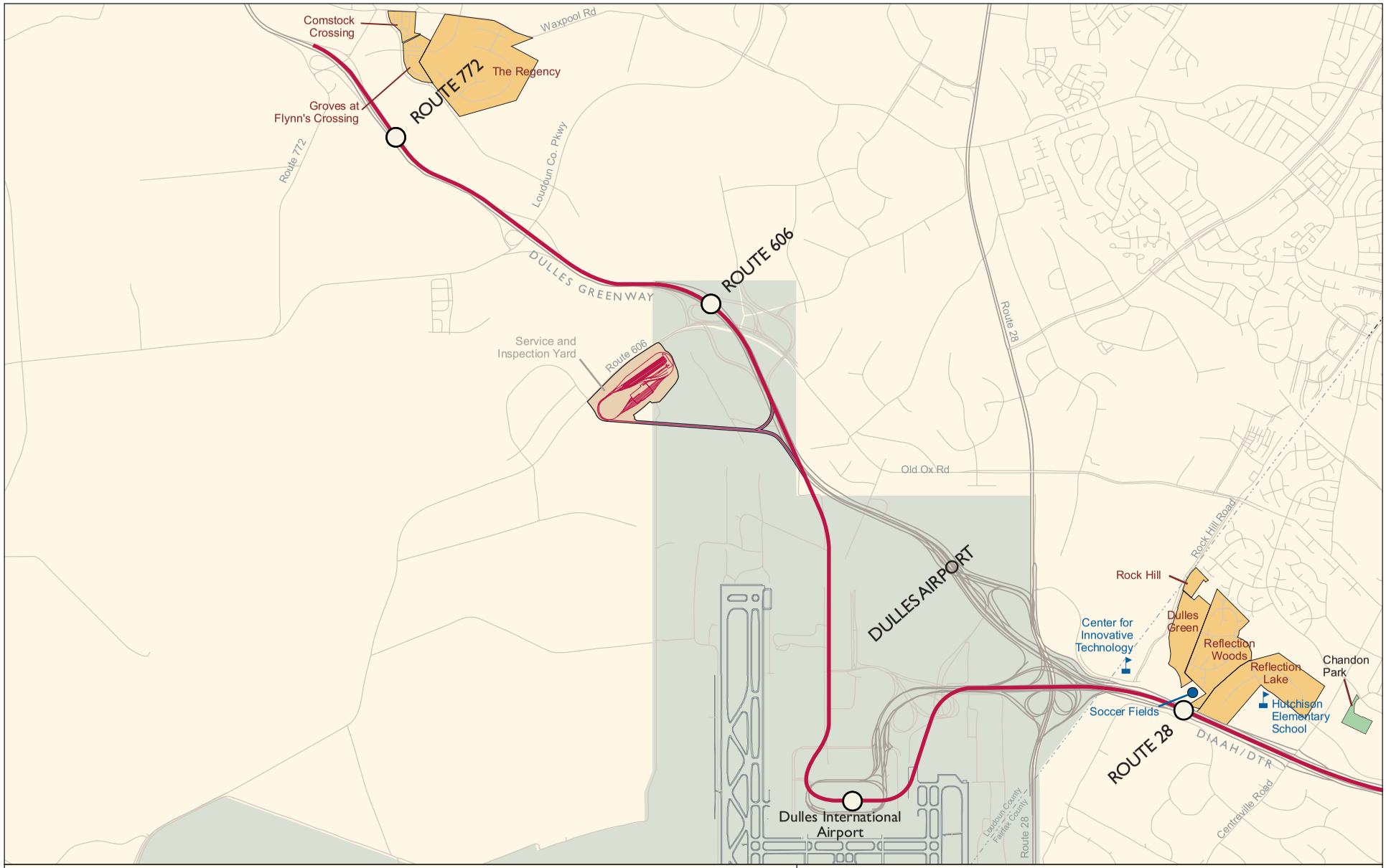


Figure 3.2-1b

Study Area Neighborhoods and Community Facilities

Dulles Corridor Rapid Transit Project



LEGEND

- Project Area Neighborhoods
- Parks
- Dulles International Airport
- Proposed Metrorail Alignment
- Transportation Land Uses
- County Boundary
- Proposed Station
- Recreation/Sport/Arts Facility
- School

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

0 2000 4000 FEET

Figure 3.2-1c

Study Area Neighborhoods and Community Facilities

Dulles Corridor Rapid Transit Project

Table 3.2-1: Neighborhood Characteristics

Neighborhood	Location	Housing Type	Access Via	Community Facilities Within or Adjacent to Neighborhoods
Brilyn Park	North and South sides of I-66	SF	South side: I-66 and Great Falls Street; North side: Gordon and Fisher Avenues	None
Locust Ridge and Locust Street	South of I-66 on Locust Ridge Court and Locust Street	SF	Locust Street	None
Speer	Between the Brilyn Park and Locust Ridge neighborhoods	SF	Great Falls Street and Brilyn Place	None
Z.B. Groves	North of I-66 on Osborn Street	SF	Great Falls Street	None
McLean Meadows	North of I-66 on Casemount Drive	SF	Haycock Road and Casemount Drive	None
Ellison Heights/Mt. Daniel	South of I-66, east of the West Falls Church Metrorail Station	SF	Great Falls Street and Highland Avenue	Mt. Daniel School, Highpoint Pool
The Pavilion and The Villages	South of the West Falls Church Metrorail Station, north of Haycock Road	TH/C	Falls Reach Drive	George Mason High School
Westhampton	East of the Dulles Connector Road and northeast of I-66	SF	Great Falls Street	Westhampton Church of Latter Day Saints
Idylwood	West of the Dulles Connector Road	SF	Idylwood Road	Lemon Road Elementary School, Mount Royal Park; Pimmit Run Stream Valley Park
Great Falls Manor	East of the Dulles Connector Road	SF	Great Falls Street	Tuckahoe Recreation Club, Pimmit Run Stream Valley Park, Our Small World Child Center
Pimmit Hills	West of the Dulles Connector Road	SF	Route 7 and Magarity Road	Pimmit View Park; Olney Park
McLean Ridge	West of the Dulles Connector Road and south of Chain Bridge Road	TH	Magarity Road	None
Hunting Ridge	East and west sides of the Dulles Connector Road	SF	Great Falls Street and Chain Bridge Road	None
Hallcrest Heights	Southeast quadrant of the Dulles Connector Road/Route 123 interchange	TH	Great Falls Street and Chain Bridge Road	None
The Westerlies	North of Magarity Road, adjacent to the Dulles Connector Road	TH	Magarity Road	None
The Commons of McLean	Northwest of Magarity Road and south of Chain Bridge Road	TH/A	Magarity Road, Chain Bridge Road, and Anderson Road	Westgate Park and Westgate Elementary School
Gates of McLean	On Spring Gate Drive between I-495 and Route 123	A	Chain Bridge Road	None
The Colonies	Magarity Road	A	Magarity Road	None
Dolley Madison Village and McLean Chase Condominiums	Adjacent to the I-495/Route 123 interchange	A/C	Magarity Road	None
The Lincoln at Tysons	Southeast quadrant of the International Drive/Jones Branch Drive intersection	A	Jones Branch Drive, International Drive	None
Avalon Crescent	Intesection of Park Run Drive and Westpark Drive	A	Westpark Drive, Park Run Drive	None

Neighborhood	Location	Housing Type	Access Via	Community Facilities Within or Adjacent to Neighborhoods
Lillian Court at Tysons II	Intersection of Tysons Boulevard and Park Run Drive	TH/C	Tysons Boulevard, Park Run Drive	None
The Rotonda	Northwest quadrant of the Westpark Drive/International Drive intersection	C	International Drive, Greensboro Drive	None
Tysons Tower	Spring Street	A	Gosnell Road	None
The Oaks of Tysons	East of Gosnell Road	A	Gosnell Road	None
Tysons Court	West of Gosnell Road	TH	Gosnell Road	None
Brentwood Courts, Monticello of Tysons, Tysons Townes, Westwood Townes, and Amberwood	West of Gosnell Road on the edge of Tysons Corner	TH	Gosnell Road, Route 123	None
Tysons Green	Southwest portion of Tysons Corner north of Old Courthouse Road	SF	Courthouse Road, Irwin Street	Raglan Road Park, Westbriar Elementary School, Old Courthouse Spring Valley Environmental Quality Corridor
Westwood Village	West of Route 7 and Westwood Center Drive and south of the DIAAH and Dulles Toll Road	TH/C	Westwood Center Drive	Ash Grove Historic Site
New Carrington	Northwest of the DIAAH/route 7 interchange	SF	Route 7 and connections with the Wolf Trap Woods neighborhood	Berea Church of Christ
Bluffs of Wolf Trap	South of the DIAAH and Dulles Toll Road	SF	Montmorency Street, via The Trails neighborhood	None
The Trails	South of the DIAAH and Dulles Toll Road	SF	Courthouse Road	None
Wolf Trap Woods	Northside of the DIAAH and Dulles Toll Road, west of Route 7	SF	Route 7	Wolf Trap National Park for the Performing Arts
Chapel Hill	South of the DIAAH and Dulles Toll Road	SF	Beulah Road	None
Carters Grove	South of the DIAAH and Dulles Toll Road (off Beulah Road)	SF	Beulah Road	None
Coral Ridge	South of the DIAAH and Dulles Toll Road	SF	Beulah Road	None
Cinnamon Creek, Wolf Trap Meadows, Windstone, and Victoria Farms	North of the DIAAH and Dulles Toll Road	SF	Beulah Road, Brown's Mill Road	Wolf Trap Stream Park, Difficult Run Stream Valley Park, Jehovah's Witnesses Congregation of Vienna
Chatham's Ford, Sun Valley, and Hunter Mill Estates	South of the DIAAH and Dulles Toll Road	SF	Beulah Road, Hunter Mill Road	Sun Valley Park, Meadowlark Botanical Gardens adjacent to Chatham's Ford
Lakeport	South of Sunrise Valley Drive and the DIAAH and Dulles Toll Road	TH	Sunrise Valley Drive	None
Upper Lake	North of Lake Thoreau and south of the DIAAH and Dulles Toll Road	SF	Sunrise Valley Drive	Lake Thoreau, Lake Thoreau Pool, Upper Lake Tennis Courts

Neighborhood	Location	Housing Type	Access Via	Community Facilities Within or Adjacent to Neighborhoods
Winterport and Boston Ridge	Within the Upper Lake neighborhood	TH	Sunrise Valley Drive	Boston Ridge Playfield
Great Meadows	South of Sunrise Valley Drive, north of Reston National Golf Course	SF	Sunrise Valley Drive	None
Wethersfield	South of Sunrise Valley Drive, west of Wiehle Avenue	TH	Sunrise Valley Drive	None
Hunters Green	Southwest quadrant of the Sunrise Valley Drive/Soapstone Road intersection	TH	Soapstone Road	Reston National Golf Course
Newbridge	Off Soapstone Road, south of the DIAAH and Dulles Toll Road	TH	Soapstone Road	Reston National Golf Course
Indian Ridge	Southside of Sunrise Valley Drive, east of Reston Parkway	TH	Sunrise Valley Drive	Reston National Golf Course
South Gate	Southeast quadrant of the Reston Parkway/Sunrise Valley Drive intersection	TH/A	Reston Parkway and Colts Neck Road	None
Stratford	Across from Reston Town Center, north of the DIAAH and Dulles Toll Road	C	Reston Parkway	None
West Market	Northside of the DIAAH and Dulles Toll Road, west of Reston Town Center	TH/C	Town Center Parkway	None
Polo Fields	Southside of the DIAAH and Dulles Toll Road, south of Herndon-Monroe Park-and-Ride	SF	Sunrise valley Drive, Fox Mill Road	None
Woodland Park	South of the DIAAH and Dulles Toll Road, west of Polo Fields	TH	Sunrise Valley Drive	None
The Downs	North of Herndon Parkway, east of Van Buren Street	SF	Van Buren Street	Haley Smith Park
President's Court	South of the DIAAH and Dulles Toll Road	SF	Van Buren Street, Senate Court	None
Chandon Woods and Worldgate	North of the DIAA and Dulles Toll Road	SF/C	Herndon Parkway, Worldgate Drive	Montessori Country School
Reflection Woods and Reflection Lake	North of the DIAAH and Dulles Toll Road, west of Elden Street	SF/TH	Parcher Avenue	None
Dulles Green	Astoria Circle	TH/A	Rock Hill Road	None
The Regency	Between Waxpool, Shellhorn, and Ryan Roads	SF	Waxpool Road	None
Comstock Crossing	On Waxpool Road near the intersection with Shellhorn Road	TH	Waxpool Road	None
Groves at Flynn's Crossing	Blossom Road Terrace	A	Ryan Road	None

SF – Single Family
TH – Townhouse
A – Apartment
C - Condominium

3.2.2.2 Community Facilities and Services

Community facilities include hospitals, parks, places of worship, day care centers, schools, government offices such as post offices, police and fire stations, cultural centers, and special service providers. These facilities provide services to the residents and visitors of the corridor. Community facilities also

contribute to community cohesion of the neighborhoods in which they are located and are viewed as valuable amenities to the residents in the study area, as defined in Section 3.3.1.

Existing community facilities are located throughout the corridor. These community facilities are shown in Figures 3.2-1 (a-c), and listed in Table 3.2-2, as they occur in the corridor from east to west.

Table 3.2-2: Community Facilities and Services in Study Area

Community Facility or Service	Location
Mt. Daniel Elementary School	2328 Oak Street, Falls Church
Highpoint Pool	6840 Woodland Drive, Falls Church
Faith Bible Presbyterian Church	6901 Haycock Road, Falls Church
George Mason Jr./Sr. High School	7124 Leesburg Pike (at Haycock Road), Falls Church
Mount Royal Park	7141 Idylwood Road (at Idylwood Court), McLean
Lemon Road Elementary School	7230 Idylwood Road, McLean
Church of Latter Day Saints	Greenwich Street at Kirby Road, McLean
Pimmit Run Stream Valley Park	Old Dominion Road and Leesburg Pike, McLean
Tuckahoe Recreation Club	1814 Great Falls Street, McLean
Olney Park	1840 Olney Road, McLean
Our Small World Children's Center	1700 Great Falls Street, McLean
Pimmit View Park	1905 Storm Drive, McLean
Westgate Elementary School	7500 Magarity Road, Falls Church
Westgate Park	7508 Magarity Road, Falls Church
Scotts Run Stream Valley Park	Meadow Road and Tremayne Place, McLean
Capital Church*	7903 Westpark Drive, McLean
Apostle Mission Church*	7903 Westpark Drive, McLean
McLean Hamlet Park	8119 Dunsinane Court (north of Dulles Toll Road), McLean
Spring Hill Elementary School	8201 Lewinsville Road, McLean
Tysons-West*Park Transit Station	8300 Jones Branch Drive, McLean
Shiloh Baptist Church	1331 Spring Hill Road (Lewinsville Road east of International Drive), McLean
Charity Baptist Church	1328 Spring Hill Road (International Drive and Lewinsville Road), McLean
U.S. Postal Office	1544 Spring Hill Road south of Tyco Road, McLean
Fire Company #29	1560 Spring Hill Road, McLean
Raglan Road Park	8590 Raglan Road, Tysons Corner
Westbriar Elementary School	1741 Pine Valley Drive, Tysons Corner
Old Courthouse Spring Branch Stream Valley Environmental Quality Corridor	West of Tysons Corner
Berea Church of Christ	8817 Leesburg Pike, McLean
Ash Grove Historic Site	Leesburg Pike and Dulles Toll Road, Vienna
Barns of Wolf Trap	1624 Trap Road (south of Dulles Toll Road), Vienna
Wolf Trap National Park for the Performing Arts	1551 Trap Road (north of Dulles Toll Road), Vienna
Meadowlark Gardens Regional Park	9750 Meadowlark Gardens Court, Vienna
Jehovah's Witnesses Congregation of Vienna	Beulah Road and Dulles Toll Road, Vienna
Wolf Trap Stream Valley Park	Coral Bells Court west of Beulah Road, Vienna
Sun Valley Park	Between Abbey Oak Drive and Dulles Toll Road, Vienna
Tamarack Park	Abbey Oak Drive and Nevar Court, Vienna
Difficult Run Stream Valley Park	Meadowlark Road south of Dulles Toll Road, Vienna
Cartersville Baptist Church	Hunter Mill Road north of Sunrise Valley Drive, Reston
Reston Presbyterian Church	10610 Sunset Hills Boulevard (Hunter Mill Road north of Dulles Toll Road), Reston
W&OD Railroad Regional Park	Throughout Mid-Corridor

Community Facility or Service	Location
Lake Thoreau	South of Sunrise Valley Drive, Reston
Lake Thoreau Pool	Sunrise Valley Drive and Upper Lake, Reston
Boston Ridge Playfield	Sunrise Valley Drive and Headlands Circle, Reston
Upper Lake Tennis Courts	Sunrise Valley Drive and Upper Lake, Reston
Fire Company #25	1820 Wiehle Avenue, Reston
Reston East Park-and-Ride	North of Dulles Toll Road and Wiehle Avenue, Reston
VDOT Park-and-Ride	Sunset Hills Road and Wiehle Avenue, Reston
Hidden Creek Country Club Golf Course	1711 Clubhouse Road, Reston
Good Beginnings School	11501 Sunrise Valley Drive, Reston
Reston National Golf Course	South of Sunrise Valley Drive, Reston
Newbridge Recreation Area	Newbridge Court south of Sunrise Valley Drive, Reston
YMCA	12196 Sunset Hills Road, Reston
Haley Smith Park	Van Buren and Herndon Parkway, Herndon
Montessori Country School	612 Alabama Drive, Reston
Herndon - Monroe Park-and-Ride	Fairfax County Parkway and Monroe Street, Reston
Sunrise Valley Park Wildlife Habitat and Nature Preserve	Sunrise Valley Drive and Monroe Avenue, Reston
Reston Montessori School	1928 Isaac Newton Square
Sunset Hills Montessori	11180 Ridge Heights Round, Reston
Mulberry Childcare and Preschool	1946 Isaac Newton Square
Chandon Park	900 Palmer Drive, Herndon
Hutchison Elementary School	13209 Parcher Avenue, Herndon
Soccer Fields	Farougi Court north of the Dulles Toll Road, Herndon
Center for Innovative Technology	2214 Rock Hill Road, Herndon

Sources: Fairfax County Department of Systems Management for Human Services, Research, Analysis, and Project Services.

* Both Apostle Mission and Capital Churches are temporarily renting the facility located at 7903 Westpark Drive from West Group Properties, LLC.

3.2.3 LONG-TERM EFFECTS

The long-term effects of the No Build Alternative and the LPA on neighborhoods and community facilities are described in the following sections. Table 3.2-3 presents a summary of these effects.

Table 3.2-3: Summary of Long-Term Effects to Neighborhoods and Community Facilities

Community Effects	No Build Alternative (2025)	Locally Preferred Alternative		
		Wiehle Avenue Extension (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
Changes in Population and Employment	Any effects are due to existing highway and transit infrastructure and services within the corridor and improvements that are committed to be implemented by 2025	The Westerlies, The Commons of McLean, Gates of McLean, The Colonies, Dolley Madison Village and McLean Chase Condominiums, Lillian Court at Tysons II, Avalon Crescent, The Lincoln at Tysons II, Rotonda, Tysons Tower, The Oaks of Tysons, Tysons Court, Brentwood Courts, Monticello of Tysons, Tysons Townes, Westwood Towns, Amberwood, Tysons Green, Westwood Village, Lakeport, Upper Lake, Winterport/Boston Ridge, Great Meadows, Wethersfield, Hunters Green, and Newbridge	The Westerlies, The Commons of McLean, Gates of McLean, The Colonies, Dolley Madison Village and McLean Chase Condominiums, Lillian Court at Tysons II, Avalon Crescent, The Lincoln at Tysons II, Rotonda, Tysons Tower, The Oaks of Tysons, Tysons Court, Brentwood Courts, Monticello of Tysons, Tysons Townes, Westwood Towns, Amberwood, Tysons Green, Westwood Village, Lakeport, Upper Lake, Winterport/Boston Ridge, Great Meadows, Wethersfield, Hunters Green, and Newbridge	The Westerlies, The Commons of McLean, Gates of McLean, The Colonies, Dolley Madison Village and McLean Chase Condominiums, Lillian Court at Tysons II, Avalon Crescent, The Lincoln at Tysons II, Rotonda, Tysons Tower, The Oaks of Tysons, Tysons Court, Brentwood Courts, Monticello of Tysons, Tysons Townes, Westwood Towns, Amberwood, Tysons Green, Westwood Village, Lakeport, Upper Lake, Winterport/Boston Ridge, Great Meadows, Wethersfield, Hunters Green, Newbridge, Indian Ridge, Stratford, South Gate, West Market, Polo Fields, Woodland Park, The Downs, President's Court, Chandon Woods, Worldgate, Reflection Woods, Reflection Lake, Dulles Green, Rock Hill, the Regency, Comstock Crossing, the Groves at Flynn's Crossing
Community Cohesion and Interaction	Potential for some impact to cohesion associated only with other projects, none have been identified specifically for neighborhoods in this study area	No effect	No effect	No effect
Isolation Effects	Potential for some impact to cohesion associated only with other projects, none have been identified specifically for neighborhoods in this study area	No effect	No effect	No effect
Social Values – Social Groups Valued or Harmed	No effect identified on communities in study area	No effect	No effect	No effect

Community Effects	No Build Alternative (2025)	Locally Preferred Alternative		
		Wiehle Avenue Extension (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
Barrier Effects	No effect identified on communities in study area	No effect	No effect	No effect
Noise and Vibration	Some noise increases could be associated with other projects in No Build Alternative	**Potential for increased noise and vibration at the following communities:** Victorica Farms, Westwood Village, New Carrington, Coral Ridge, Brilyn park, Westhampton, Great Falls Manager, Hunting Ridge, Hallcreast Heights, McLean Ridge, Commons of McLean, Ellison Heights/Mt. Daniel, Idylwood, Pimmit Hills	**Potential for increased noise and vibration at the following communities:** Victorica Farms, Westwood Village, New Carrington, Coral Ridge, Brilyn park, Westhampton, Great Falls Manager, Hunting Ridge, Hallcreast Heights, McLean Ridge, Commons of McLean, Ellison Heights/Mt. Daniel, Idylwood, Pimmit Hills	**Potential for increased noise and vibration at the following communities:** Victorica Farms, Westwood Village, New Carrington, Coral Ridge, Brilyn park, Westhampton, Great Falls Manager, Hunting Ridge, Hallcreast Heights, McLean Ridge, Commons of McLean, Ellison Heights/Mt. Daniel, Idylwood, Pimmit Hills
Physical Intrusions – Dust, Odor, Light	No effect identified on communities in study area	**Construction Effects:** Potential for increased dust, odor, light at the following communities: Idylwood, Hunting Ridge, McLean Ridge, Westwood Village **Long-Term Effects:** Hunting Ridge, Westwood Village	**Construction Effects:** Idylwood, Hunting Ridge, McLean Ridge, Westwood Village **Long-Term Effects:** Hunting Ridge, Westwood Village	**Construction Effects:** Idylwood, Hunting Ridge, McLean Ridge, Westwood Village, Reflection Woods and Lake, Dulles Greens **Long-Term Effects:** Hunting Ridge, Westwood Village
Access Changes – Bicycle, Pedestrian, Transit, and Vehicular	Access to corridor neighborhoods and community facilities limited due to lack of a Build Alternative	**Bicycle and Pedestrian Improvements:** Pedestrian bridges across existing roadways are planned for the following stations: Tysons East, Tysons Central 123, Tysons Central 7, Tysons West, and Wiehle Avenue. **Neighborhoods within Proximity of Transit Stations with Enhanced Access:** The Westerlies, The Commons of McLean, Gates of McLean, The Colonies, Dolley Madison Village and McLean Chase Condominiums, Lillian Court at Tysons II, Avalon Crescent, The Lincoln at Tysons II, Rotonda, Tysons Tower, The Oaks of Tysons, Tysons Court, Brentwood Courts, Monticello of Tysons, Tysons Townes, Westwood Towns, Amberwood, Tysons Green, Westwood Village, Lakeport, Upper Lake, Winterport/Boston Ridge, Great Meadows, Wethersfield, Hunters Green, and Newbridge.	**Bicycle and Pedestrian Improvements:** Pedestrian bridges across existing roadways are planned for the following stations: Tysons East, Tysons Central 123, Tysons Central 7, Tysons West, and Wiehle Avenue. **Neighborhoods within Proximity of Transit Stations with Enhanced Access:** The Westerlies, The Commons of McLean, Gates of McLean, The Colonies, Dolley Madison Village and McLean Chase Condominiums, Lillian Court at Tysons II, Avalon Crescent, The Lincoln at Tysons II, Rotonda, Tysons Tower, The Oaks of Tysons, Tysons Court, Brentwood Courts, Monticello of Tysons, Tysons Townes, Westwood Towns, Amberwood, Tysons Green, Westwood Village, Lakeport, Upper Lake, Winterport/Boston Ridge, Great Meadows, Wethersfield, Hunters Green, and Newbridge.	**Bicycle and Pedestrian Improvements:** Pedestrian bridges across existing roadways are planned for the following stations: Tysons East, Tysons Central 123, Tysons Central 7, Tysons West, Wiehle Avenue, Reston Parkway, Herndon-Monroe, Route 28, and Route 772. **Neighborhoods within Proximity of Transit Stations with Enhanced Access:** The Westerlies, The Commons of McLean, Gates of McLean, The Colonies, Dolley Madison Village and McLean Chase Condominiums, Lillian Court at Tysons II, Avalon Crescent, The Lincoln at Tysons II, Rotonda, Tysons Tower, The Oaks of Tysons, Tysons Court, Brentwood Courts, Monticello of Tysons, Tysons Townes, Westwood Towns, Amberwood, Tysons Green, Westwood Village, Lakeport, Upper Lake, Winterport/Boston Ridge,

Community Effects	No Build Alternative (2025)	Locally Preferred Alternative		
		Wiehle Avenue Extension (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
		Increase in Traffic Volumes at Stations: All station areas would experience a slight increase in traffic volumes on local roadways near stations. **Potential Parking Spillover:** Potential parking spillover can be expected at Tysons East, Tysons Central 123, Tysons Central 7, Tysons West, and Wiehle Avenue.	**Increase in Traffic Volumes at Stations:** All station areas would experience a slight increase in traffic volumes on local roadways near stations. **Potential Parking Spillover:** Potential parking spillover can be expected at Tysons East, Tysons Central 123, Tysons Central 7, Tysons West, and Wiehle Avenue.	Great Meadows, Wethersfield, Hunters Green, Newbridge, Indian Ridge, Stratford, South Gate, West Market, Polo Fields, Woodland Park, The Downs, President's Court, Chandon Woods, Worldgate, Reflection Woods, Reflection Lake, Dulles Green, Rock Hill, the Regency, Comstock Crossing, the Groves at Flynn's Crossing. **Increase in Traffic Volumes at Stations:** All station areas would experience a slight increase in traffic volumes on local roadways near stations. **Potential Parking Spillover:** Potential parking spillover can be expected at Tysons East, Tysons Central 123, Tysons Central 7, Tysons West, Wiehle Avenue, Herndon-Monroe, Reston, and Route 28.
Community Facility Impacts	No effect identified on any community facilities or services in study area.	Traffic congestion at Fire Company #25 on Wiehle Avenue. Longer and more frequent traffic queing in the vicinity of Sunrise Valley Drive and Wiehle Avenue	Traffic congestion at Fire Company #25 on Wiehle Avenue. Longer and more frequent traffic queing in the vicinity of Sunrise Valley Drive and Wiehle Avenue	Traffic congestion at Fire Company #25 on Wiehle Avenue. Longer and more frequent traffic queing in the vicinity of Sunrise Valley Drive and Wiehle Avenue
Displacements	Some displacements could be associated with other projects in No Build Alternative	No Effect	No Effect	No Effect
Safety – Pedestrian/ Bicyclists; Crime/ Emergency	No effect identified on communities in study area. Traffic projected to increase in neighborhoods.	Slight increase in local vehicular traffic volumes in all station areas. Pedestrian bridges across existing roadways are planned to improve safety for the following stations: Tysons East, Tysons Central 123, Tysons Central 7, Tysons West, and Wiehle Avenue.	Slight increase in local vehicular traffic volumes in all station areas. Pedestrian bridges across existing roadways are planned to improve safety for the following stations: Tysons East, Tysons Central 123, Tysons Central 7, Tysons West, and Wiehle Avenue.	Slight increase in local vehicular traffic volumes in all station areas. Pedestrian bridges across existing roadways are planned for the following stations: Tysons East, Tysons Central 123, Tysons Central 7, Tysons West, Wiehle Avenue, Reston Parkway, Herndon-Monroe, Route 28, and Route 772.

Community Effects	No Build Alternative (2025)	Locally Preferred Alternative		
		Wiehle Avenue Extension (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
Property Values adjacent to Metrorail Stations	No new Metrorail Stations; current trends continue	**Neighborhoods within Station Areas where Property Values May Increase due to 5 new Stations:** The Westerlies, The Commons of McLean, Gates of McLean, The Colonies, Dolley Madison Village and McLean Chase Condominiums, Lillian Court at Tysons II, Avalon Crescent, The Lincoln at Tysons II, Rotonda, Tysons Tower, The Oaks of Tysons, Tysons Court, Brentwood Courts, Monticello of Tysons, Tysons Townes, Westwood Towns, Amberwood, Tysons Green, Westwood Village, Lakeport, Upper Lake, Winterport/Boston Ridge, Great Meadows, Wethersfield, Hunters Green, and Newbridge.	**Neighborhoods within Station Areas where Property Values May Increase due to 5 new Stations:** The Westerlies, The Commons of McLean, Gates of McLean, The Colonies, Dolley Madison Village and McLean Chase Condominiums, Lillian Court at Tysons II, Avalon Crescent, The Lincoln at Tysons II, Rotonda, Tysons Tower, The Oaks of Tysons, Tysons Court, Brentwood Courts, Monticello of Tysons, Tysons Townes, Westwood Towns, Amberwood, Tysons Green, Westwood Village, Lakeport, Upper Lake, Winterport/Boston Ridge, Great Meadows, Wethersfield, Hunters Green, and Newbridge.	**Neighborhoods within Station Areas where Property Values May Increase due to 11 new Stations:** The Westerlies, The Commons of McLean, Gates of McLean, The Colonies, Dolley Madison Village and McLean Chase Condominiums, Lillian Court at Tysons II, Avalon Crescent, The Lincoln at Tysons II, Rotonda, Tysons Tower, The Oaks of Tysons, Tysons Court, Brentwood Courts, Monticello of Tysons, Tysons Townes, Westwood Towns, Amberwood, Tysons Green, Westwood Village, Lakeport, Upper Lake, Winterport/Boston Ridge, Great Meadows, Wethersfield, Hunters Green, Newbridge, Indian Ridge, Stratford, South Gate, West Market, Polo Fields, Woodland Park, The Downs, President's Court, Chandon Woods, Worldgate, Reflection Woods, Reflection Lake, Dulles Green, Rock Hill, the Regency, Comstock Crossing, the Groves at Flynn's Crossing.

3.2.3.1 No Build Alternative

The No Build Alternative would not produce mobility benefits beyond those that would be provided by planned future transportation projects and improvements. This alternative would not cause any changes to the currently anticipated future changes in population, employment, community cohesion or isolation. The No Build Alternative would not cause any additional residential displacements, safety impacts or changes in property values beyond those anticipated to occur due to planned future transportation projects.

Current trends in property values indicate that values are likely to increase regardless of the implementation of the Dulles Corridor Rapid Transit Project. No new Metrorail Stations would be built under the No Build. Therefore, it is expected that current trends in property values would continue.

3.2.3.2 Wiehle Avenue Extension

The Wiehle Avenue Extension would be primarily located within a transportation right-of-way, therefore no isolation effects or community cohesion effects are projected for 2011 or 2025. Several communities throughout the corridor would be affected by noise. The neighborhoods affected by noise would be Victoria Farms, Westwood Village, New Carrington, Coral Ridge, Brilyn park, Westhampton, Great Falls

Manor, Hunting Ridge, Hallcreast Heights, McLean Ridge, Commons of McLean, Ellison Heights/Mt. Daniel, Idylwood, and Pimmit Hills since these neighborhoods would be located close to the proposed alignment. The proximity of the Hunting Ridge and Westwood Village neighborhoods to the alignment would cause these neighborhoods to experience some additional effects such as light intrusions.

According to the *Fairfax County Comprehensive Plan*, higher density redevelopment and in-fill development could be constructed in the transit station areas, which would add population and employment in the area. The potential increases in population and employment could increase traffic volumes and the use of community facilities as well as change the character of development at the transit stations.

Five Stations are planned under the Wiehle Avenue Extension. Historically where Metrorail Stations have been constructed and are in operation in Northern Virginia, such as the Clarendon and Ballston Stations in Arlington, adjacent properties have experienced an increase in value. It is expected that these trends would continue.

All of the neighborhoods located near station facilities could experience increases in traffic congestion, population, and employment as a result of the station locations and potential future development. However, the overall traffic impact in the corridor is localized to specific streets in the vicinity of the station areas. This increase in vehicular traffic could affect pedestrian safety at each station location.

Implementation of the Wiehle Avenue Extension could result in longer and more frequent traffic queing in the vicinity of Fairfax County Fire Company #25 at the intersection of Sunrise Valley Drive and Wiehle Avenue and could affect egress and access to the station. Fairfax County Fire Company #25 currently has pre-emptive traffic signal to control the flow of traffic.

Under Wiehle Avenue Extension, neighborhoods located west of Wiehle Avenue would not receive mobility benefits from access to Metrorail service. Neighborhoods located within a half-mile of the Herndon-Monroe park-and-ride would receive access to transit service via the proposed Express Bus Service.

3.2.3.3 Full LPA

In addition to the effects described under the Wiehle Avenue Extension, one additional neighborhood, Reflection Woods would experience an increase in noise under the full LPA.

One additional community facility, the interim use soccer fields north of the DIAAH and Dulles Toll Road, would be affected by the Route 28 Station. The soccer fields would be converted to a transit facility per the terms and conditions set forth in the Dulles Green Proffer. Excerpts from this proffer statement are included in Appendix I.

Eleven stations are planned under the full LPA. Historically where Metrorail Stations have been constructed and are in operation in Northern Virginia, such as the Clarendon and Ballston Stations in Arlington, adjacent properties have experienced an increase in value. It is expected that these trends would continue.

3.2.4 CONSTRUCTION EFFECTS

The following sections detail the short-term construction effects to neighborhoods of the No Build Alternative and the LPA.

3.2.4.1 No Build Alternative

Under the No Build Alternative, there would be no construction effects from the Dulles Corridor Rapid Transit Project. However, construction-related impacts to neighborhoods and community facilities could result from the improvements assumed as part of this alternative. Identification of these effects would be the responsibility of the agencies and jurisdictions implementing the improvements.

3.2.4.2 Wiehle Avenue Extension

During construction of the Wiehle Avenue Extension, construction-related traffic, noise, air quality, and visual impacts would occur. These impacts are addressed in the individual topic sections. Generally, these short-term impacts would not affect most of the neighborhoods because they are not located immediately adjacent to the proposed alignment or stations where major construction would occur, or they are already buffered from the transportation corridor.

The Idylwood neighborhood would experience noise effects and some additional truck traffic during construction of the improvements to the West Falls Church S&I Yard. Three neighborhoods, Hunting Ridge, McLean Ridge, and Westwood Village would experience physical intrusions, such as light, dust and odors during the construction of the alignment in Tysons Corner. Additionally, the construction of the median stations would be visible to the Pavilion neighborhood. West of the Wiehle Avenue Station, construction of enhanced bus facilities would not affect neighborhoods or community facilities.

3.2.4.3 Full LPA

In additional to the effects described under the Wiehle Avenue Extension, the Reflection Woods, Reflection Lake and Dulles Green neighborhoods would experience construction effects such as, light, dust and visual effects from construction equipment under the full LPA.

3.2.5 MITIGATION

Mitigation strategies for impacts upon neighborhoods in the corridor would focus on reducing noise, visual, traffic, and construction effects. These are discussed in their respective sections of the Final EIS.

3.3 PROPERTY ACQUISITION AND DISPLACEMENTS

This section presents information regarding the property acquisitions (partial or full) and displacements that would occur as a result of the Dulles Corridor Rapid Transit Project. Federal and state laws require that property owners be paid fair market value for their land and improvements, and that they be assisted in finding replacement business sites or dwellings. Displacements result from right-of-way acquisitions that require the use of a property occupied by a residence or business. Partial acquisitions occur when only a portion of an existing land use is required and as such may not result in a displacement or relocation. Full acquisitions occur when a complete parcel is required and may result in either a displacement or relocation.

3.3.1 LEGAL AND REGULATORY CONTEXT

Under the Uniform Relocation Assistance and Real Property Acquisition Policy Act of 1970, as amended, all federal agencies are required to meet certain standards for the fair and equitable treatment of persons displaced by federally supported actions. Relocation assistance will follow the guidelines set forth in Title 49, Part 24 of the Code of Federal Regulations (49 CFR Part 24).

3.3.2 METHODOLOGY

To identify potential acquisitions and displacements that would occur from implementing the Dulles Corridor Rapid Transit Project, the limit of disturbance for the LPA was overlaid onto corridor parcel maps. Each of the parcels was then analyzed to determine if an acquisition was necessary and if the acquisition would displace a residence, business, community facility, or institutional use. If land is acquired that does not include a residence, business, or institutional use, a displacement does not occur. Conversely, a partial acquisition could result in a displacement, even if it does not take a building. If a partial acquisition results in the inability to use the parcel as it was used prior to the acquisition, it could result in a full displacement. For example, if all of the parking was taken from a business, then the business would not be able to remain open and a displacement would occur. Land proffered for transit facilities by private landowners and land required from public agencies (Fairfax and Loudoun counties, Virginia Department of Transportation, MWAA) has not been analyzed for displacements.

3.3.3 LONG-TERM EFFECTS

The long-term effects of the No Build Alternative, the Wiehle Avenue Extension, and the full LPA that would result in partial or complete acquisitions of land parcels and displacements are described in the following sections. Table 3.3-1 presents a summary of these effects. Temporary uses of land for construction are discussed in Section 3.3.5.

Table 3.3-1: Acquisitions and Displacements

Acquisition Type	No Build Alternative (2025)	Wiehle Avenue Extension (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
Private Residential Parcels (partial acquisitions)	0	11 (3.9 acres)	11 (3.9 acres)	11 (3.9 acres)
Private Commercial Parcels	0	37 (13.4 acres)	37 (13.4 acres)	64 (28.1 acres)
Government and Proffered Parcels	0	14 (15.0 acres)	14 (15.0 acres)	36 (166.0 acres)
Total Parcels	**0**	**62 (32.3 acres)**	**62 (32.3 acres)**	**111 (198.0 acres)**
Residential Displacements	0	0	0	0
Business Displacements	0	3	3	3

Notes:
1. Only partial acquisitions are required for all residential and most commercial parcels.
2. Property requirements are preliminary and subject to change based on negotiations with property owners and further design refinement.

3.3.3.1 No Build Alternative

Under the No Build Alternative, there would be no direct effects from the Dulles Corridor Rapid Transit Project. However, displacements or relocations could occur as a result of some of the projects assumed under this alternative. Identification of these effects would be the responsibility of the agencies and jurisdictions implementing the improvements.

3.3.3.2 Wiehle Avenue Extension

The property acquisition effects associated with the Wiehle Avenue Extension would require partial acquisition (or easement) of two residential properties for ancillary facilities located along the Dulles Connector Road, but would not cause any displacements. The line and track for the Wiehle Avenue Extension would require 15 partial acquisitions from commercial properties located along Routes 123 and 7.

The Tysons Central 123 station would require partial acquisition of one commercial parcel. This acquisition would not require the removal of structures or preclude existing uses on the remaining portions of the parcel. At the Tysons Central 7 Station, one auto repair business would be displaced for the north entrance pavilion and three partial acquisitions of commercial parcels would be required for the station and south entrance pavilion.

At the Tysons West Station, partial or complete land acquisitions would be required from eight parcels. The majority of the right-of-way required is for the bus bays and Kiss & Ride facilities. This acquisition would displace two businesses (an auto collision center and car rental office). These businesses would have their operations affected by the loss of a limited number of parking spaces and some alteration of on-site circulation and access.

Between the Tysons West and Wiehle Avenue stations, partial acquisitions of nine residential and two commercial parcels would be required along the alignment for ancillary facilities including stormwater management facilities, traction power substations, and tie-breakers. These ancillary facilities would not result in any displacements.

At the Wiehle Avenue Station, complete or partial acquisitions of six commercial parcels would be required. Construction of an access road would require removal of some structures from an existing storage business. West of Wiehle Avenue Station, partial acquisition from one commercial property would be required along the alignment for a tie-breaker station. The facility would not result in a displacement.

The Wiehle Avenue Extension requires the acquisition of property interest in the median and other parts of the Dulles International Airport Access Highway and Dulles Connector Road. The U.S. Department of Transportation (USDOT) owns the Access Highway and Connector Road. MWAA has leased the property from the USDOT through the year 2067. DRPT will seek conveyance of the Access Highway and Connector Road property interest needed for the Project from the USDOT and MWAA. The acquired property interest will be adequate to assure DRPT's or WMATA's continuing control of the Project property throughout the useful life of the Project.

3.3.3.3 Full LPA

The effects associated with the full LPA would be similar to those described for the Wiehle Avenue Extension in areas east of and including the Wiehle Avenue station area.

At the Reston Parkway Station, three partial acquisitions of commercial properties would be required, but would not result in any displacements.

Between the Reston Parkway and Herndon-Monroe stations, partial acquisition (or an easement) of four commercial properties would be required long the alignment for ancillary facilities. The facilities would not

result in any displacements. At the Herndon-Monroe Station, four partial acquisitions of commercial properties would be required, but not result in any displacements.

Between the Herndon-Monroe and Route 28 stations, partial acquisition (or an easement) of one commercial property would be required along the alignment for a stormwater management pond. The facility would not result in a displacement. At the Route 28 Station, five partial acquisitions of commercial properties would be required, but would not result in any displacements.

The full LPA requires the acquisition of property interest in the median and other parts of the Dulles International Airport Access Highway and Dulles Connector Road, and in parts of the Dulles Airport property itself, including the site of the S&I Yard and portions of eight parcels that are currently leased to commercial entities. The USDOT owns the Access Highway, the Connector Road and the Dulles Airport property. MWAA has leased the property from the USDOT through the year 2067 and has sublet certain commercial parcels to businesses. DRPT will seek conveyance of the Access Highway, Connector Road and Airport property interest needed for the Project from the USDOT and MWAA. The acquired property interest will be adequate to assure DRPT's or WMATA's continuing control of the project property throughout the useful life of the project.

As the alignment leaves the airport property, and transitions into the median of the Dulles Greenway, it traverses private property requiring the partial acquisition of one commercial property. Between Route 606 and Route 772, partial acquisition of three commercial parcels would be required along the alignment for ancillary facilities.

3.3.4 CONSTRUCTION EFFECTS

Construction effects on property displacements, relocations, or acquisitions (partial or full) that would occur due to the Dulles Corridor Rapid Transit Project are presented in this section. Construction staging areas would be required for temporary use during the construction period. The locations of the construction staging areas are illustrated in Figure 2.3-3. In most cases, the construction staging areas are located within existing transportation rights-of-way.

3.3.4.1 No Build Alternative

No construction effects would result from the No Build Alternative.

3.3.4.2 Wiehle Avenue Extension

The project has identified seven sites for which property required for construction staging would be leased or otherwise acquired for temporary use. None of the property acquired would require permanent displacements or impede existing activities. Therefore, no short-term construction impacts related to displacements or relocations would occur.

3.3.4.3 Full LPA

Property required for construction staging would be leased or otherwise acquired for temporary use at one site in addition to the seven sites for the Wiehle Avenue Extension. None of the property acquired would require permanent displacements or impede existing activities. Therefore, no short-term construction impacts related to displacements or relocations would occur.

3.3.5 MITIGATION

The acquisition of right-of-way and the relocation of displacees would be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policy Act of 1970, as amended. Relocation resources would be made available to all residential, business, and nonprofit displacees without discrimination. DRPT would prepare a detailed acquisition and relocation plan prior to initiating any property acquisition or relocation activities.

3.4 VISUAL AND AESTHETIC CONDITIONS

This section presents the results of a visual impacts analysis of the proposed Dulles Corridor Rapid Transit Project.

3.4.1 METHODOLOGY

The Federal Transit Administration (FTA) does not have a specific methodology or set of guidelines for conducting visual assessments of transit projects. As is the generally accepted practice, the Federal Highway Administration (FHWA) visual assessment methodology was applied for this analysis. The following steps were used in the analysis:

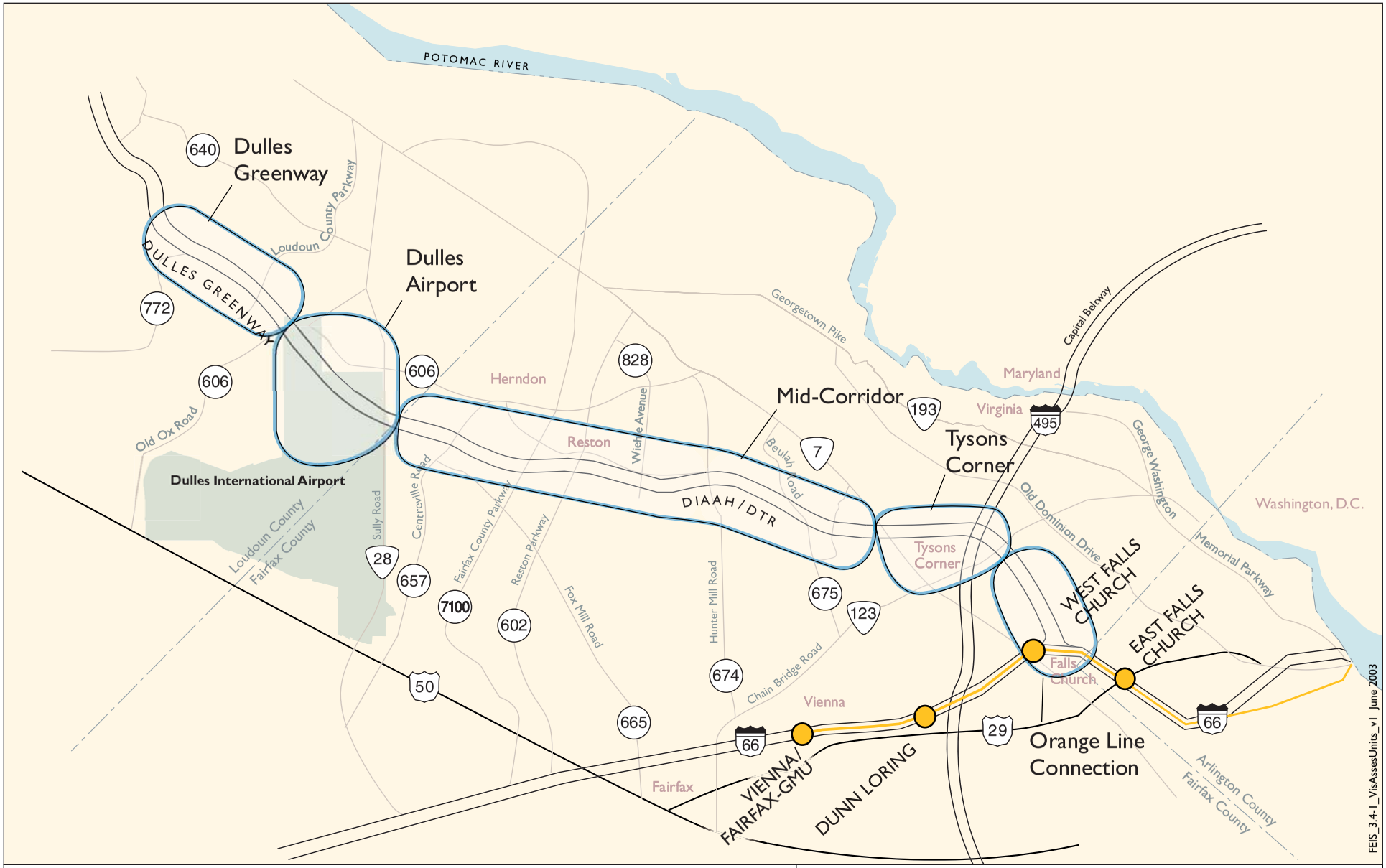
1. The study area was defined by dividing the Dulles Corridor into visual assessment units, which are relatively homogeneous areas of similar visual character. Figure 3.4-1 illustrates the boundaries of these visual assessment units.
2 Each visual assessment unit was evaluated for existing visibility, visual character, quality of views, and presence of important visual resources.
3. The types of viewers present in each visual assessment unit were identified. Different types of viewers have different levels of sensitivity to visual changes based on their familiarity with the environment, what they are doing, how much time they spend looking at the environment, and their sense of ownership of the view.
4. Project plans, photographs, computer-generated visual simulations, and artist renditions of the project were reviewed regarding the visible physical changes that would occur.
5. The visual impact of the project's visible physical changes was assessed and classified into three basic categories: substantial, minimal, and negligible visual impacts. Substantial visual impacts of a transportation project a re those that would result in a deterioration in the ability to use the adjacent land as intended, a reduction in the quality of that use, obstruction of an important view, interference with a specific design in the environment, degradation of a natural condition, removal of a substantial percentage, or the last amount of, landscaping or natural vegetation, and similar levels of visual disturbance. Minimal impacts are those visual effects that do not produce these conditions. Negligible impacts are those where the visible changes would be barely noticeable to the general public.
6. If substantial visual impacts were identified, mitigation was developed, if available, to reduce the impacts.

3.4.2 EXISTING CONDITIONS

The Dulles Corridor is located within an area that has undergone and is undergoing continued development. In the last few years, office, industrial, and mixed-use development has occurred in much

of the study area, especially in the vicinity of Tysons Corner, Reston, Herndon, and more recently, Loudoun County. Portions of the corridor contain older residential developments.

For visual analysis purposes, the corridor can be divided into five distinct regions, referred to as visual assessment units. From east to west, these are the Orange Line Connection, Tysons Corner, Mid-Corridor, Dulles Airport, and Dulles Greenway visual assessment units. The existing visual conditions in each of these areas are discussed below, and representative photographs of the Dulles Corridor are shown in Figures 3.4-2a through 3.4-2e. Figure 3.4-3 shows the view corridors within the Dulles Airport visual assessment unit. Table 3.4-1 summarizes the visual characteristics of each unit. Specific characteristics of each visual assessment unit can be found in the Draft EIS.



LEGEND

- Existing Metrorail Orange Line and Stations
- Visual Assessment Unit
- Limited Access Highway
- U.S. Highways
- Major Arterials

0 1 2 3 MILES

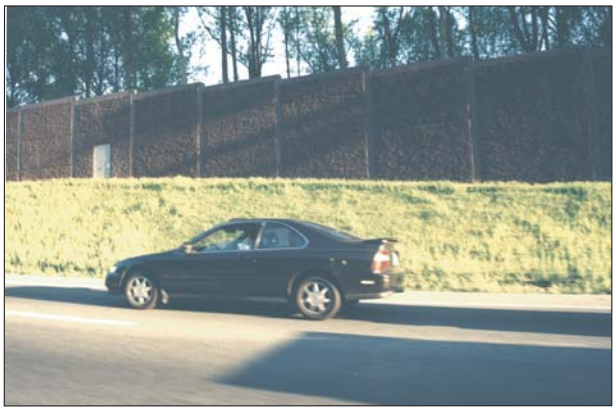
Figure 3.4-1

Visual Assessment Units

Dulles Corridor Rapid Transit Project



I-66/West Falls Church Station and Service and Inspection Yard



Typical Sound Barrier



I-66/Metrorail Orange Line Alignment

FTA_DEIS_3.4-2a_VAU_OrangeLineConn_v11 July 2004

Figure 3.4-2a

Views Along the Alignment: Orange Line Connection

Dulles Corridor
Rapid Transit Project



Tysons Corner



Tysons Corner at Route 123



Tysons Corner at Route 7

FEIS_3.4-2b_VAU_Tysons_v9 July2004

Figure 3.4-2b

Views Along the Alignment: Tysons Corner

Dulles Corridor
Rapid Transit Project



Mid-Corridor Residential Community with Dulles Airport Access Road and Dulles Toll Road in Background



Dulles Airport Access Road and Dulles Toll Road Collection Facility



Mid-Corridor Office Building

FTEIS_3_VAU_MidCorridor_v3 July2004

Figure 3.4-2c

Views Along the Alignment: Mid-Corridor

Dulles Corridor
Rapid Transit Project



Dulles Airport Terminal and Tower



Dulles Airport Terminal and Tower



Dulles Airport Terminal and Tower

FTA_DEIS_3_VAU_DullesAirport_v4 July2004

Figure 3.4-2d

Views Along the Alignment: Dulles Airport

Dulles Corridor
Rapid Transit Project



Dulles Greenway



Dulles Greenway



Dulles Greenway

FTA_DEIS_3.4-2e_VAU_DGreenway_v9 July 2004

Figure 3.4-2e

Views Along the Alignment: Loudoun County

Dulles Corridor
Rapid Transit Project

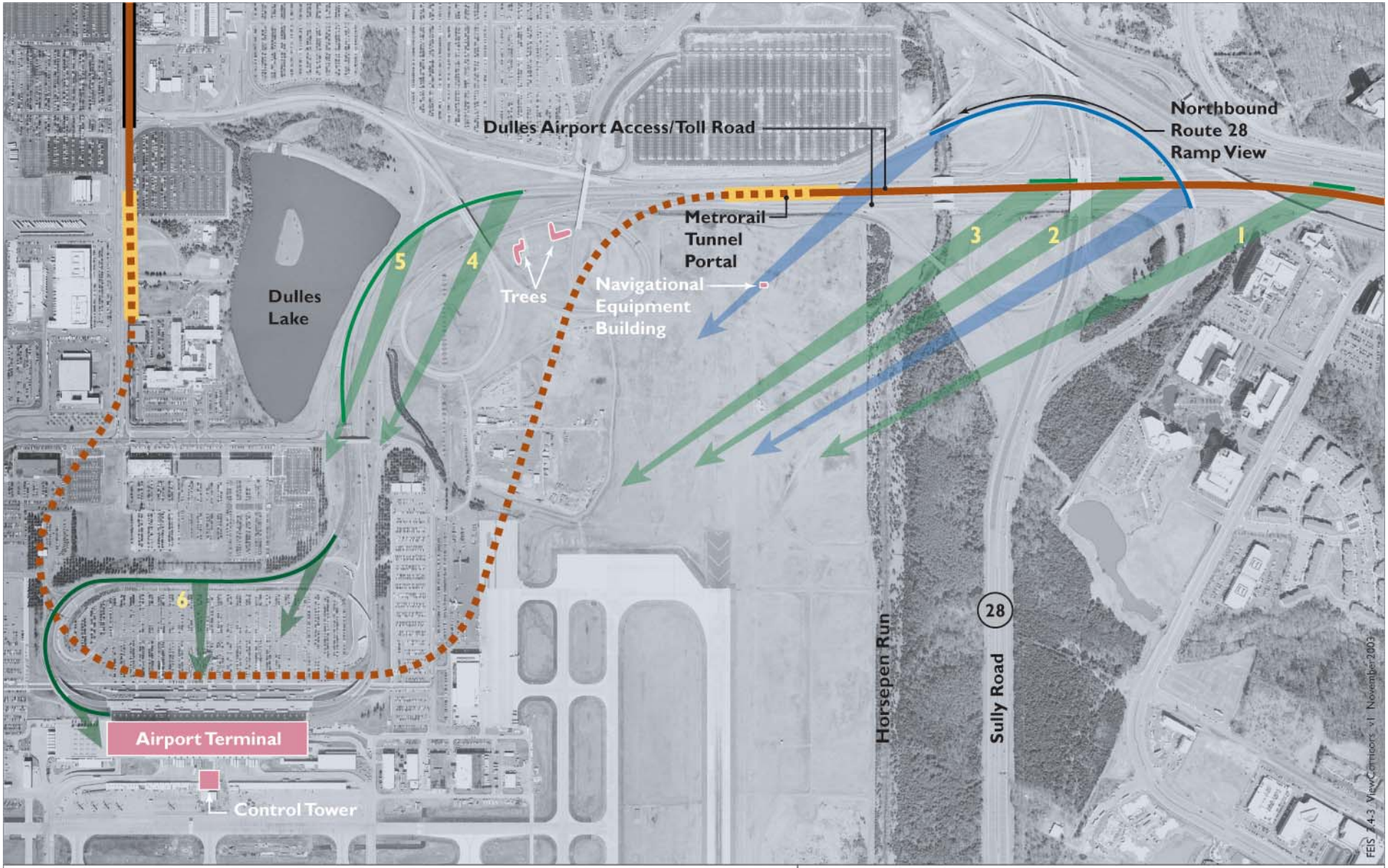


Figure 3.4-3

View Corridors Dulles Airport Terminal and Control Tower

Dulles Corridor
Rapid Transit Project

Table 3.4-1: Visual Characteristics

Visual Assessment Unit	Limits of Visual Assessment Unit	Visual Characteristics	Viewers
Orange Line Connection	Eastern end of corridor, along I-66 and Dulles Connector Road, to Dulles Connector Road/Route 123 interchange	Narrow, enclosed transportation facility with short views of landscaping, sound barriers and traffic; No distinctive views or focal points Adjacent characteristics: Mostly residential development, with small amount of industrial (WFC Yard) space at the I-66/Dulles Connector Road interchange	Highway users, users of West Falls Church Metrorail Facility Residents of homes adjacent to I-66 and Dulles Connector Road.
Tysons Corner	Route 123 interchange with Dulles Connector Road to the Dulles Toll Road at Route 7 interchange	Tall buildings and varied topography provide important views into and out of the area. Many buildings posses a distinctive architectural style, contributing to important views and focal points Adjacent characteristics: Various planned developments (large and small-scale commercial developments, hotel/restaurants, office commercial, light-industrial and multi-family residential)	Permanent and temporary residents, workers and people traveling through the area
Mid-Corridor	Route 7 crossing of the Dulles Toll Road/DIAAH to the Route 28 interchange	Narrow, enclosed transportation facility with short views of landscaping, sound barriers, and traffic Adjacent characteristics: Eastern portion mostly low-density residential; western portion mostly planned office commercial development Wolf Trap Farm Park for Performing Arts within unit Hunter Mill Road, a Virginia Scenic Byway within unit	Highway users Residents with views of Dulles Toll Road/DIAAH

Visual Assessment Unit	Limits of Visual Assessment Unit	Visual Characteristics	Viewers
Dulles Airport	Dulles Toll Road/Route 28 interchange, continues to airport, ending at Dulles Greenway	Extensive visibility due to openness of airport property; views from main terminal are limited due to lack of low windows. "Peekaboo" sequence designed by airport architect, Eero Saarinen. Adjacent characteristics: Airport related land uses dominate area; other transportation related facilities Terminal and tower are eligible for listing on NRHP	Airport workers and travelers
Dulles Greenway	Northwestern edge of the airport, adjacent to Greenway to western corridor terminus near Route 772	Relatively flat topography and low-degree of development provide extensive visibility Adjacent characteristics: Undeveloped and developing land, (mostly industrial and warehousing)	Motorists on roadways and workers in industrial buildings

3.4.3 LONG-TERM EFFECTS

Analysis of visual impacts involves visible physical changes and the reaction of viewers to the changes. The sensitivity of views affects whether a visible physical change would have an adverse or beneficial visual impact. The potential visual effects of the LPA are summarized in Table 3.4-2. More detailed descriptions of the potential visual effects are provided in Section 3.4 of the Draft EIS.

Table 3.4-2: Summary of Long-Term Visual Effects

Physical Changes	Visibility From	Types of Viewers	Viewer Sensitivity[1]	Visual Impact[2]
Orange Line Connection Visual Assessment Unit				
Metrorail alignment in Dulles Connector Road center median, including new rail yard lead, traction power substation	Dulles Connector Road	Motorists, transit riders	Moderate	Minimal
West Falls Church Metrorail Yard improvements, including additional storage tracks, traction power substation	West Falls Church Station	Transit workers	Moderate	Negligible
New Metrorail bridge over Pimmit Run	Dulles Connector Road, Pimmit Run Stream Valley Park	Motorists, transit riders	Moderate	Negligible
		Recreational trail users	High	Minimal
Tysons Corner Visual Assessment Unit				
Elevated alignment along Route 123 and Route 7; underground alignment along Route	Route 123, Route 7, intersecting and parallel roadways, adjacent commercial	Motorists, transit riders, office/commercial viewers,	Moderate	Minimal

Physical Changes	Visibility From	Types of Viewers	Viewer Sensitivity[1]	Visual Impact[2]
123 and Route 7; portals on Route 123 and Route 7	and uses along Route 123 and Route 7, distant residences	Residents (distant)	Moderate	Minimal
Tysons East Station: elevated; including traction power substation	Route 123, Scotts Crossing/Colshire Drive; adjacent offices; nearby residences	Motorists, transit riders, office workers	Moderate	Minimal
		Residents	High	Minimal
Tysons Central 123 Station: elevated; including traction power substation	Route 123, Tysons Boulevard, adjacent and nearby commercial uses (malls), Scotts Run Stream Valley Park	Motorists, transit riders, commercial viewers	Moderate	Minimal
Tysons Central 7 Station: underground with aboveground entrance pavilions	Route 7, adjacent commercial uses, adjacent offices	Motorists, transit riders, commercial viewers, office workers	Moderate	Minimal
Tysons West Station: elevated	DIAAH, Dulles Toll Road, Route 7, Westwood Center Drive/Tyco Road adjacent offices, nearby hotels, commercial uses; distant residences; Ash Grove historic site	Motorists, transit riders, office workers, commercial viewers, hotel guests, employees, distant residents, recreational users	Moderate	Minimal
Mid-Corridor Visual Assessment Unit				
LPA alignment in DIAAH (center median), including removal of median landscaping	DIAAH, Dulles Toll Road, crossing roads, plus some adjacent land uses (though mostly screened by soundwalls, landscaping, and topography), Hunter Mill Road Proposed Historic District	Motorists, transit riders, misc. viewers in adjacent land uses	Moderate	Minimal
		Residents	High	Negligible
Wiehle Avenue, Reston Parkway, Herndon/Monroe Metrorail Stations (center median of DIAAH)	DIAAH, Dulles Toll Road, Wiehle Avenue, Reston Parkway, adjacent parking areas, adjacent office buildings, adjacent roadways	Motorists, transit riders, office workers	Moderate	Minimal
Route 28 Station (center median of DIAAH)	DIAAH, Dulles Toll Road, adjacent roadways, adjacent residents	Motorists, transit riders	Moderate	Minimal
		Residents	High	Minimal
Traction Power substations along DIAAH/Dulles Toll Road, including one near the Barns at Wolf Trap	DIAAH, Dulles Toll Road, plus potentially the Barns at Wolf Trap	Motorists, transit riders	Moderate	Minimal
New Metrorail bridge over Difficult Run	DIAAH, Dulles Toll Road, Difficult Run Stream Valley Park	Motorists, transit riders	Moderate	Negligible
		Recreational trail users	Low	Negligible
New Metrorail bridge over W&OD Railroad Regional Park	DIAAH, Dulles Toll Road, W&OD Railroad Regional Park	Motorists, transit riders	Moderate	Minimal
		Recreational trail users	Low	Negligible

Physical Changes	Visibility From	Types of Viewers	Viewer Sensitivity[1]	Visual Impact[2]
Dulles Airport Visual Assessment Unit				
LPA alignment (mostly underground, with portals east and west of the terminal, as well as ventilation and emergency access shafts); alteration of the "peekaboo" sequence	Airport roadways, terminal, parking areas, other airport uses	Motorists, transit riders	Moderate	Minimal
		Airport workers, air travelers	High	Substantial
Dulles Airport Station (underground)	Airport roadways, terminal, parking areas, other airport uses	Motorists, transit riders, airport workers	Moderate	None
		Airport workers, air travelers	High	None
Traction Power Substation	Airport roadways, parking areas, other airport uses	Motorists, transit riders, airport workers	Moderate	Negligible
		Airport workers, air travelers	Moderate	Negligible
Dulles Greenway Visual Assessment Unit				
LPA alignment in Dulles Greenway (center median)	Dulles Greenway, Cultural Resource House in Ryan (53-23)	Motorists and transit riders	Moderate	Negligible
Route 606 Station (adjacent to Dulles Greenway)	Dulles Greenway, Dulles Transit Center	Motorists and transit riders	Moderate	Negligible
Route 772 Station (adjacent to Dulles Greenway)	Dulles Greenway, Cultural Resource House in Ryan (53-23)	Motorists and transit riders	Moderate	Minimal
S&I Yard Site 15	Route 606; Dulles Airport north-south runway; industrial land uses	Motorists. air travelers, airport workers, office/warehouse workers	Moderate	Minimal

1 View sensitivity levels are discussed in Section 3.4.1

2 Substantial visual impacts are those that result in deterioration in the ability to use the adjacent land as intended, a reduction in the quality of that use, obstruction of an important view, interference with a specific design in the environment, degradation of a natural condition, removal of a substantial portion or the last amount of landscaping or the natural vegetation, or similar levels of visual disturbance. Less than substantial impacts are those visual effects that would not result in these conditions. Minimal visual impacts are those that would be barely noticeable to the general public.

3.4.3.1 No Build

No visual effects from the Dulles Corridor Rapid Transit Project would occur under the No Build Alternative. However, there could be effects from improvements assumed under this alternative. Visual effects resulting from improvements assumed under the No Build Alternative would be the responsibility of agencies and jurisdictions implementing the improvements.

3.4.3.2 Wiehle Avenue Extension

The Wiehle Avenue Extension is primarily located within an existing transportation corridor. The Wiehle Avenue Extension would introduce new visual elements, such as Metrorail stations, pedestrian walkways, parking structures, tie-breaker stations and traction power substations, into the existing visual setting of the study area. However, due to the existing land uses and existing visual and aesthetic characteristics of the area, the Wiehle Avenue Extension and associated facilities would have a less than substantial effect on sensitive resources and viewers.

3.4.3.3 Full LPA

The visual effects of the full LPA would be similar to those of the Wiehle Avenue Extension in areas east of, and including, the Wiehle Avenue Station. The LPA is primarily located within an existing transportation corridor. The LPA would introduce new visual elements, such as Metrorail stations, pedestrian walkways, parking structures, tie-breaker stations and traction power substations, into the existing visual setting of the study area. Due to the existing land uses, lack of sensitive viewers, and existing visual and aesthetic characteristics of the area, the full LPA and associated facilities in general would have a less than substantial effect on sensitive resources and viewers. However, the full LPA would have a substantial visual affect on the peekaboo sequence within the Dulles International Airport Historic District.

3.4.4 CONSTRUCTION EFFECTS

The visual effects associated with construction of the LPA would be similar to and include those described in Section 3.4.4 of the Draft EIS for the Metrorail Alternative (T6/Y15). Most construction and mitigation techniques have not been identified at this time, but it is assumed that standard Best Management Practices would be used for construction.

The construction staging areas will be located along the corridor for construction of the LPA. Views into construction staging areas could occur relative to the selected locations, potentially impacting views from highly sensitive viewers. Construction staging areas often contain construction equipment, stockpiles of materials, construction maintenance facilities, refueling stations, employee welfare facilities (including portable toilets), and parking for employee vehicles. This type of land use, though temporary, is generally not visually compatible with most surrounding development or undeveloped land, including the type of development that is most common throughout the Dulles Corridor: office, commercial, residential, recreational, and open space. In many cases, large numbers of viewers would be able to see the construction staging areas, either from high-volume roadways or from tall office and residential buildings. Thus, it is likely that at least some of the construction staging areas would result in substantial short-term visual impacts if not screened from view.

In Tysons Corner, construction of the elevated and underground segments of the LPA would have additional visual effects. Elevated segments take longer to construct and would be more visible and harder to screen from view. Thus, these portions of the LPA have a greater chance of resulting in construction-related visual impacts in Tysons Corner. The density of development in Tysons Corner and the height of many of the buildings allows for large numbers of viewers to see the construction. Underground segments, on the other hand, require special construction techniques and special staging areas. Construction of underground segments creates the need for removal of spoils (wastes) that must be stockpiled or hauled away and could result in visual impacts. Any accumulation of dirt outside the excavation resulting from haul trucks is particularly likely to result in visual impacts.

Underground operations would have construction activity visible only at the entrances and at stations. However, if, cut-and-cover tunnel construction techniques are used, whereby a trench is dug, tunnel lining and support are constructed from aboveground, and then the tunnel is covered, construction activities would be visible from areas surrounding the entire tunnel, not just at the entrances and stations.

3.4.5 MITIGATION

To mitigate any visual effects of the project, DRPT and WMATA would consider designs for Metrorail stations, aerial structures, and portals that are compatible with the surrounding environment. In addition, landscaping would be provided at stations. Using established WMATA designs, traction power substations and tie-breaker stations would be designed to be compatible with the surrounding environment. At Dulles Airport, the design of the two tunnel portals would consider the historic terminal and other contributing elements to the historic district. DRPT and WMATA would coordinate with the Metropolitan Washington Airports Authority and the Virginia Department of Historic Resources in the design of these facilities.

3.5 CULTURAL RESOURCES

This section presents information regarding the impacts to archaeological and historic architectural resources that would occur due to the Wiehle Avenue Extension and the full LPA. The discussion includes a description of regulatory requirements, methods of identifying existing historic properties, the archaeological and architectural resources identified, discussions of impacts, and potential mitigation measures.

3.5.1 LEGAL AND REGULATORY CONTEXT

Section 106 of the National Historic Preservation Act, 16 U.S.C. 470(f), as amended (Section 106), governs federal actions that could affect historic properties. Section 106 requires federal agencies to take into account the effects of their undertakings, including licensing and approvals on historic properties, and to afford the Advisory Council on Historic Preservation (ACHP) and other interested parties a reasonable opportunity to comment on such undertakings. As defined broadly by 36 CFR 800.16, a "historic property" means "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (NRHP) maintained by the Secretary of the Interior." This term includes archaeological sites and properties of traditional religious and cultural importance to Native American tribes or Native Hawaiian organizations that meet the NRHP criteria. Section 101(b)(4) of NEPA requires federal agencies to coordinate and plan their actions so as to preserve important historic, cultural, and natural aspects of the country's national heritage.

Properties that qualify for inclusion in the NRHP must meet at least one of the following four criteria:

- Criterion A: Association with events that have made a significant contribution to the broad patterns of our history;
- Criterion B: Association with the lives of persons of significance in our past;
- Criterion C: Embody the distinctive characteristics of a type, period, or method of construction, or the work of a master, or high artistic values, or a significant and distinguishable entity whose components may lack individual distinction; or
- Criterion D: Have yielded, or may be likely to yield, information important in prehistory or history (36 CFR 60.4).

Properties that qualify for the NRHP also must possess integrity, defined by the following seven aspects: location, design, setting, materials, workmanship, feeling, and association. The term "eligible for inclusion in the NRHP" includes both properties formally designated as eligible and all other properties determined to meet NRHP criteria. Normally, NRHP eligibility requires a property to be at least 50 years of age. In

order for buildings and structures less than 50 years of age to be eligible for the NRHP, these resources must be highly significant and meet the "special criteria considerations" as outlined in 36 CFR 60.4.

National Historic Landmarks are defined as historic properties of outstanding national significance that have been specially designated by the Secretary of the Interior, in accordance with 36 CFR 65.

Section 4(f) of U.S. Department of Transportation Act, as amended (49 USC 303 (c)) states that U.S. DOT may not approve the use of land from a publicly owned park, recreation area, wildlife or waterfowl refuge, or historic site of national, state, or local significance, unless a determination is made that there is no feasible and prudent alternative to the use of that land and the action includes all possible planning to minimize harm to the property resulting from such use. Chapter 7 of this Final EIS contains a complete discussion of sites and issues covered by this statute and its regulations.

3.5.2 METHODOLOGY

An integral part of the Section 106 process is to determine the area within which archaeological and historic architectural resources would be affected or are likely to be affected. As defined by 36 CFR 800.16 (d), the Area of Potential Effect (APE) represents the "geographic area or areas within which an undertaking could cause changes in the character or use of historic properties, if any such properties exist." In accordance with 36 CFR 800.4(a), DRPT and WMATA consulted the Virginia Department of Historic Resources (VDHR) in determining the boundaries of the APE.

The APE for archaeology was initially defined as 200 feet beyond the predicted limits of disturbance and 200 feet beyond station footprints to allow for possible variation during construction. In delineating the APE, major human-made and natural features were considered. Survey work determined that portions of the APE had been disturbed by development-related construction and did not require intensive-level survey, and several areas were removed as a result of the selection of the Metrorail Alternative (T6/Y15) as the LPA. The remaining areas, a total of 138.07 acres, constitute the revised APE for archaeology on which the field investigations described in the Project's April 2004 *Identification and Evaluation Report—Archaeology* are based. Figures 3.5-1a and 3.5-1b show the revised APE for archaeology.

During the development of the Draft EIS, the APE for architecture was established at 1,000 feet from the centerline to account for the uncertainty of the proposed design plans for the various alternatives under consideration. The potential for direct, indirect, audible, and/or visual impacts to historic resources was assessed for a wide area to ensure a comprehensive study of all NRHP-listed or -eligible resources that could be affected by the proposed undertaking. Following the selection of the Metrorail Alternative (T6/Y15) as the LPA and subsequent narrowing of the study area, VDHR, DRPT, and WMATA agreed that a 1,000-foot APE was no longer necessary or appropriate. Based on an analysis of the impacts associated with the Wiehle Avenue Extension and the full LPA, the APE for architecture was revised to 600 feet from the centerline. Figures 3.5-1a and 3.5-1b show the revised APE for architecture.

The *Cultural Resources Technical Report (Phase 1a)* was prepared in August 2003 to provide further documentation of the data upon which the Draft EIS cultural resources analysis and Section 4(f) evaluation was based. The information presented in that report partially fulfilled the requirements of Section 106, including documentation of known archaeological and architectural resources that might be affected by the proposed project and identification of areas that may contain archaeological and/or architectural resources.

In order to complete the requirements of identification and evaluation under Section 106, the *Identification and Evaluation Report—Archaeology* and the *Identification and Evaluation Report—Historic Architecture* were prepared in April 2004 to document archaeological and historic architectural resources within the APE that had not previously been recorded and evaluated for NRHP eligibility. A Phase 1b archaeological survey of selected portions of the corridor was undertaken to determine the presence or absence of prehistoric and historic archaeological resources that may be in the APE and to provide recommendations on further cultural resource investigations.

Based on the Phase 1a survey completed in August 2003, 49 areas within the APE were recommended for additional archaeological survey. The total surveyed area was 138.07 acres, and a total of 2,101 shovel tests were excavated. Nine isolated artifact locations were identified; however, no archaeological sites were identified, and no remains of previously identified archaeological sites were found within the APE. Because no historic properties were identified, no additional archaeological studies were recommended.

Based on the August 2003 Phase 1a survey and in coordination with VDHR, DRPT and WMATA identified 83 historic architectural resources within the APE that required Phase 1b survey and documentation. These resources are located in the portion of the corridor between the West Falls Church Metrorail Station and Tysons Corner in Fairfax County. The scope of this phase of work involved the execution of a reconnaissance level survey of each resource in accordance with VDHR survey guidelines. A historic context on the rapid development of Fairfax County during the second and third quarters of the twentieth century was developed in order to evaluate these resources within a relevant context for eligibility of listing in the NRHP. No new potentially eligible resources were identified during this investigation, and no additional architectural studies were recommended.

Together, the August 2003 *Cultural Resources Technical Report (Phase 1a)* and the April 2004 *Identification and Evaluation Reports* for archaeology and historic architecture serve as a detailed record of the cultural resources data collection that was performed during the preliminary engineering and environmental review process, as well as fulfilling the requirements of identification and evaluation under Section 106.

3.5.3 EXISTING CONDITIONS

The following sections describe the process used to identify historic properties, their historic context, and the archaeological and historic architectural resources that were identified.

3.5.3.1 Efforts to Identify Historic Properties

The identification of potentially affected historic properties is a critical step for compliance with both Section 106 and NEPA. Identification was conducted in accordance with the regulations implementing Section 106 and the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (48 FR 44716-44742), as well as guidance issued by VDHR.

Efforts to identify historic properties included, but were not limited to, public input obtained from public scoping meetings and other public meetings conducted for NEPA and Section 106 compliance, meetings or contact with other interested parties and agencies, including DRPT, WMATA, MWAA, and VDHR, and contact with individuals knowledgeable about known or potentially historic properties. Historic literature and maps were researched, along with historic context information from state and local guidelines and secondary sources.



LEGEND

- Area of Potential Effect, Archaeology
- Area of Potential Effect, Architecture

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

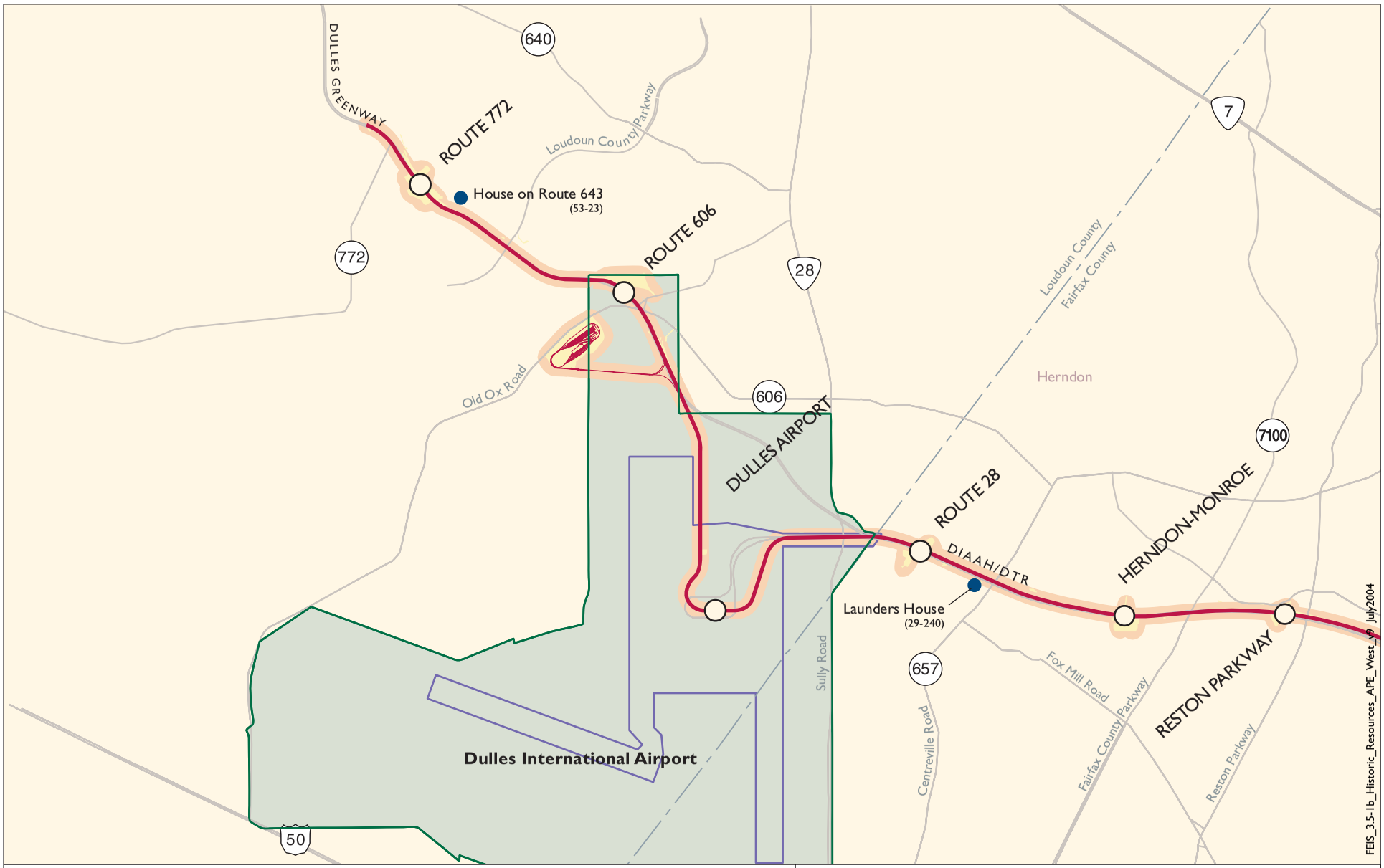
- Existing Metrorail Orange Line and Stations
- Proposed Station
- Historic Architectural Resources
- Proposed Metrorail Alignment
- County Boundary

0 3000 6000 FEET

Figure 3.5-1a

Area of Potential Effect and Known Historic Resources

Dulles Corridor Rapid Transit Project



LEGEND

- Area of Potential Effect, Archaeology
- Area of Potential Effect, Architecture
- Historic Architectural Resources

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

- Dulles Property Boundary
- Boundary of NRHP-Eligible Dulles Airport Historic District (2004)
- Proposed Metrorail Alignment
- County Boundary
- Proposed Station

0 3000 6000 FEET

Figure 3.5-1b

Area of Potential Effect and Known Historic Resources

Dulles Corridor Rapid Transit Project

Key file materials, such as the NRHP and National Historic Landmark nomination forms, files and inventories for locally significant properties housed at VDHR and Fairfax County, and previous investigations (e.g., surveys and compliance-related reports) were reviewed. Shovel-testing of areas determined to have a high likelihood of archaeological potential; and reconnaissance-level survey of architectural resources in the APE were conducted.

Several repositories were consulted to identify known or potential historic properties and develop the historic context for the APE. Repositories visited included but were not limited to: the Library of Congress, VDHR, the Virginia State Library, the Virginia Room of the Fairfax County Library, the Fairfax County Planning Office, Fairfax Archaeological Services, Fairfax County Park Authority (FCPA), the Thomas Balch Library in Leesburg, the Virginia Room of the Spotsylvania County Public Library, the Architecture Library of the University of Maryland in College Park, and the Gelman Library of George Washington University in Washington, D.C.

3.5.3.2 Historic Context

Knowledge of local prehistory and history helps to place cultural resources within their historic context. A summary of prehistoric (Native American prior to European contact) and historic (since European immigration to the Americas) development within Fairfax and Loudoun counties is provided in the Project's April 2004 *Identification and Evaluation Report—Archaeology* and *Identification and Evaluation Report—Historic Architecture*.

3.5.3.3 Archaeological Resources

Archaeological resources are locations with evidence of past human activity. The sites identified below are listed in order from east to west; actual locations of archaeological sites are kept confidential to protect the sites from disturbance and are not provided in this Final EIS. The description begins with the site number assigned by the State Historic Preservation Officer (SHPO), beginning with 44, the code for Virginia (the 44th state in alphabetical order). The next two letters designate the county or city (FX for Fairfax County or LD for Loudoun County). The following number is assigned in sequence as new sites are recorded with the state. In parentheses after the site number is the name given to the site by those who provided the site information to the state.

Based on the selection of the Metrorail Alternative (T6/Y15) as the LPA and subsequent narrowing of the APE, as well as the results of additional testing of previously identified sites during the Phase 1b survey, several archaeological resources discussed in the Draft EIS, and the Supplemental Draft EIS are no longer considered to be affected by the full LPA or the Wiehle Avenue Extension. Previously identified sites that no longer fall within the APE for archaeology include: Site 44FX2662 (Zipf); Site 44FX2024 (Magarity Site); Site 44FX0051 (Maplewood); Site 44FX2299 (Jarrett #4); Site 44FX1569 (Dulles Toll Road Site); Site 44FX2034 (Reston Land Parcel 912 A&B); Site 44FX1489 (Worldgate Hotel Site); Site 44FX0232; Site 44FX2233 (Dulles Green/DG 2); Site 44LD0500 (Trueno); Site 44LD0491 (HE-696A "Orange"); Site 44LD0380 (HNWF-1A); Site 44LD0383 (HSEE-BR); Site 44LD0472 (HE-P620A); Site 44LD0377 (HNWB-1A); Site 44LD0378 (HNWB-1B); and Site 44LD0852 (Shellhorn Road 1). Detailed summaries of these resources can be found in the documents listed above.

Seven previously-identified archaeological sites are located within the revised APE for archaeology and are summarized in Table 3.5-1.

Table 3.5-1: Archaeological Resources Identified

Site	Description	Listing
44FX0388 – Olney Park/Dulles Access Connector	Prehistoric archaeological site; most likely a rock quarry	Eligibility undetermined
44FX2405 – Scott's Run Site	Prehistoric archaeological site; lithic workshop used to process stone tools	Eligibility undetermined
44FX0915 – Arrowhead Farm	Historic archaeological site, early 20th century	Eligibility undetermined
44LD0379 – Indian Creek Site	Prehistoric, early/middle archaic occupation archaeological site	Potentially eligible for listing in the NRHP
44LD0432 – Runway #1	Prehistoric archaeological site	Eligibility undetermined
44LD0406	Prehistoric and historic occupation with artifacts dating to the Early Archaic period archaeological site	Potentially eligible for listing in the NRHP
44LD0408	Prehistoric archaeological site	Not eligible for listing in the NRHP

Source: Identification and Evaluation Report-Archaeology, April 2004.

In addition to these seven previously identified archaeological sites, nine isolated artifact locations were discovered during the Phase 1b archaeological survey conducted in early 2004. However, by definition, none of these meet the minimum requirements for consideration of eligibility for listing in the NRHP. The April 2004 *Identification and Evaluation Report—Archaeology* contains a discussion of these locations, as well as the other survey areas where shovel tests did not result in the identification of archaeological sites or isolated artifact locations.

3.5.3.4 Historic Architectural Resources

Generally, historic architectural resources are buildings, structures, landscapes, or objects greater than 50 years of age. Locations of the known architectural resources within the APE are shown in Figures 3.5-1a and 3.5-1b.

Based on the selection of the Metrorail Alternative (T6/Y15) as the LPA and subsequent narrowing of the APE, as well as the further reduction of the APE to 600 feet prior to Phase 1b survey, several architectural resources discussed in the Draft EIS, and Supplemental Draft EIS are no longer considered to be affected by the LPA or the Wiehle Avenue Extension. Previously identified sites that no longer fall within the revised APE for architecture include: Bois de Gosses (29-81, 1358 Windy Hill Road, McLean); Shiloh Baptist Church (29-189, 1331 Spring Hill Road, McLean); Wiehle/Sunset Hills Proposed Historic District (29-14, Reston); Robert Wiehle House (29-14-1, 1830 Old Reston Avenue, Reston); Smith Bowman Distillery (29-14-2, 1875 Old Reston Avenue, Reston); Sunset Hills (29-14-3, 1850 Reston Avenue, Reston); Ratcliff/Meiselman House (29-245, 2346 Centreville Road, Herndon); Middleton Farm (29-253, 13801 Frying Pan Road, Herndon); Cockerille House (53-1100, Route 789, Sterling vicinity); House, and Route 772 (now Petworth Court) (53-1095, Ryan).

Nine known historic resources are located within the revised APE for architecture. Summaries of these resources can be found in Table 3.5-2. Detailed descriptions of these resources are contained in the Draft EIS and Supplemental Draft EIS.

Table 3.5-2: Historic Architectural Resources Identified

Resource	Description	Listing
The Lewinsville Post Office (29-338), 1554 Great Falls Road, McLean	Architectural resource, dating to the 1850s	Potentially Eligible for listing in the NRHP
Ash Grove (29-2), 8900 Ash Grove Lane, Vienna	Architectural resource, dating to the 1790s	Potentially Eligible for listing in the NRHP
Wolf Trap National Park for the Performing Arts (29-159) 1551 and 1555 Trap Road, Vienna	130-acre complex consisting of historic farm and associated outbuildings developed for the performing arts	Listed on the Fairfax Co. Historic Landmarks Inventory; Potentially eligible for listing in the NRHP
Plantation (29-5180) 1624 Trap Road, Vienna	Architectural resource, dating to 1895	Listed on the Fairfax Co. Historic Landmarks Inventory; Potentially eligible for listing in the NRHP
Hunter Mill Proposed Historic District (29-5180), Reston	District, stretching along Hunter Mill Road from Baron Cameron Road (6oute 606) to Chain Bridge Road (Route 123), with various resources and contributing elements identified along the roadway	Potentially Eligible for listing in the NRHP
Launders House (29-240), 2300 Centreville Road, Herndon	Architectural resource, built around 1910	Potentially Eligible for listing in the NRHP
Washington Dulles International Airport (53-8)	Proposed historic district within the 11,000-acre airport complex with various contributing elements, including the "peekaboo sequence" consisting of a series of viewsheds designed to allow motorists to gradually view structures on the airport property as they approach	Eligible for listing in the NRHP
House, Route 643 (53-23), Ryan	Architectural resource, dating to the late 19th century	Potentially Eligible for listing in the NRHP

Source: Identification and Evaluation Report-Historic Architecture, April 2004.

3.5.4 LONG-TERM EFFECTS

As defined in Section 106 of the National Historic Preservation Act, an effect on a cultural resource could occur due to an action that could 1) physically damage or destroy all or part of the property; 2) isolate the property or alter the character of the property's setting, when that character contributes to the property's qualification for the NRHP; 3) introduce visual, audible, or atmospheric elements that are out of character with the property or alter its setting; 4) result in neglect of a property leading to its deterioration or destruction; or 5) result in the transfer, lease, or sale of the property without adequate restriction or conditions included to ensure preservation of the property's significant historic features.

The long-term effects of the Wiehle Avenue Extension and the LPA on cultural resources could be direct or indirect. Direct effects would result from actual physical contact with the resources, while indirect effects would be from noise and visual impacts. Indirect impacts are more likely to affect historic architectural resources than archaeological sites. Exceptions include archaeological sites that are open to the public for visitation, such as those located at historic house museums or battlefield parks. The noise impacts at the identified historic architectural resources within the APE were assessed in accordance with applicable noise criteria. Potential impacts on historic architectural resources were assessed using FTA and WMATA criteria for noise. Vibration levels at the historic resources were judged to be below FTA criteria for annoyance and well below the threshold for minor cosmetic damage.

Table 3.5-3 summarizes the effects of the Wiehle Avenue Extension and the full LPA archaeological resources, while Table 3.5-4 summarizes the effects of the Wiehle Avenue Extension and the full LPA on historic architectural resources.

Table 3.5-3: Project Effects on Archaeological Resources

Resource	No Build Alternative	Wiehle Avenue Extension	Full LPA
Site 44FX0388 (Olney Park/Dulles Access Connector Site)	Continues current conditions.	No historic properties affected.	No historic properties affected.
Site 44FX2405 (Scott's Run Site)	Continues current conditions.	No historic properties affected.	No historic properties affected.
Site 44FX0915 (Arrowhead Farm)	Continues current conditions.	Continues current conditions.	No historic properties affected.
Site 44LD0379 (HNWE-1A or Indian Creek Site)	Continues current conditions.	Continues current conditions.	No historic properties affected.
Site 44LD0432 (Runway #1)	Continues current conditions.	Continues current conditions.	No historic properties affected.
Site 44LD0406	Continues current conditions.	Continues current conditions.	No historic properties affected.
Site 44LD0408 (HSP-789A)	Continues current conditions.	Continues current conditions.	No historic properties affected.

Table 3.5-4: Project Effects on Architectural Resources

Resource	No Build Alternative	Wiehle Avenue Extension	Full LPA
The Lewinsville Post Office (29-338), 1554 Great Falls Road, McLean	Continues current conditions.	No historic properties affected.	No historic properties affected.
Ash Grove (29-2), 8900 Ash Grove Lane, Vienna	Continues current conditions.	No adverse effect.	No adverse effect.
Wolf Trap National Park for the Performing Arts (29-159), 1551 and 1555 Trap Road, Vienna	Continues current conditions.	No historic properties affected.	No historic properties affected.
Plantation (29-188), 1624 Trap Road, Vienna	Continues current conditions.	No adverse effects	No adverse effects
Hunter Mill Road Proposed Historic District (29-5180), Reston	Continues current conditions.	No adverse effect.	No adverse effect.
Launders House (29-240), 2300 Centreville Road, Herndon	Continues current conditions.	Continues current conditions.	No historic properties affected.
Washington Dulles International Airport (53-8)	Continues current conditions.	Continues current conditions.	Adverse effect.
House, Route 643 (53-23), Ryan	Continues current conditions.	Continues current conditions.	No adverse effect.

3.5.4.1 No Build Alternative

The No Build Alternative would continue current conditions and would have no adverse effects on known archaeological or architectural resources in the corridor.

3.5.4.2 Wiehle Avenue Extension

The Wiehle Avenue Extension would have no adverse effects on known archaeological resources in the corridor. There are two previously identified sites (44FX0388 and 44FX2405) located within the Wiehle Avenue Extension portion of the APE; however, no remains of these sites were found within the APE during the 2004 Phase 1b survey. Therefore these sites would not be affected by the Wiehle Avenue Extension. Although Site 44FX0388 was described in the Draft EIS as being potentially disturbed by the

construction of a nearby tie-breaker station, design refinements associated with the relocation of this tie-breaker station have eliminated this potential adverse effect.

The Wiehle Avenue Extension would result in minor impacts to three historic architectural resources: Ash Grove Historic Site, the Plantation, and the Hunter Mill Road Proposed Historic District. However, construction of the Wiehle Avenue Extension would not affect the characteristics that contribute to these resources' eligibility for the NRHP; therefore, no adverse effects would occur.

The **Ash Grove Historic Site** and **the Plantation** would experience a minor increase in noise as a result of Metrorail operations; however, predicted noise levels do not exceed FTA or WMATA criteria at either property. Therefore, this would not adversely affect these resources.

The **Hunter Mill Road Proposed Historic District** could experience minor visual impacts from the Wiehle Avenue Extension. The LPA would pass through the potential historic district in the median of the DIAAH /Dulles Toll Road. In addition, three stormwater management ponds and two traction power substations would be located along the DIAAH/Dulles Toll Road within the potential boundaries of the Project facilities district. These Project facilities have been sited to lessen their visibility by being placed adjacent to the DIAAH/Dulles Toll Road (within or adjacent to existing public right-of-way) and are not near any significant contributing elements of the potential district. Due to the existing conditions, Metrorail operations would not be a predominant source of noise in the area and would not change the overall noise levels in the proposed district. Implementation of the Wiehle Avenue Extension would not have an adverse effect on the characteristics that make the Hunter Mill Road Proposed Historic District significant. Because the proposed district boundaries have yet to be determined, it is possible that these ancillary facilities would be located outside of the proposed district.

3.5.4.3 Full LPA

In addition to the effects on cultural resources discussed for the Wiehle Avenue Extension, the full LPA would also have the additional following effects.

The LPA would have no adverse effects on known archaeological resources in the corridor. There are five previously identified sites located within the APE for the full LPA; however, no remains of these sites were found within the APE during the 2004 Phase 1b survey. Therefore, these sites would not be affected by the LPA.

The LPA would result in an adverse effect on the Dulles International Airport Historic District and minor impacts to the house at 22017 Shellhorn Road (Route 643) in Ryan (53-23). Based on the results of the consultation with VDHR, the impacts to the "peekaboo" views of the main terminal control tower from the DIAAH, a contributing element to the **Dulles International Airport Historic District**, would constitute an Adverse Effect under Section 106. (This was previously identified in the Supplemental DEIS as No Adverse Effect). However, the implementation of the mitigation measures stipulated in a Memorandum of Agreement (MOA) executed between FTA, VDHR, and DRPT would reduce this effect significantly enough that it would no longer be considered adverse. A discussion of the mitigation measures included in the MOA is provided in Section 3.5.6.

In his design for the airport, architect Eero Saarinen incorporated all aspects of airport operations, including the terminal, runways, passenger movement devices called "mobile lounges," airport services and support systems, landscaping, land use, and roadways. It also provided for the DIAAH, a dedicated access road to provide an efficient and direct route to the airport from Washington, D.C. A 1989 historic

architectural survey of the airport property identified 13 of the approximate 62 buildings at the airport as contributing buildings to a historic district associated with the Main Terminal, as well as the 18 original mobile lounges, terminal area landscaping, and the DIAAH.

Also identified as a contributing element to the district was the "peekaboo sequence," a series of viewsheds designed by Saarinen to allow motorists to gradually view structures on the airport property. Saarinen intended that this peekaboo sequence heighten viewer interest by providing motorists approaching the airport along the DIAAH a variety of views of the Main Terminal and control tower from different points along the roadway, each revealing an increasingly greater glimpse of the structures and creating a sense of dramatic expectation. Although several of the peekaboo views have been compromised or eliminated since Saarinen implemented his original design in the 1960s—a result of commercial construction, changes to the Route 28 interchange, and growth of landscaping and vegetation at the perimeter of the airport property and within the Route 28 interchange—the views that exist today remain important elements of the Dulles International Airport Historic District.

The full LPA would approach Dulles Airport at grade in the median of the DIAAH above ground before transitioning to a subway west of the Route 28 interchange after Horsepen Run. Three remaining peekaboo views that provide approaching motorists views of the airport's control tower are located in this area. In response to concerns raised during the Draft EIS comment period, the vertical profile of the Metrorail alignment and the concrete safety barrier required to separate the Metrorail tracks from vehicular traffic on the DIAAH were lowered by 3 feet to minimize the visual impacts of the full LPA on these three peekaboo views. Although these efforts have reduced the potential impacts, the design changes do not alter the full LPA's location within the boundaries of the historic district, and security fencing atop the concrete median barriers would still be required. As a result, the three peekaboo views could still be affected by the full LPA because a new physical element would be introduced between the approaching motorists' views of the control tower as they near the airport proper. Therefore, the visual effect of the portion of the LPA in this area would constitute an adverse effect to the Dulles International Airport Historic District.

With the exception of these three peekaboo views, the full LPA would not result in any additional adverse effects on any other elements of the Dulles International Airport Historic District. A full analysis of the effect of the full LPA on the district can be found in the April 2004 *Identification and Evaluation—Historic Architecture*.

The Route 772 station would be slightly visible from the **house located at 22017 Shellhorn Road (Route 643) in Ryan (53-23)**. Since the publication of the Draft EIS, the Route 772 station footprint has been reconfigured to be consistent with proposed development in the vicinity of the station site. Although the footprint of the proposed station facilities has been decreased and relocated closer to the Dulles Greenway, the station would still have some visual impact on the house, and the impact of the full LPA on this resource was changed from "No Historic Properties Affected" in the Draft EIS to "No Adverse Effect" in the Supplemental Draft EIS. However, the house is presently abandoned and deteriorating, and the property has been compromised by the construction of commercial warehouses immediately east of the farm and the earlier construction of the Dulles Greenway to the south and west. In addition, the approved Loudoun Station development would add new commercial development between the house and the station facilities. This site would experience an increase in noise; however, predicted noise levels do not exceed FTA or WMATA criteria at this property. Therefore, this resource would not be adversely affected by the full LPA.

3.5.5 CONSTRUCTION EFFECTS

Construction effects on cultural resources result when there is direct physical impact. Construction effects could also occur from the operation of heavy equipment on or near a resource. Construction noise and vibration impacts were analyzed and were judged to be below the FTA impact criteria for structural damage along the project corridor (see Sections 4.7 and Section 4.8).

3.5.5.1 No Build Alternative

The No Build Alternative would continue current conditions and would have no construction effects on known archaeological or architectural resources in the corridor associated with this project.

3.5.5.2 Wiehle Avenue Extension

Construction activities associated with the Wiehle Avenue Extension would not result in additional impacts to any known archaeological or historic architectural resources. Several potential construction staging areas would be located along the corridor; however, these staging areas have been sited to avoid all known archaeological and architectural resources. Noise from construction would not change overall noise levels in the corridor in such a way as to result in an adverse effect on any architectural resource.

3.5.5.3 Full LPA

Construction activities associated with the full LPA would not result in additional impacts to any known archaeological resources. Several potential construction staging areas would be located along the corridor; however, these staging areas have been sited to avoid all known archaeological resources.

With the exception of Dulles Airport, no construction effects on historic architectural resources discussed would be anticipated from construction activities related to the full LPA. Noise from construction would not change overall noise levels in the corridor in such a way as to result in an adverse effect on any architectural resource.

During the construction period, there would be short-term impacts to the Dulles Airport terminal. No vibration effects would occur that would exceed FTA criteria. During a portion of the construction period, the area directly over the Dulles Airport underground station, directly in front of the terminal, would be excavated from the surface to allow construction of the station itself. The tunnels leading to and from the Dulles Airport Station also would be excavated from the surface, and then covered within the Dulles International Airport Historic District. During this time, proximity impacts, including air quality, noise, and visual effects, would occur. None of the proximity impacts would have any long-term effects that would compromise the significance of the resource.

3.5.6 MITIGATION

To mitigate the effects of the full LPA on the cultural resources present at Dulles Airport, the at-grade Metrorail alignment in the DIAAH median has been lowered to preserve the historic “peekaboo” view sequence of the control tower and main terminal. In addition, the design of the Dulles Airport station, two tunnel portals, and aerial structures would consider the historic terminal and other contributing elements of the historic district. DRPT and WMATA would coordinate the design of these facilities with the MWAA and the VDHR. As further mitigation, DRPT would also implement treatment measures, such as interpretive exhibits, public artwork, photo documentation, or landscaping to provide Metrorail users and airport travelers with an appreciation for the airport’s unique historic characteristics. A treatment plan incorporating these measures will be developed in accordance with the Section 106 Memorandum of

Agreement (see Appendix F). Additionally, the Section 106 MOA discusses mitigation for discovery of unknown archaeological artifacts.

3.6 PARKLANDS AND RECREATION AREAS

This section describes existing public parklands and recreation areas located within the study area of the project. An assessment of the long-term operating and short-term construction effects of the No Build Alternative, the Wiehle Avenue Extension and the full LPA on these resources, and proposed measures to mitigate any potential adverse impacts on parklands, is provided in the following sections. Additional details are presented in the Section 4(f) Evaluation and 6(f) Evaluation included in Chapter 7.

3.6.1 LEGAL AND REGULATORY CONTEXT

Section 4(f) of the U.S. Department of Transportation Act of 1966 protects public parks and recreational lands, wildlife habitat, and historic sites of national, state, or local significance from acquisition and conversion to transportation use. Section 4(f) is implemented by regulations 23 CFR 771.135. The Section 4(f) Evaluation in Chapter 7 provides detailed information on the conditions of "use" under Section 4(f).

Section 6(f) of the U.S. Land and Water Conservation Fund Act of 1965 (16 U.S.C. 4601-4 to 4601-11) preserves, develops, and assures the quality and quantity of outdoor recreation resources through purchase and improvement of recreational lands, wildlife and waterfowl refuges, and other similar resources. Certain conditions must be met before conversion of these resources to other usage.

Federal Transit Law 49 USC §5301(e) requires that special effort should be made to preserve the natural beauty of the countryside, public park and recreation lands, wildlife and waterfowl refuges, and important historical and cultural assets when planning, designing, and carrying out an urban mass transportation capital project with Federal financial assistance under sections 5309 and 5310 of this title.

3.6.2 METHODOLOGY

Potential effects to publicly owned or leased parks and recreation lands (parks) that are located within the proposed limit of disturbance for the various alternatives or immediately adjacent to these areas are described in this section. The study area for parklands and recreation areas was initially defined as an area within 300 feet of the proposed alignments, station areas, S&I Yard, and maintenance and storage facility. After the noise, vibration, and air quality effects (discussed in Chapter 4) were carefully analyzed, this study area was reviewed to ensure it adequately covered all of the parklands and recreational areas potentially affected. Section 3.2 contains information on neighborhood parks and community facilities that are not within or immediately adjacent to the limits of disturbance for any of the alternatives, and are not publicly owned.

Parklands and recreation areas in the study area were identified in coordination with the Fairfax County Park Authority (FCPA), Fairfax County Planning Department, Loudoun County Planning Department, Northern Virginia Regional Park Authority (NVRPA), the National Park Service (NPS), and the Commonwealth of Virginia Department of Conservation and Recreation (DCR). Parkland boundaries were confirmed with reviews of park master plans, the Outdoors 2002, Virginia ADC maps, aerial

photography, comprehensive plans, and information found on websites of the FCPA, NPS, NVRPA, and Hunter Mill Defense League.

3.6.3 EXISTING CONDITIONS

There are no publicly owned or officially designated wildlife or waterfowl refuges in the vicinity of the study area.

Public parklands and recreation areas within the study area are shown on Figures 3.6-1a and 3.6-1b. The size, ownership, and recreational features for each park identified are summarized in Table 3.6-1. Five agencies have jurisdiction and ownership of parkland resources: NPS, NVRPA, FCPA, Fairfax County School Board, and City of Falls Church School District.

Table 3.6-1: Parklands and Recreation Areas

Park Name	Ownership	Acres	Park Features and Description
Existing Resources			
George Mason High School Athletic Fields 7124 Leesburg Pike	City of Falls Church	17	Athletic fields used by both the school and the City of Falls Church Parks and Recreation Department for organized recreation, including soccer, softball, and baseball.
Mount Royal Park 7141 Idylwood Road	Fairfax County Park Authority	3	Currently a passive park with an open recreation area, but planned improvements to convert this to an active park include the addition of a picnic area, tot lot, play area, tennis courts, and an exercise area.
Pimmit Run Stream Valley Park Great Falls Street/Lemon Road	Fairfax County Park Authority	67.92	Linear passive park located on either side of the Dulles Connector Road and consisting of an informal hiking trail and natural area. The informal hiking trail crosses under the Connector Road, though the land under the existing highway bridges is not part of the park and is not owned by FCPA.
Olney Park 1840 Olney Road	Fairfax County Park Authority	18.02	Neighborhood park with two baseball fields, one basketball court, tennis courts, hiking trail, natural area, open area, picnic area, playground, tot lot, restroom facilities, and a parking lot.
Westgate Park 7508 Magarity Road	Fairfax County Park Authority	12.5	Active park with two baseball fields, two lighted tennis courts, a picnic area, and an open area.
Scotts Run Stream Valley Park Chain Bridge Rd/Magarity Road	Fairfax County Park Authority	23.62	Linear passive park with a trail.
Ash Grove Historic Site Leesburg Pike/Dulles Toll Road	Fairfax County Park Authority	12.3	Active park consisting of a historic house, detached brick kitchen, and wood-framed smokehouse. The Ash Grove Historic Site was dedicated to FCPA by the developer of the Tysons Village townhouses.
Wolf Trap National Park for the Performing Arts 1551 Trap Road	National Park Service	130	Picnic area, restrooms, open area
Meadowlark Gardens Regional Park 9750 Meadowlark Gardens Court	Northern Virginia Regional Park Authority	95	Active park with gardens, meeting and reception rooms, gazebos, trails, and a gift shop.

Park Name	Ownership	Acres	Park Features and Description
Difficult Run Stream Valley Park Browns Mill Rd/ Beulah Road	Fairfax County Park Authority	863.33	Passive park with a hiking and equestrian trail that extends into the Wolf Trap Meadow subdivision. The trail crosses under the DIAAH and Dulles Toll Road, though the land under the existing highway bridges is not part of the park and is not owned by FCPA. Construction of a natural surface trail, as part of the Fairfax Cross-Country Trail, is planned for 2004.
Washington & Old Dominion Railroad Regional Park 21293 Smiths Switch Road	Northern Virginia Regional Park Authority	45 miles long and 100 feet wide	A 45-mile long, 100-foot wide recreational trail extending from Arlington County to Loudoun County. The park consists of a paved trail for walking, running, and bicycling, as well as a 32-mile adjacent gravel equestrian trail.
Hutchison Elementary School Athletic Fields 13209 Parcher Avenue	Fairfax County School Board	34.8	Active park with two baseball fields and six football fields. Through an agreement with Fairfax County Public Schools, the FCPA uses the school's athletic fields after hours.
Soccer Fields	Fairfax County Board of Supervisors	3.76	Interim use soccer fields, part of a developer proffer to develop land at a later date as a transportation facility.



LEGEND

- Parklands and Recreational Areas
- Historic District and Scenic Byway
- Proposed Metrorail Alignment
- Existing Metrorail Orange Line and Stations
- Proposed Station
- County Boundary

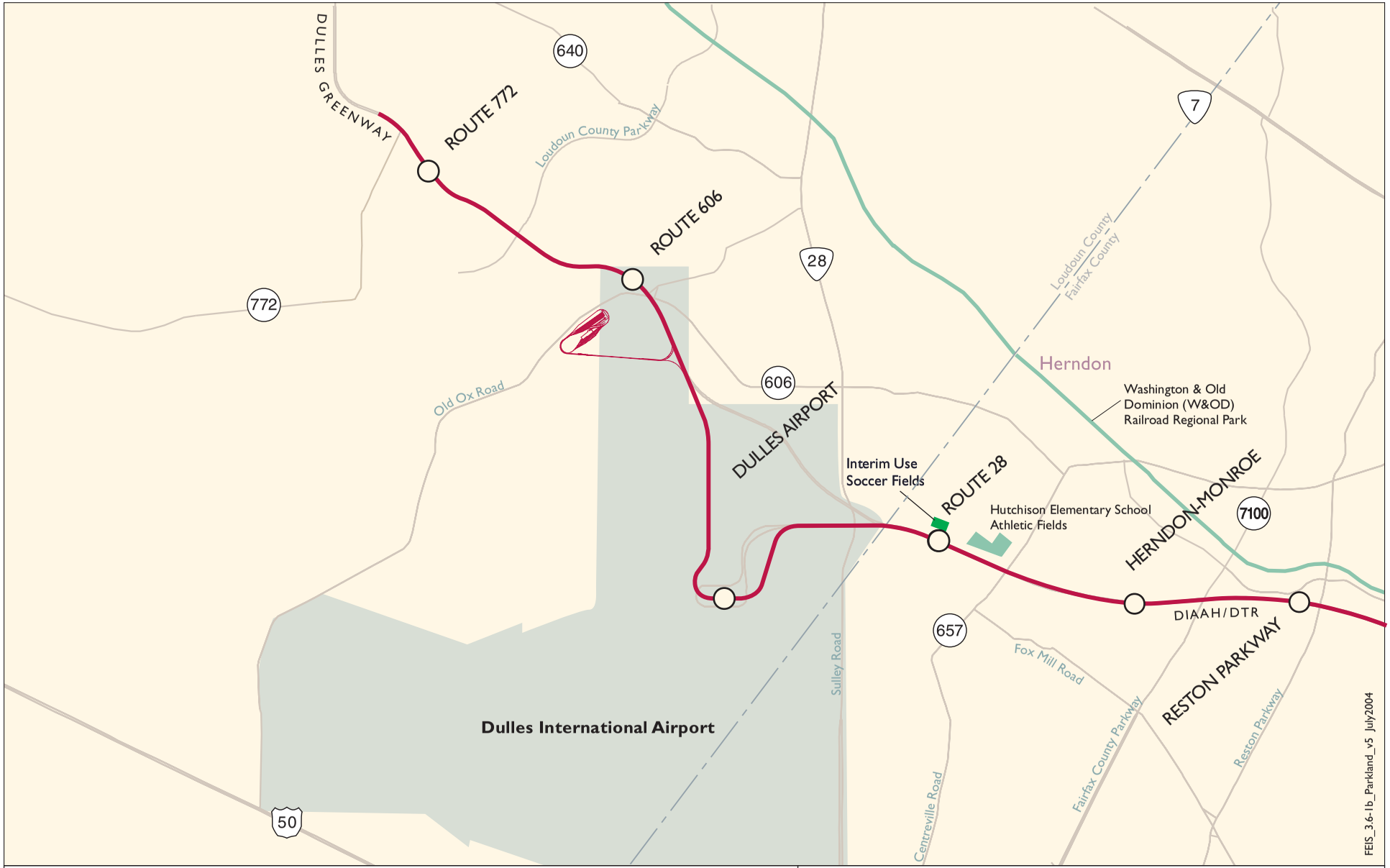
DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

0 3000 6000 FEET

Figure 3.6-1a

Public Parkland and Recreational Areas

Dulles Corridor Rapid Transit Project



LEGEND

- Parklands and Recreational Areas
- Proposed Metrorail Alignment
- County Boundary
- Proposed Station

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

0 3000 6000 FEET

Figure 3.6-1b

Public Parkland and Recreational Areas

Dulles Corridor Rapid Transit Project

3.6.4 LONG-TERM EFFECTS

This section discusses the long-term (2025) effects to parklands that would result from the No Build Alternative, the Wiehle Avenue Extension and the full LPA. Table 3.6-2 summarizes the long-term effects to parklands. There would be no long-term effects to officially designated wildlife or waterfowl refuges as a result of the No Build, the Wiehle Avenue Extension or the full LPA because these resources do not exist within the study area.

Table 3.6-2: Summary of Long-Term Effects on Parklands

Park Name	No Build Alternative (2025)	Locally Preferred Alternative		
		Wiehle Avenue Extension Opening Year (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
George Mason High School Athletic Fields 7124 Leesburg Pike	No Effect	No Effect	No Effect	No Effect
Mount Royal Park 7141 Idylwood Road	No Effect	No Effect	No Effect	No Effect
Pimmit Run Stream Valley Park Great Falls Street/Lemon Road	No Effect	No Effect	No Effect	No Effect
Olney Park 1840 Olney Road	No Effect	No Effect	No Effect	No Effect
Westgate Park 7508 Magarity Road	No Effect	No Effect	No Effect	No Effect
Scotts Run Stream Valley Park Chain Bridge Road/Magarity Road	No Effect	Minor Effect (visual)	Minor Effect (visual)	Minor Effect (visual)
Ash Grove Historic Site Leesburg Pike/Dulles Toll Road	No Effect	Minor Effect (noise)	Minor Effect (noise)	Minor Effect (noise)
Wolf Trap National Park for the Performing Arts 1551 Trap Road	No Effect	No Effect	No Effect	No Effect
Meadowlark Gardens Regional Park 9750 Meadowlark Gardens Court	No Effect	No Effect	No Effect	No Effect
Difficult Run Stream Valley Park Browns Mill Road/ Beulah Road	No Effect	No Effect	No Effect	No Effect
Washington & Old Dominion Railroad Regional Park 21293 Smiths Switch Road	No Effect	No Effect	No Effect	No Effect
Hutchison Elementary School Athletic Fields 13209 Parcher Avenue	No Effect	No Effect	No Effect	No Effect
Soccer Fields* Land Bay 5 at Dulles Greens	No Effect	No Effect	No Effect	Converts to Transportation Use

*Land for fields was dedicated to Fairfax County for station facilities associated with the project. Soccer fields are temporary use only.

3.6.4.1 No Build Alternative

There would be no long-term effects on parklands associated with the No Build Alternative.

3.6.4.2 Wiehle Avenue Extension

The Wiehle Avenue Extension would not adversely affect any of the park resources identified between the end of the Metrorail Orange Line and Wiehle Avenue. The alignment would span three parks, Pimmit

Run Stream Valley Park, Difficult Run Stream Valley Park and the W&OD Regional Railroad Trail. These parks would not experience long-term impacts as a result of the Wiehle Avenue Extension due to the existing conditions at these crossings and the fact that planned bridge structures related to these crossings would not be located within park property.

The Draft EIS and Supplemental Draft EIS documented that there would be an adverse effect on the crossing at the W&OD Regional Railroad Trail. Subsequent to these documents, DRPT received confirmation from NVRPA in February 2004, that there would be no impact to the trail and that the planned crossing would adhere to NVRPA design guidelines.

Two resources, Scotts Run Stream Valley Park and the Ash Grove Historic Site would experience minor proximity impacts.

Scotts Run Stream Valley Park is located adjacent to Route 123, a major thoroughfare within Fairfax County. The surrounding area consists of suburban development, with various multiple-floor commercial office buildings, apartments and transportation facilities currently within view of this resource. Route 123 has recently been widened from four to eight lanes and its crossing of the park was expanded. In addition, a new multiple-floor office building has been constructed along the eastern side of Scotts Run Stream Valley Park. The Tysons East Station would be located adjacent to the park, where the park abuts Route 123. The station would have a minimal effect on the visual character of the surrounding area and park. Due to the existing conditions of the area, the visual effects resulting from the Wiehle Avenue Extension would not result in a substantial impairment of the use or function of this park.

Ash Grove Historic Site is located adjacent to the DIAAH/Dulles Toll Road and a residential complex. Ash Grove would experience a minor increase in noise as a result of the implementation of the Wiehle Avenue Extension. Based on the existing conditions at the site, the Wiehle Avenue Extension operations would not substantially impair the use or function of this resource.

In addition to the existing resources identified, Fairfax County has developed a *Countywide Trails Plan* that identifies areas that could become trails. Currently, there are no formally designated easements for these proposed trails. Several of the trails identified in the Plan are within the study area.

The new Metrorail bridge structure over Hunter Mill Road, a designated Virginia Scenic Byway, and proposed stormwater management ponds, and the Tysons East Station are within proximity to proposed trails.

During engineering and design, coordination with Fairfax County would continue to avoid and/or minimize impacts to these proposed facilities. It is likely that these trails, if officially designated during the final design and engineering, could be incorporated into the design of the Wiehle Avenue Extension, thereby enhancing accessibility to these trails.

3.6.4.3 Full LPA

With the exception of the interim use soccer fields at Dulles Greens, the long-term effects related to implementation of the full LPA would be the same as discussed for the Wiehle Avenue Extension. The soccer fields are a temporary special use of this land. The land for these soccer fields was dedicated to Fairfax County in a proffer for station facilities associated with the project in the future. Additional information on the terms of the proffer is provided in Appendix I. There would be no other additional impacts to park resources as a result of the full LPA.

According to Fairfax County's *Countywide Trails Plan*, as described above, several trails identified in the Plan are within the study area. The following project-related actions are within proximity to these proposed trails:

- Reston Parkway Station
- Herndon-Monroe Station
- Route 28 Station

During engineering and design, coordination with Fairfax County would continue to avoid and/or minimize impacts to these proposed facilities. It is likely that these trails, if officially designated during the final design and engineering, could be incorporated into the design of full LPA, thereby enhancing accessibility to these trails.

3.6.5 CONSTRUCTION EFFECTS

3.6.5.1 No Build

No construction effects would occur from the No Build Alternative.

3.6.5.2 Wiehle Avenue Extension

Temporary construction effects would likely occur to Pimmit Run, Scotts Run Stream Valley Park, Difficult Run Stream Valley Park and the W&OD Railroad Regional Park. Construction activities would be scheduled so that disruption to the use of these facilities would be minimized. Signage and temporary access around construction activities would be provided so that access to these parklands would be maintained. It is not anticipated that construction activities would impair the use of these park resources.

Temporary, non-adverse construction-related noise, increased air borne particulate matter, visual and stream water quality impacts would occur. Sections 3.6 - Visual and Aesthetics, 4.2 - Water Resources, 4.6 - Air Quality and 4.7 – Noise provide a more in-depth description of the temporary construction effects related to these topic areas. Standard Best Management Practices would be employed to avoid and/or minimize construction related impacts. It is assumed that after construction activities are complete, pre-construction conditions would be reestablished.

A contractor work area would be located in the vicinity of the Ash Grove Historic Site. The work area would be located within the interchange of Route 7 and the DIAAH/Dulles Toll Road. Temporary non-adverse effects, such as increased noise and air borne particulate matter, may result. Best management practices would be used to avoid and minimize these impacts to the extent possible. Upon completion of the alignment, it is assumed that current conditions would resume.

3.6.5.3 Full LPA

Aside from the impacts discussed for the Wiehle Avenue Extension, there would be no construction-related effects to existing park resources within project limits west of Wiehle Avenue.

3.6.6 MITIGATION

DRPT would design and construct the Metrorail overpass of the W&OD Railroad Regional Park in accordance with the NVRPA Guideline for the Development of W&OD Trail Bridge Crossings.

During construction, use of and access to the W&OD Railroad Regional Park would be maintained using measures that may include signage and temporary access around construction activities. Disruption to Pimmit Run Stream Valley Park, Scotts Run Stream Valley Park, and Difficult Run Stream Valley Park during construction would be minimized to extent possible. DRPT would continue to coordinate with NVRPA and FCPA in mitigating any construction impacts of the project upon parklands in the corridor.

3.7 SAFETY AND SECURITY

This section describes safety and security issues in the existing Metrorail and Metrobus system, and those associated with the proposed LPA.

3.7.1 LEGAL AND REGULATORY CONTEXT

WMATA employees and contractors follow the safety requirements and guidelines established by federal and state Occupational Safety and Health Administrations (OSHA) and facilities are designed and constructed to meet the Americans with Disabilities Act Accessibility Guidelines (ADAAG). In addition, the applicable guidelines as issued by other appropriate federal, state and local transportation, fire and safety agencies are applied to WMATA facilities. WMATA has also developed its own safety procedures for construction and operations of its facilities.

WMATA passenger facilities are designed in accordance with the guidelines established in National Fire Protection Association (NFPA) 130, Standards for Fixed Guideway Transit and Passenger Rail systems. NFPA 130, an industry standard, has been developed to ensure maximum passenger safety during emergency situations such as fire events. The guidelines presented in Executive Order 13045, Protection of Children from Environmental Risks, were developed to reduce the safety risks to children. WMATA facilities incorporate the applicable EO 13045 guidelines in the design and construction of the transit facilities.

Due to the proximity of the proposed transit facilities to an air terminal and other air passenger facilities on the grounds of the Dulles Airport, security discussions were initiated with the Transportation Security Agency (TSA), an agency within the Department of Homeland Security. The result of the discussions was that TSA has requested that the Agency be considered a stakeholder on the project and actively participate in developing security measures for the transit facilities located at the airport.

3.7.2 METHODOLOGY

Safety and security issues were determined by identifying the respective concerns as they applied to the construction, operation, and maintenance of the project. These concerns were developed, in part, with reference to industry standards and government regulations. Once identified, they were compared to existing WMATA practices and procedures. If the existing practices and procedures adequately covered the safety and security concern, no impact was deemed to occur. The physical study area for safety and security was the limit of disturbance for the proposed improvements.

3.7.3 EXISTING CONDITIONS

This section discusses WMATA's current safety and security measures for both patrons and employees. Safety refers to providing safe conditions for passengers, employees, and pedestrians within the

Metrobus and Metrorail systems. Security refers to the enforcement of laws and protection measures for passengers, employees, and pedestrians within the Metrobus and Metrorail systems. Safety and security procedures related to construction activities are discussed in Section 3.7.5.

3.7.3.1 Safety

Existing WMATA procedures and adherence to applicable federal, state, and local regulations and industry standards ensure that safety and security concerns related to a patron's access to stations and the use of the Metrobus and Metrorail systems' facilities including stations, parking areas, trains, and buses, are adequately addressed.

A. Stations and Facilities

Metrorail stations and facilities are designed to provide open and unobstructed lines-of-sight. Stations are well-lit and equipped with call boxes, staffed kiosks, and public-address systems. All facilities are designed in accordance with ADAAG Guidelines. Escalators are well signed and emergency stop features are easily accessible. Stairwells and elevators are clearly signed. Station manager kiosks are located adjacent to the fare collection array. Many stations and parking facilities on the Metrorail system are monitored by closed-circuit television (CCTV). In addition, WMATA assigns operating and police personnel to control passenger traffic and monitor the platforms during peak periods at selected stations.

Additional safety features include safety zones under the platform to allow passengers who fall into the train way to avoid the train, hotlines from central control to police and fire departments, automated smoke exhaust systems in tunnels, call boxes, passenger information displays on platforms, and cellular phone service.

B. Trains

Each Metrorail train car contains safety features designed to maintain a safe passenger and employee environment. Passenger-activated safety measures include intercoms to the train operator, fire extinguishers, and emergency exit doors.

Operator-activated safety features include driver operation of doors, two-way radio contact between train operator to central control, and on-board public address system to passengers.

C. Buses

WMATA operates a variety of buses in its fleet, including commuter buses, low-floor transit buses, and articulated buses. Safety features onboard buses include emergency escape windows, manual door releases, ceiling escape hatches, fire extinguishers, two-way radio communication between operators and central control, and emergency silent alarms.

D. Pedestrian/Motorist Safety

The process of station planning and design includes efforts to eliminate or at least minimize potential pedestrian and motor vehicle conflicts. However, on station sites with severe physical constraints, primarily situations where pedestrians must cross access roads or bus ways to reach the station or parking facilities, WMATA relies heavily on roadway and pedestrian signing and well-marked cross walks.

E. Operational Safety Measures

Operational safety measures employed by WMATA include: staff training in emergency response and rescue, including what to do in the event a harmful chemical agent is released; many stations are equipped with bomb containing trash receptacles and the technology to sense the presence of chemicals;

increased frequency of station patrols by special response teams and police officers; increased public address announcements to customers and reinforced security and safety procedures; and use of vehicles furnished with fire-retardant materials, mechanical door releases and auxiliary battery back up to open train doors in the event of a power outage.

3.7.3.2 Security

Mass transit operations can become an attractive target for terrorist or criminal acts or become a victim of collateral damage caused by terrorist acts. The result can be confusion, panic and disorganization on the part of transit patrons, employees and officials as well as the general population. As such, ensuring the safety and security of resources and people has become an increasingly important goal of WMATA and the FTA. To assist in accomplishing the goal, the FTA has developed a security initiative to improve security on transit systems nationwide. The initiative includes: in-depth security assessments, development of plans to address deficiencies, testing the plans in realistic situations, training employees to understand and implement the plan, and undertaking research to enhance human capabilities.

A. Law Enforcement

WMATA has a law enforcement department with more than 357 sworn police officers. Metro Transit Police Department (MTPD) officers provide a variety of law enforcement and public safety services on the Metrobus and Metrorail systems and have arrest powers and jurisdiction for crimes on or against WMATA facilities throughout the 1,500-square mile Transit Zone that includes Maryland, Virginia, and the District of Columbia. Crime in the Metrobus and Metrorail systems varies by location, with most crime occurring in parking lots of the outlying areas of the system. Table 3.7-1 lists numbers of crimes from 1999-2003 by location on the system. Crimes include arson, assault, larceny, motor vehicle theft, attempted motor vehicle theft, homicide, and robbery.

Table 3.7-1: Numbers of Crimes

Location	1999	2000	2001	2002	2003
Bus	69	52	76	75	12
Rail	232	333	313	400	38
Parking Lots	666	686	1,123	986	88

B. Metrorail System and Facilities

In addition to the previously described FTA initiative and WMATA's existing safety measures and procedures, WMATA has implemented and/or proposed additional measures aimed at improving the safety and security on the Metrobus and Metrorail systems before and after the occurrence of any incident. Such an occurrence may include a terrorist or criminal threat or action against federal, MWAA, or WMATA facilities, patrons, or employees. These measures include: chemical sensors at underground Metrorail stations, installation of cameras on additional buses, installation of videotaping capability for the 1,400 security cameras in stations, upgraded public address system at Metrorail stations, the removal of trash bins from station platforms, the addition of bomb containment trash bins on the mezzanine levels of stations, use of explosive ordinance detection equipment, the transfer of newspaper vending machines to locations outside the stations, increased announcements reminding patrons of safety, expanded intrusion detection system at WMATA facilities, the installation of identification card access at sensitive field locations, increased surveillance at bus divisions and rail yards, back-up operations control center, biological sensors pilot program, decontamination pilot program, construction of a mock tunnel for employee training and drills, and regularly scheduled training drills and exercises designed to simulate terrorist, criminal, and accidental actions.

C. Dulles Airport

Because airport security continues to be a sensitive topic, FAA, Transportation Security Administration (TSA), and MWAA keep most safety or security procedures or measures not relating directly to passenger service confidential. MWAA's security features include all required national security requirements directed by TSA, such as increased passenger screening and increased vehicle searches and other measures implemented in association with the Department of Homeland Security's terror code system.

A variety of Metrorail facilities are expected to be located on Dulles Airport property as part of the proposed full LPA, including: alignments that are both aerial and underground, two portals for trains to enter and exit a tunnel, vent and emergency access shafts, traction power substations, and a rail car service and inspection yard (S&I Yard).

Security during construction of these facilities would be based on MWAA requirements and applicable security clearances would be required for all personnel involved in the construction of project facilities. Permanent security would be based on WMATA's policies at the time operations begin plus any additional TSA and MWAA requirements. Portals, vent shafts, and emergency access shafts would be located outside of the airport secure zone and would be equipped with intruder detection systems. The S&I Yard would be isolated from the airfield operations using standard MWAA fencing equipped with an intruder detection system. WMATA's standard security provisions for their other yards and shops will also be integrated into the S&I Yard at Dulles Airport subject to approval of FAA, TSA and MWAA.

Because multiple police forces would be involved in the security of the Metrorail facilities at Dulles Airport, mutual aid agreements would be developed to ensure that no gaps, inconsistencies, or conflicts in security coverage arise. Coordination with FAA, TSA, and MWAA regarding security issues is described below.

D. Agency Coordination

In its comments on the Draft EIS, the FAA expressed concerns regarding the Metrorail facilities to be located on Dulles Airport property and indicated that the TSA would need to review and approve the project's plans and procedures. Coordination meetings to discuss the project and related security issues were held with TSA and MWAA on March 11, 2003 and April 24, 2003. In these meetings, it was agreed by all parties that many of the security issues for the Metrorail extension and the facilities planned at Dulles Airport in particular would be worked out in the later phases of the project (e.g., during preliminary engineering and final design) after the environmental process is complete. The TSA indicated that it has not yet developed specific policies, criteria, or requirements to address rail transit facilities on airport property. TSA expressed its interest as a stakeholder in continued involvement related to security concerns and noted that security measures were constantly changing and improving.

Coordination will continue throughout the remainder of the preliminary engineering and final design stages of the project to develop and/or update the Master Agreements, Mutual Aid Agreements or Memoranda of Understanding regarding security for the Metrorail extension with the jurisdictions affected (e.g., Fairfax County, Town of Herndon, MWAA, and Loudoun County).

3.7.4 LONG-TERM EFFECTS

The long-term effects of the No Build Alternative and the LPA on safety and security are described in the following sections.

3.7.4.1 No Build Alternative

Under the No Build Alternative, there would be no safety and security related effects from the Dulles Corridor Rapid Transit Project. However, there could be effects from the improvements assumed under this alternative. Identification of these effects would be the responsibility of the agencies and jurisdictions responsible for implementing the improvements.

3.7.4.2 Wiehle Avenue Extension

For the Wiehle Avenue Extension, safety and security effects would be similar to those described below for the proposed LPA east of and including the Wiehle Avenue Station. Safety and security effects at premium bus facilities would be similar to those described below for the LPA west of the Wiehle Avenue Station.

If the LPA were not constructed in its entirety by 2025, then safety and security effects west of Wiehle Avenue would be similar to the No Build Alternative.

3.7.4.3 Full LPA

The full LPA can be expected to experience safety and security concerns similar to the current Metrorail system. These concerns include; fire, derailment, loss of power, flooding, hazardous materials incidents, criminal acts, extreme weather, or medical emergencies. Further, there would be a need to account for additional security issues relating to project work and operations at or near Dulles Airport. The issues and solution affecting the Metrorail system in proximity to an airport would be similar to those already in place or being resolved by WMATA for Ronald Reagan Washington National Airport.

A. Metrorail Stations and Facilities

The safety and security concerns at stations include threats of personal crime, car theft, fire, and terrorism. New Metrorail stations, including designated parking, Kiss & Ride, and pedestrian areas, would be constructed with the same or current evolution of safety features as at existing Metrorail stations. Transit areas would be signed and lighted for directing pedestrians and motorists to appropriate and safe areas. No additional adverse effects to pedestrians or motorists are anticipated since pedestrian bridges over existing roadways would be provided at most stations and improvements to crossings would be provided to intersections adjacent to stations. For the project's underground line and station at Dulles Airport, there are no emergency access shafts, exhaust vent shafts or other openings of the project in the airport airside secure zone. Rather, these have been located outside the security fence in a parking lot of general aviation or in a DIAAH interchange.

The new Metrorail stations would be underground, aerial, and at ground level. Station heights could affect emergency response and fire evacuation. The maximum height of the evacuation walkway level of each of the aerial stations would be approximately 65 feet. The maximum depth of the evacuation walkway in underground segments would be approximately 57 feet.

The third rail that provides power to the Metrorail cars could pose a serious safety threat. However, no effects are anticipated along the alignment, as appropriate measures such as fencing and warning signs would be in place. As with the existing Metrorail system, the risk of passengers falling off station platforms and coming into contact with the track would be possible. However, as previously noted, Metrorail stations have a safety zone under the platforms that provides refuge for passengers who fall on the rail guideway.

B. Neighborhoods

No safety or security impacts are anticipated under this alternative.

C. Traffic Increase

Projected increases in vehicle traffic at and near Metrorail stations are described in detail in Chapter 6 of this Final EIS.

D. Trains

In emergency situations, the operation of the LPA along the corridor would follow the existing plans and procedures found in WMATA's Standard Operating Plan. This plan provides procedures to prevent collisions with other Metrorail cars and disruptions in operations along the line or at stations. Typically, if there is a problem along one track, Metrorail service is maintained by a controlled operation of trains in both directions (single tracking) on the second track. Passengers would continue to have direct access to all stations along the line during a single tracking operation.

3.7.5 CONSTRUCTION EFFECTS

This section outlines potential construction safety and security effects resulting from the LPA.

3.7.5.1 No Build Alternative

Under the No Build Alternative there would be no construction-related safety and security effects from the Dulles Corridor Rapid Transit Project. However, there could be effects from the improvements assumed under this alternative. Identification of these effects would be the responsibility of the agencies and jurisdictions responsible for implementing the improvements.

3.7.5.2 Wiehle Avenue Extension

For the Wiehle Avenue Extension, construction effects would be similar to those described below for the LPA east of and including the Wiehle Avenue Station. West of the Wiehle Avenue Station, construction of facilities for Express Bus Service would have minimal construction-related safety and security concerns. All construction activities associated with the LPA would be in compliance with OSHA standards.

3.7.5.3 Full LPA

Construction activities in the Tysons Corner area, along the DIAAH and Dulles Toll Road, and along the Dulles Greenway—especially for pedestrian bridges and rail aerial structures—would result in temporary lane closures, diversion of traffic, and removal of shoulders, potentially affecting traffic safety. However, the contractor would ensure that the effects are minimized by following applicable state and local codes as well as industry standards. Traffic safety maintenance measures, such as signage, would be employed to minimize the effects. In addition, the contractor would coordinate with applicable authorities, including VDOT, to ensure that affects related to construction on the roadways are minimized.

Other construction-related safety and security concerns include safety of the public and construction workers in and around the construction areas. The contractor would follow applicable state and local codes as well as the contractor's standards such as erecting temporary construction fencing and providing the public with information regarding the construction activities to minimize potential effects. Coordination will continue with TSA regarding security procedures for all construction personnel as well as construction activities at Dulles Airport.

3.7.6 MITIGATION

To mitigate any potential effects upon safety and security, WMATA would update its Safety and Security Program with elements required by TSA and/or MWAA. Coordination with these agencies will continue during the project's design.

During construction, strategies to reduce the safety and security effects associated with construction activities could be used, including: temporary construction fencing and security staff to protect the public and the worksite from unauthorized entry of vehicles, people, and animals; and temporary signage to direct motorists and pedestrians around construction areas.

Mutual aid agreements for emergency response would be developed with Arlington County, Fairfax County, MWAA, and Loudoun County. These agreements would identify the roles and responsibilities of each jurisdiction in responding to emergencies, general policing and security, and emergency access. All emergency response procedures along the DIAAH and at Dulles Airport would be subject to MWAA fire and life safety standards. Procedures at other locations would be based on the local jurisdiction's requirements. No tunnel exits of any kind, including vent shafts, emergency access shafts or any other kinds of openings will occur within the secure zone of the airport.

3.8 ENVIRONMENTAL JUSTICE

This section presents the environmental justice effects of the proposed Dulles Corridor Rapid Transit Project.

3.8.1 LEGAL AND REGULATORY CONTEXT

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, directs federal agencies to "promote nondiscrimination in federal programs substantially affecting human health and the environment, and provide minority and low-income communities access to public information on, and an opportunity for public participation in matters relating to human health or the environment." It also defines the terms "minority" and "low-income" in the context of environmental analysis.

The Council on Environmental Quality (CEQ) has oversight responsibility for and has written guidance regarding the federal government's compliance with Executive Order 12898 and the NEPA process. Likewise, the U.S. Department of Transportation (U.S. DOT) and the U.S. Environmental Protection Agency (EPA) have drafted guidelines to provide these agencies with guidance regarding compliance with environmental justice requirements.

3.8.2 METHODOLOGY

To assess potential environmental justice impacts, EPA guidance recommends that screening first be performed to determine the location of potentially affected low-income and minority populations, followed by a determination of whether disproportionate impacts may occur. The sections below document the process used to identify low-income and minority populations in the Dulles Corridor.

3.8.2.1 Identifying Minority and Low-Income Populations

The study area defined for the Dulles Corridor Rapid Transit Project environmental justice evaluation extends 300 feet to either side of the proposed centerline of the LPA, expanded to a one-half mile radius at proposed station locations. This area was selected based on a review of the anticipated limit of disturbance of the proposed improvements. Furthermore, this area was checked against the results of noise, vibration, and air quality analysis to ensure that all potentially affected environmental justice populations are included in the analysis.

U.S. Census Bureau data were used to identify low-income and minority populations within the study area. Low-income and racial characteristic data at the census block group level from the Census 2000 were used in the analysis. Census 2000 used new subcategories of minority groups. For the purpose of this analysis, these groups have been combined to be consistent with the racial groups described in Executive Order 12898.

Two threshold standards for identifying minority or low-income populations were developed for this project for areas where 50 percent of the population of a census block group is minority or living below the poverty level; or areas where the minority or low-income population of a census block group is at least 10 percentage points higher than the comparison population.

It should be noted that this methodology provides a broad assessment of locations where minority communities could potentially be located. It should not be interpreted that this methodology identifies all areas that meet the “greater than 10 percent” criteria as minority concentrations in and of themselves. The “greater than 10 percent” is used as a broad indicator that there is the potential that a minority or low-income community might be located within a larger census block group. The actual presence is determined by field investigation and coordination with local jurisdictions. This methodology has been used for several environmental justice analyses for transportation projects.

3.8.2.2 Identifying Impacts Disproportionately Affecting Minority and Low-Income Populations

According to U.S. DOT Order 5680.1, a disproportionately high and adverse effect on minority or low-income populations is one that, "(1) is predominately borne by a minority or a low-income population, or (2) will be suffered by the minority population or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population or non-low income population."

3.8.3 EXISTING CONDITIONS

The following sections identify the minority and low-income populations potentially affected by the project.

3.8.3.1 Minority Populations

Census 2000 block groups with populations that are at least 50 percent minority or are at least 10 percent higher than the minority population of the county or the study area as a whole are listed in Table 3.8-1. Six block groups meet at least one of these thresholds. All six block groups and applicable neighborhoods are located in Fairfax County and are shown in Figure 3.8-1. No U.S. Census block groups that meet the thresholds for identification as a minority population are located in the Loudoun County portion of the project corridor. A summary of each block group is provided below.

Table 3.8-1: Census Blocks That Meet Environmental Justice Thresholds

Tract/Block Group	Amer. Indian/ Alaskan Native	Black (not Hispanic origin)	Asian/ Pacific Islander	Hispanic	Mixed-Race Minority	Total Minority
4712 BG3	0.0%	3.1%	**24.6%**	9.7%	2.6%	40.1%
4809 BG8	0.1%	6.3%	14.9%	**27.7%**	0.9%	**50.0%**
4809 BG9	0.2%	9.1%	12.1%	**30.7%**	2.4%	**54.5%**
4810 BG1	0.2%	13.6%	15.1%	**24.8%**	2.6%	**56.3%**
4811 BG1	0.1%	12.8%	**24.4%**	12.8%	3.2%	**53.3%**
4825 BG8	0.2%	10.2%	15.1%	**20.5%**	3.5%	**49.6%**
Fairfax County	0.2%	8.4%	13.0%	11.0%	2.8%	35.4%
Study Area	0.2%	6.0%	12.1%	8.9%	2.1%	29.3%

* Percentages that meet minority thresholds are in bold.

** Total Minority figures may not equal the sum of individual categories due to rounding.

*** Mixed-Race Minorities consists of combinations of all racial groups eligible for environmental justice consideration excluding those in the 'Whites and Some Other' category which does not have eligible race components.

Source: U.S. Census Bureau, GCT-PL: 2000 U.S. Census Race and Hispanic or Latino.

A. Tract 4712, Block Group 3

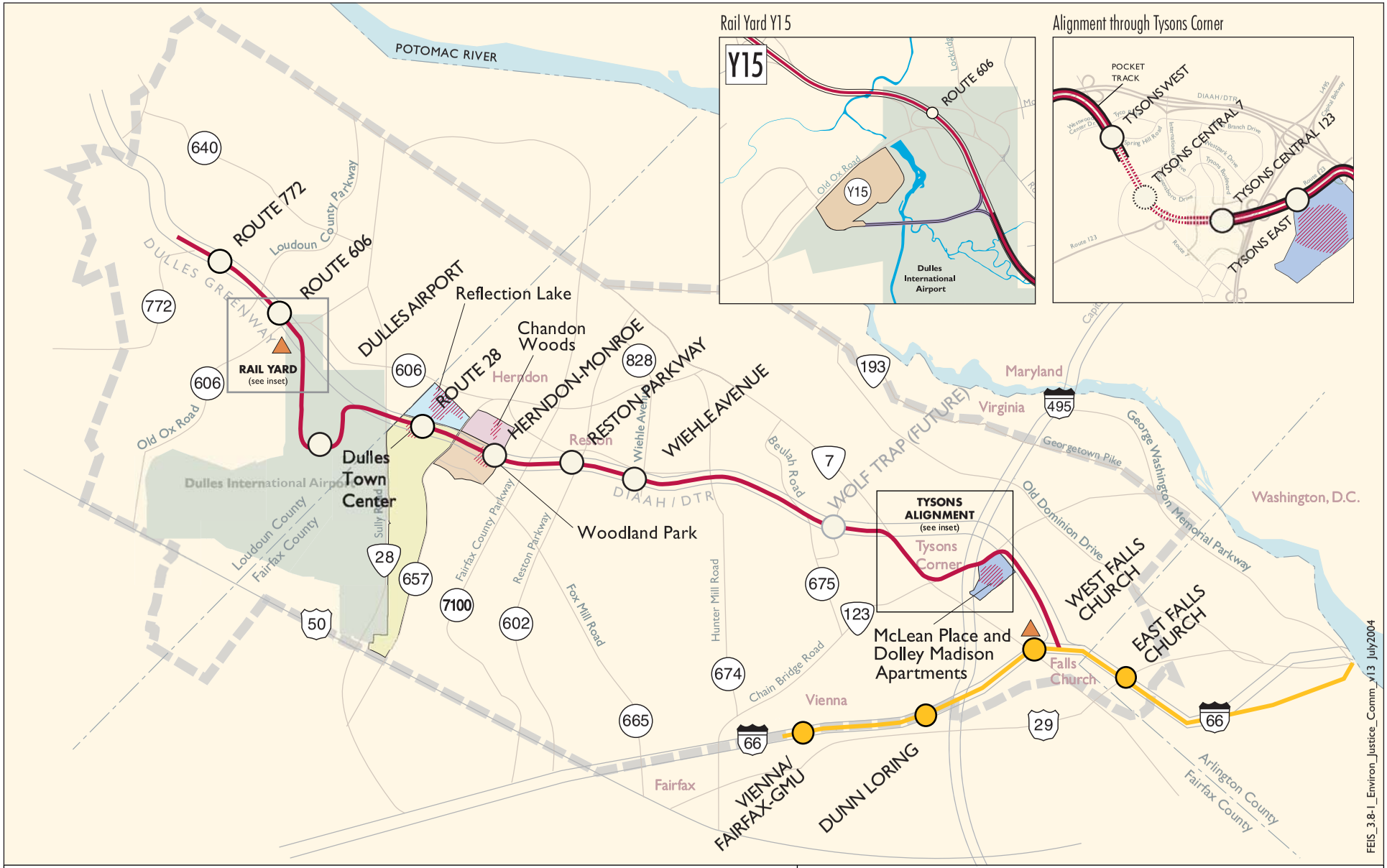
This block group is located east of Tysons Corner and is bordered by Dolley Madison Boulevard, I-495, Magarity Road, and Scott Run (within one-half mile of the Tysons East Station). This block group is largely comprised of multi-family residential neighborhoods, including the McLean Place townhouses and the Dolley Madison Apartments at Tysons. This neighborhood meets the minority threshold because the Asian population is more than 10 percent higher than the Asian population of the county as a whole.

B. Tract 4809, Block Groups 8, and 9

Block Groups 8 and 9 are located on the north side of the DIAAH and are bordered by Van Buren Street, Alabama Drive, and Centreville Road. The residential area within a half-mile radius of the proposed Herndon-Monroe Park and Ride Stop is a portion of the Chandon Woods neighborhood. Chandon Woods is a residential neighborhood with townhouses and single-family homes. Block Groups 8 and 9 meet the minority thresholds because the Hispanic populations are more than 10 percent higher than the Hispanic population of the study area and the county, In addition, the total minority population both Block Groups 8 and 9 also exceeds the 50 percent threshold.

C. Tract 4810, Block Group 1

This block group on the north side of the DIAAH is bordered by Elden Street, Loudoun County, and the Town of Herndon. A portion of the Reflection Lake neighborhood is within a one-half-mile radius of the proposed Herndon-Monroe Park and Ride Stop. Reflection Lake is a neighborhood of townhouses and single-family homes. This block group meets the minority threshold because the Hispanic population is more than 10 percent higher than the Hispanic population of the study area and the county, and because the total minority population is more than 50 percent.



LEGEND

- Proposed Metrorail Alignment
- Proposed Metrorail Alignment Underground
- Dulles Corridor Limits
- County Boundary
- Rail Yard
- Census Tract 4811 Block Group 1
- Census Tract 4810 Block Group 1
- Census Tract 4809 Block Groups 8 & 9
- Census Tract 4712 Block Group 3
- Census Tract 4825 Block Group 8
- Neighborhoods
- Proposed Station
- Existing Metrorail Orange Line and Stations

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

0 1 2 3 MILES

Figure 3.8-1

Environmental Justice Communities

Dulles Corridor Rapid Transit Project

D. Tract 4811, Block Group 1

This block group is located on the south side of the DIAAH between Monroe Street and Centreville Road. A small portion of the block group, containing the Woodland Park townhouse neighborhood (southwest of the intersection of Monroe Street and Sunrise Valley Road), is located in the study area (approximately one-half mile from the proposed Herndon-Monroe Park and Ride Stop). This block group meets the minority threshold because the Asian population is more than 10 percent higher than the Asian population of the study area as a whole, and because the total minority population is greater than 50 percent.

E. Tract 4825, Block Group 8

This block group is located south of the DIAAH and is bordered by the Dulles Toll Road, Centreville Road, Sully Road, and Lee Highway. The residential portion of this block group, which includes the Dulles Town Center complex, is within a half-mile radius of the proposed Route 28 Station site. This block group meets the minority threshold because its Hispanic population is more than 10 percent higher than the Hispanic population of the study area as a whole.

3.8.3.2 Low-Income Populations

None of the Census 2000 block groups that are partially or entirely within the project corridor meets the threshold for low-income populations.

3.8.4 LONG-TERM EFFECTS

This section includes a discussion of the potential disproportionate impacts to minority and low-income populations that would result from the project. The analysis of environmental justice impacts of the LPA consists of a determination of whether environmental impacts identified in other sections of this Final EIS disproportionately affect minority or low-income populations. If no substantial impacts are predicted to occur, then there would be no substantial impacts that disproportionately affect minority or low-income populations. Benefits of the transit improvements to minority or low-income populations are also identified. The long-term effects of the No Build Alternative, the Wiehle Avenue Extension, and the full LPA on environmental justice communities are described in the following sections. Table 3.8-2 presents a summary of these effects.

Table 3.8-2: Effects to Environmental Justice Communities

Environmental Justice Communities (Census Tract, Block Group)	No Build Alternative (2025)	Locally Preferred Alternative		
		Wiehle Avenue Extension Opening Year (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
McLean Place Townhomes, Dolley Madison Apartments at Tysons (Tract 4712, BG3)	No Effect	Located within ½ mile of the proposed Tysons East Station Increased access to transit through Metrorail Service No disproportionate impacts	Located within ½ mile of the proposed Tysons East Station Increased access to transit through Metrorail Service No disproportionate impacts	Located within ½ mile of the proposed Tysons East Station Increased access to transit via proposed Metrorail Service No disproportionate impacts

Environmental Justice Communities (Census Tract, Block Group)	No Build Alternative (2025)	Locally Preferred Alternative		
		Wiehle Avenue Extension Opening Year (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
Chandon Woods (Tract 4809, BG8)	No Effect	Located within ½ mile of the Herndon-Monroe Park and Ride Stop Increased access to transit via the proposed Express Bus Service[1] No disproportionate impacts	Located within ½ mile of the Herndon-Monroe Park and Ride Stop Increased access to transit via the proposed Express Bus Service[1] No disproportionate impacts	Located within ½ mile of the Herndon-Monroe Park and Ride Station Increased access to transit via proposed Metrorail Service No disproportionate impacts
Chandon Woods (Tract 4809, BG9)	No Effect	Located within ½ mile of the Herndon-Monroe Park and Ride Stop Increased access to transit via the proposed Express Bus Service[1] No disproportionate impacts	Located within ½ mile of the Herndon-Monroe Park and Ride Stop Increased access to transit via the proposed Express Bus Service[1] No disproportionate impacts	Located within ½ mile of the Herndon-Monroe Park and Ride Station Increased access to transit via proposed Metrorail Service No disproportionate impacts
Reflection Lake (Tract 4810, BG1)	No Effect	Located within ½ mile of the Herndon-Monroe Park-and-Ride stop Increased access to transit via the proposed Express Bus Service[1] No disproportionate impacts	Located within ½ mile of the Herndon-Monroe Park-and-Ride stop Increased access to transit via the proposed Express Bus Service[1] No disproportionate impacts	Located within ½ mile of the Herndon-Monroe Park-and-Ride stop Increased access to transit via proposed Metrorail Service No disproportionate impacts
Woodland Park (Tract 4811, BG1)	No Effect	Located within ½ mile of the Herndon-Monroe Park-and-Ride stop Increased access to transit via the proposed Express Bus Service[1] No disproportionate impacts	Located within ½ mile of the Herndon-Monroe Park-and-Ride stop Increased access to transit via the proposed Express Bus Service[1] No disproportionate impacts	Located within ½ mile of the Herndon-Monroe Park-and- Ride stop Increased access to transit via proposed Metrorail Service No disproportionate impacts
Dulles Town Center (Tract 4825, BG8)	No Effect	Access to transit at the Herndon-Monroe Park-and-Ride Stop via the proposed Express Bus Service[1] No disproportionate impacts	Access to transit at the Herndon-Monroe Park-and-Ride stop via the proposed Express Bus Service[1] No disproportionate impacts	Located within ½ mile of the proposed Route 28 Station Increased access to transit via proposed Metrorail Service No disproportionate impacts

1 Express bus service would serve areas west of Wiehle Avenue and provide connections to Metrorail.

3.8.4.1 No Build Alternative

Under the No Build Alternative, the six minority block groups would not benefit from increased accessibility that transit improvements in the corridor would bring. Effects on minority and low-income populations could result from improvements assumed under the No Build Alternative. However, identification of these effects would be the responsibility of the agencies and jurisdictions responsible for implementing the improvements.

3.8.4.2 Wiehle Avenue Extension

The Wiehle Avenue Extension would provide Metrorail service from the Orange line East Falls Church Station to Wiehle Avenue and Express Bus Service from Wiehle Avenue to Route 772. Under the Wiehle Avenue Extension, environmental justice areas west of Wiehle Avenue, including Chandon Woods,

Woodland Park, Reflection Lake, and Dulles Town Center communities would receive bus service rather than rail transit service. Therefore, the only environmental justice community that would have direct access to Metrorail service under the Wiehle Avenue Extension would be the community associated with the McLean Place Townhomes and Dolley Madison Apartments, which is near the proposed Tysons East Station. The Chandon Woods, Woodland Park, Reflection Lake, and Dulles Town Center communities would have access to the proposed Express Bus Service via the Herndon-Monroe Park-and-Ride stop. Disproportionate impacts would not occur under the Wiehle Avenue Extension.

Some noise, visual, economic, and traffic impacts would occur. However, none of the environmental justice populations identified would be disproportionately affected. Displacements and relocations would occur within Tysons Corner under the Wiehle Avenue Extension; however, none of the environmental justice populations identified would be displaced.

3.8.4.3 Full LPA

The six minority block groups identified would benefit from the increased accessibility that the full LPA would provide.

Some noise, visual, economic, and traffic impacts would occur as a result of the LPA. However, none of the environmental justice populations identified would be disproportionately affected. Displacements and relocations would occur within Tysons Corner under the LPA; however, none of the environmental justice populations identified would be displaced.

3.8.5 CONSTRUCTION EFFECTS

This section includes a discussion of the potential disproportionate effects to minority and low-income populations that would result from construction of the LPA.

3.8.5.1 No Build Alternative

Under the No Build Alternative, there would be no effects from the Dulles Corridor Rapid Transit Project. However, construction-related impacts (and/or disproportionate effects) to the identified environmental justice populations could result from the improvements assumed under this alternative. Identification of these effects would be the responsibility of the agencies and jurisdictions responsible for implementing the improvements.

3.8.5.2 Wiehle Avenue Extension

Construction activities related to the Wiehle Avenue Extension between the Orange Line and Wiehle Avenue would not disproportionately affect the one minority community identified within the McLean Place Townhomes and Dolley Madison Apartments at Tysons Corner. Construction of facilities for Express Bus Service under the Wiehle Avenue Extension would have limited potential for disproportionate effects.

3.8.5.3 Full LPA

Construction staging areas could result in short-term air quality, noise and visual impacts along the alignment. These staging areas would be placed to avoid disproportionately affecting any of the six minority block groups.

3.8.6 MITIGATION

No disproportionate impacts to minority or low-income populations are anticipated from either the Wiehle Avenue Extension or the full LPA. Therefore, no mitigation measures are proposed.

3.8.7 PUBLIC INVOLVEMENT OUTREACH

Executive Order 12898 directs agencies to utilize existing law to ensure that they provide opportunities for community input in the NEPA process, including input on potential effects and mitigation measures. The public involvement program is discussed in Chapter 11.

Additional public outreach efforts included the addition of contacts within minority communities to the project mailing list: presidents of neighborhood associations, resident managers, property management companies, and neighborhood resource coordinators.

Significant outreach activities included mass distribution of flyers and newsletters throughout the corridor, speaking engagements, a project kiosk at Tysons Corner Center and a public information center in Reston, and special outreach at community events. Specific outreach focusing on minority populations within the corridor was conducted in advance of all public meetings.

Outreach to minority populations would continue throughout the NEPA process and the design and construction phases of the project. Any press releases advertising public hearings or other public project meetings were sent to communications outlets directed toward minority communities in the region, including Asian Fortune, El Tiempo Latino, Impacto (Latino), Iran Times, Pho No (Vietnamese), Washington Afro-American, Washington Hispanic, Metro Herald (African American), Telemundo TV (Latino), WHUR FM (African American), and WKYS FM (African American).

4 ENVIRONMENTAL EFFECTS

This chapter of the Final EIS for the Dulles Corridor Rapid Transit Project describes the existing conditions of the natural and built environments. The No Build Alternative, the Wiehle Avenue Extension, and the full Locally Preferred Alternative (LPA) have been analyzed to determine the potential effects each would have upon the study area's natural resources, its habitats, and by-products of the built environment such as noise, hazardous materials, and energy consumption.

The alternative formerly known as "LPA Phase 1" in the October 2003 *Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation* has been renamed the Wiehle Avenue Extension in this Final EIS and is expected to begin operations in 2011. This change reflects the federal approach to the project's funding under the Federal Transit Administration's New Starts program. It will assure consistency among the environmental, engineering and financial documents during the project's development.

In the October 2003 *Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation* as well as this Final EIS, the term "full LPA" represents the Wiehle Avenue Extension and the second phase of the Dulles Corridor Rapid Transit Project. This second phase would extend west from Wiehle Avenue to Washington Dulles International Airport and Route 772 and is expected to begin operations in 2015.

The term "LPA", "proposed action", or "selected LPA" refers to both the Wiehle Avenue Extension and the full LPA collectively.

Each section includes a description of the study area defined for each environmental resource, the methods used to make the assessments, and the existing conditions of each resource. Study area definitions vary according to the resource being studied. The study area is generally the limits of disturbance for the proposed improvements for water resources, terrestrial biota and habitat. For other resource elements, the study area differs from the limit of disturbance. For example, air quality requires two study areas. The first would encompass the entire Washington metropolitan region and the second includes the areas immediately surrounding the proposed transit facilities where cars and buses would queue (e.g., intersections).

The sections also include, for each alternative, a discussion of the potential long-term effects, potential construction (short-term) effects, and mitigation for those effects when warranted. Briefly, the sections of this chapter address the following issues:

Section 4.1 provides an assessment of the effects to the geologic resources along and adjacent to the study area including the geology, topography, soils, prime farmlands, and groundwater within the Dulles Corridor.

Section 4.2 includes a description of the effects to streams, floodplains, wetlands, and critical areas that make up the surface waters in the study area.

Section 4.3 includes an examination of the effects to aquatic biota and habitat that exist in the study area.

Section 4.4 provides a description of the effects to terrestrial biota and habitat that are present within the study area.

Section 4.5 includes an assessment of the plant and animal species that are classified as rare, threatened, or endangered and are likely to exist in the study area.

Section 4.6 provides a description of the air quality impact analysis conducted for the project.

Section 4.7 presents the results of the ambient noise monitoring program and the evaluation of potential impacts.

Section 4.8 presents the results of the existing source vibration measurement program and an evaluation of potential impacts of the proposed improvements.

Section 4.9 includes a description of the potential for discovering hazardous or contaminated materials during construction of the project and a summary of the extent of any suspected contamination and appropriate mitigation measures.

Section 4.10 provides a summary of the quantitative assessment of the impact of the project on transportation-related energy consumption in the study area.

Additional information on agency coordination undertaken to address natural resources addressed in this Chapter is discussed in Appendices J and K.

4.1 GEOLOGIC RESOURCES

Geologic resources include geology, groundwater, topography, soils, and prime farmland.

4.1.1 LEGAL AND REGULATORY CONTEXT

Laws regarding sole source aquifers and prime farmlands are pertinent to defining geological resources. The Sole Source Aquifer Protection Program is authorized by the Safe Drinking Water Act of 1974, as amended in 1986 and 1996, to protect drinking water and its sources. Aquifers are designated as “Sole Source” to protect drinking water supplies in areas with few or no alternative sources of potable water.

The protection of prime farmland is promulgated under Title 7 of the United States Code, Chapter 73—the Farmland Protection Policy. The purpose of the policy is to minimize the extent to which Federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses, and to assure that federal programs are compatible with state, local, and private programs and policies to protect farmland.

4.1.2 METHODOLOGY

Research was the principal method used to gather information about the geologic resources within the study area in Fairfax and Loudoun counties. Geology, topography, and groundwater information was obtained from U.S. Geological Survey (USGS) maps and atlases. Soil and prime farmland data were compiled from the U.S. Environmental Protection Agency (EPA), the U.S. Department of Agriculture (USDA), the Virginia Department of Health, and various local and regional resource agencies. Additional information was obtained from websites, local and regional plans, project engineering studies and investigations, and personal communications with representatives from various federal, state, and local agencies.

The study area for geologic resources was generally defined as the Dulles Corridor, an area that extends from Route 7 to the north, I-66 to the south, a point beyond Route 772 in Loudoun County to the west, and a point beyond the City of Falls Church in Arlington County to the east. For soils, the study area was reduced to the predicted limits of disturbance.

4.1.3 EXISTING CONDITIONS

A description of the existing conditions of the geologic resources underlying the study area follows.

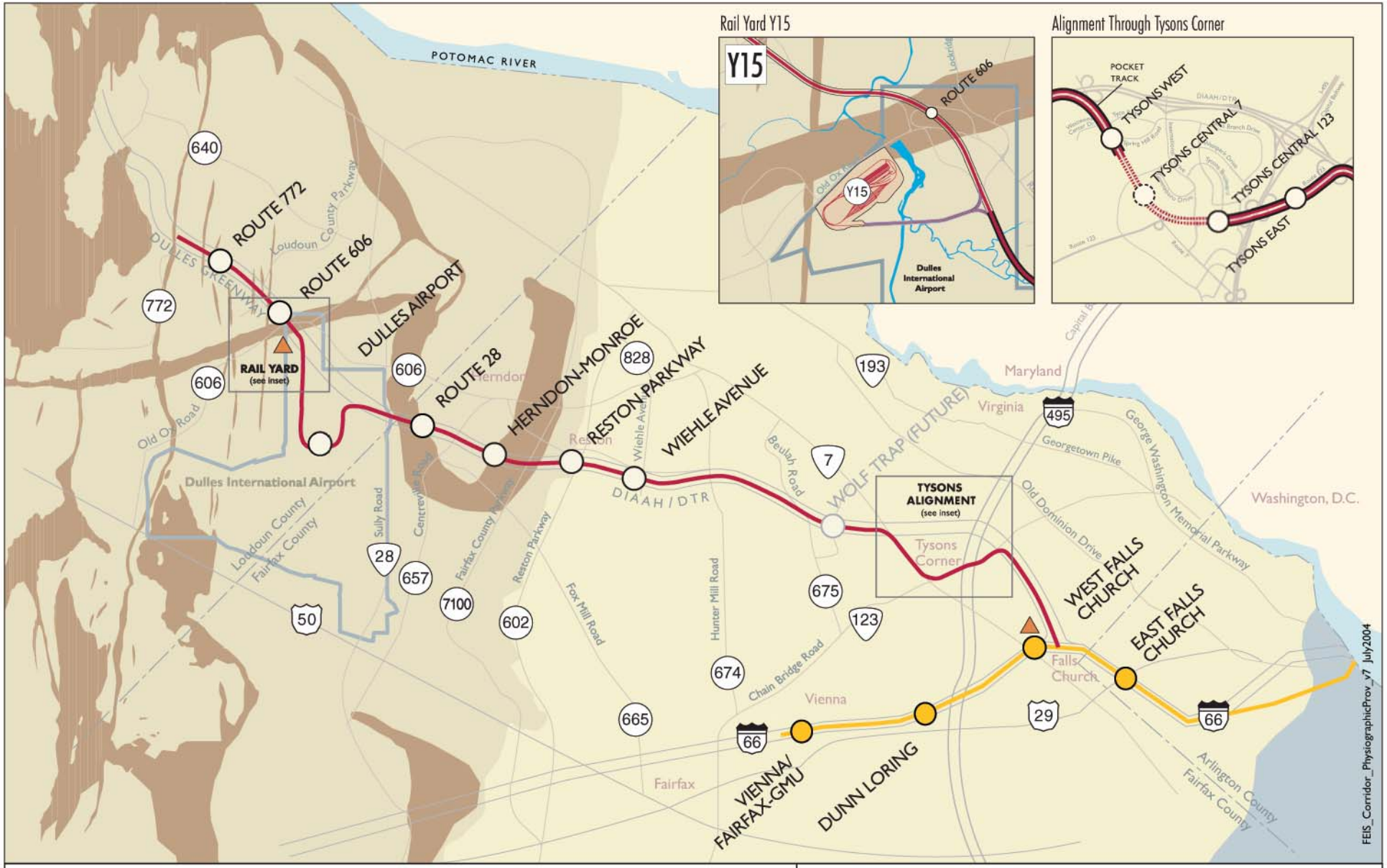
4.1.3.1 Geology and Topography

Virginia consists of five Physiographic Provinces: the Coastal Plain, Piedmont, Blue Ridge, Valley and Ridge and Appalachian. The study area is generally located in the Piedmont Physiographic Province, which lies between the Coastal Plain to the east and the Blue Ridge to the west. The Piedmont Physiographic Province can be subdivided into the Piedmont upland and Triassic lowland. Crystalline metamorphic rocks such as schist, granite, gneiss, and greenstone of the late Precambrian or early Paleozoic age underlie the Piedmont upland. Figure 4.1-1 shows the geology located within the study area and surrounding area.

The Triassic lowland, also referred to as the Culpeper Basin, in western Fairfax County and eastern Loudoun County, begins approximately at Reston Parkway. The lowland is an area of much younger, un-metamorphosed, red sedimentary rock (sandstone, siltstone, shale, and conglomerate), and igneous rock. Exposed igneous intrusions (diabase, diorite, and syenite) are present sporadically throughout the Triassic lowland, as shown in Figure 4.1-1. A horseshoe-shaped igneous intrusion crosses the study area just west of Reston. Another intrusion intersects the corridor at the northern end of Dulles Airport. Some of these intrusions, composed of diabase flat rock (a hard, dark-colored volcanic rock), are home to a community known as the diabase glade habitat. This community is explained in detail in Section 4.5.

The Triassic lowlands range in elevation from approximately 250 feet to 400 feet above mean sea level. The lowlands slope toward the southwest and are adjacent to the higher Piedmont uplands to the east. The Piedmont uplands range in elevation from 300 feet to 450 feet above mean sea level. Ground elevations of the study area gradually decline westward from Tysons Corner to Difficult Run, and then rise to 400 feet above mean sea level south of Sunset Hills Road. At the transition between the uplands and lowlands, the topography begins to flatten out, with elevations of approximately 380 feet above mean sea level. From the Dulles International Airport Access Highway (DIAAH) and Route 28 interchange, the ground elevation declines to 250 feet above mean sea level and rises again to about 300 feet above mean sea level at the project terminus in Loudoun County. Within Tysons Corner, ground elevations rise southward to approximately 450 feet above mean sea level.

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LEGEND

- Triassic Lowland (Culpeper Basin)
- Piedmont Upland
- Igneous Intrusion
- Coastal Plain

PROPOSED METRORAIL ALIGNMENT

- At-grade/Retained Fill
- Aerial
- Underground
- Aerial Yard Lead

- Existing Metrorail Orange Line and Stations
- Proposed Station
- County Boundary
- Rail Yard

0 1 2 3 MILES

Source: Virginia Department of Mines, Minerals, and Energy (Division of Mineral Resources)

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

Figure 4.1-1

Geology

Dulles Corridor Rapid Transit Project

4.1.3.2 Groundwater

Several types of aquifers underlie the Dulles Corridor. Crystalline-rock and undifferentiated sedimentary-rock aquifers underlie the Piedmont upland. This dense, almost impermeable bedrock yields water primarily from secondary porosity and permeability provided by fractures. Groundwater levels measured during project geotechnical investigations at various locations within the study area indicated that ground water levels ranged from 23 to 34 feet below the ground surface in the vicinity of Tysons Corner and 14 to 17 feet below the ground surface between Reston and Loudoun County. Geotechnical borings drilled in Loudoun County did not encounter groundwater. Water from aquifers underlying both topographic regions within the study area is suitable for drinking, but iron, manganese, and sulfate are often present at elevated concentrations in isolated areas.

The nearest Sole Source Aquifers are the Maryland Piedmont Aquifer and Poolesville Area Aquifer. As indicated by EPA, Region III, these aquifers lie within the political and geographic jurisdictions of Frederick and Montgomery counties in Maryland. There are no sole source aquifers in Fairfax or Loudoun counties.

According to the Fairfax County Water Authority (FCWA) and the Loudoun County Sanitation Authority, the primary source of drinking water in the study area is surface water. The Fairfax County Water Authority obtains water from the Potomac River with an intake situated above Great Falls. Groundwater is the source of drinking water for some older homes in various parts of the Dulles Corridor. Although the Commonwealth of Virginia does not have an EPA-mandated or regulated wellhead protection program to protect these groundwater wells from contamination, the Commonwealth works with localities and waterworks via the Virginia Rural Water Association who coordinates the Source Water Assessment Program. As part of this program, the Virginia Department of Health performs vulnerability assessments of groundwater wells based on 1,000-foot fixed-radius zones. The study area for geologic resources crosses into the 1,000-foot radius for four drinking water wells. The wells are in the following locations: the Hunter Mill Swim and Racquet Club, the Reston Presbyterian Church, west of the Loudoun/Fairfax County line to the north of the Dulles Greenway, and southwest of the Dulles Greenway along the north side of Route 606.

4.1.3.3 Soils

Soils within the study area vary according to the underlying geology—Coastal Plain, Piedmont Upland, Triassic Lowland, and Igneous Intrusion. Tables 4.1-1 and 4.1-2 list the soil types and various characteristics of each soil within the study area.

Within the Piedmont Upland, areas of greenstone bedrock underlying the Lloyd, Orange, and Rocky Land soil types could contain naturally occurring fibrous asbestos minerals. Figure 4.1-2 shows the approximate location of these soil types in the study area. The alignment passes over igneous diabase intrusions west of Reston and at the northern end of Dulles Airport. Most of the soils in this region belong to the Iredell soils group, a problematic soil that shrinks and swells depending on water content.

Table 4.1-1: Study Area Soils – Fairfax County

Soil Name (Symbol)	Depth to Bedrock (Feet bgs)	Depth to Water Table (Inches)	Slope (%)	Soil Drainage	Shrink to Swell Potential
Piedmont Upland					
Mixed Alluvial Sand (Mr)	3 to 30	n.a.	0 to 2	Good	Variable
Masada gravelly loam, eroded rolling (Mg)	Alluvium on Terraces	0 to 36+	7 to 14	Good	Low
Glenelg silt loam, undulating* (Gb)	5 to 100	2 to 72	2 to 7	Good	Low
Glenville silt loam (Gg)	10 to 100	0 to 27+	2 to 7	Marginal to Poor	Low
Medowville silt loam** (Mp)	10 to 100	0 to 48	2 to 7	Good to Marginal	Low
Glenelg silt loam, eroded rolling (Gc)	5 to 100	2 to 72	7 to 14	Good	Low
Elioak silt loam, eroded undulating* (Eb)	5 to 100	0 to 55	2 to 7	Good	Low to Moderate
Worsham** (Wo)	20 to 100	0 to 0.5	7 to 14	Marginal	High
Manor silt loam, hilly (Mc)	5 to 100	0 to 36	14 to 25	Good	Low
Elioak silt loam, eroded rolling* (Ec)	5 to 100	0 to 55	7 to 14	Good	Low to Moderate
Glenelg silt loam, eroded hilly (Ge)	5 to 100	2 to 72	14 to 25	Good	Low
Lloyd** (Ld)	4 to 30	2 to 72	7 to 14	Marginal	Moderate to High
Triassic Lowland (Culpeper Basin) prior to Igneous Intrusion					
Chewacla silt loam** (Cg)	10 to 20	2 to 48	0 to 2	Marginal to Poor	Low
Calverton silt loam, undulating (Cc)	3 to 8	0 to 37	2 to 7	Marginal to Poor	Moderate to High
Mayodan silt loam, undulating (Mo)	10 to 15	0 to 12	2 to 7	Good to Marginal	Low to Moderate
Brecknock loam, undulating* (Bf)	3 to 8	2 to 74	2 to 7	Good to Marginal	Low
Rocky land, rolling basic rock** (Rc)	n.a.	0 to 2	2 to 14	Not Available	Variable
Bucks loam, undulating* (Bn)	3 to 8	0 to 74	2 to 7	Good	Low
Igneous Intrusion within the Triassic Lowland (Culpeper Basin)					
Iredell to Mecklenburg silt loams, eroded undulating** (Ib)	0 to 15	0 to 32	2 to 7	Marginal to Poor	High to very High
Elbert silt loam** (Ea)	3 to 15	0 to 36	0 to 2	Poor	High to very High
Very rocky land, rolling basic rock (Vb)	0 to 15	0 to 2	2 to 25	Not Available	Variable
Kelly silt loam, undulating (Ka)	2 to 8	0 to 39	2 to 7	Marginal to Poor	High to very High
Croton silt loam (Ck)	3 to 8	0 to 34+	0 to 2	Poor	Moderate to High
Triassic Lowland (Culpeper Basin) after Igneous Intrusion					
Penn silt loam, eroded rolling (Pn)	3 to 5	0 to 19+	7 to 14	Good to Excessive	Low
Buck silt loam, eroded undulating* (Bo)	3 to 8	0 to 55	2 to 7	Good	Moderate
Manassas silt loam* (Ma)	3 to 8	0 to 36	2 to 7	Good to Moderate	Low
Calverton loam, undulating (Ca)	3 to 8	0 to 37	2 to 7	Marginal to Poor	Moderate
Brecknock silt loam, eroded undulating* (Bh)	3 to 8	2 to 24	2 to 7	Good to Marginal	Low

*Prime Farmland Soils for Fairfax County – from NASIS database.
http://nasis.nrcs.usda.gov/documents/help/NASIS_da.htm.
**Hydric Soil or contains hydric inclusions.
bgs = Below Ground Surface

Table 4.1-2: Study Area Soils – Loudoun County

Soil Name	Depth to Bedrock (Feet bgs)	Depth to Water Table	Slope (%)	Soil Drainage	Shrink to Swell Potential
Rowland silt loam**	Greater than 6	Seasonal	0 to 3	Moderate to Poor	n.a.
Bowmansville silt loam	Greater than 6	Seasonal	0 to 3	Poor	n.a.
Manassas silt loam	Greater than 5	Perched	1 to 8	Fair	n.a.
Panorama silt loam*	Greater than 6	None	3 to 8	Good	n.a.
Ashburn silt loam	20 to 40	Seasonal	1 to 8	Fair	n.a.
Albano silt loam	40 to 60	Seasonal	0 to 3	Poor	n.a.
Dulles silt loam	40 to 60	Seasonal	0 to 3	Fair to Moderate	n.a.
Nestoria gravelly silt loam**	Greater than 4	Seasonal	8 to 15	Well	n.a.
Penn silt loam	20 to 40	None	3 to 8	Fair	Low
Haymarket	Greater than 5	Perched	2 to 8	Good	High

*Prime Farmland
** Hydric Soils and soils containing hydric inclusions
bgs = Below Ground Surface
n.a.= not available

4.1.3.4 Prime Farmland

The USDA defines prime farmland as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oil seed crops, and land that is also available for these uses. Prime farmland can be cropland, pastureland, forestland, or other land, but not urban built-up land or water. Land designated as "prime farmland" has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed according to acceptable farming methods.

Most of the study area is located within Fairfax County, which is highly developed and densely populated. Consequently, prime farmland soils in the study area have been developed into residential neighborhoods or commercial centers. Loudoun County, in contrast, is a mix of suburban and rural development. Data obtained from the Loudoun County Office of Mapping and Geographic Information indicate that three small areas with Panorama silt loam, a soil designated as prime farmland, exist in proximity to the alignment in Loudoun County (See Figure 4.1-3). Coordination with the Natural Resources Conservation Service (NRCS) confirmed these areas and the soil types that are considered prime for farmland.

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LEGEND

SOIL TYPE
- Lloyd
- Orange
- Rocky Land

PROPOSED METRORAIL ALIGNMENT
- At-grade/Retained Fill
- Aerial
- Underground
- Aerial Yard Lead

- Existing Metrorail Orange Line and Stations
- Proposed Station
- County Boundary
- Rail Yard

0 1 2 3 MILES

Source: Loudoun County Office of Mapping and Geographic Information

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

Figure 4.1-2

Soils Potentially Containing Fibrous Asbestos Minerals

Dulles Corridor Rapid Transit Project



LEGEND

- Prime Farmland
- Proposed Metrorail Alignment
- County Boundary
- Existing Metrorail Orange Line and Stations
- Proposed Station

Source: Loudoun County Office of Mapping and Geographic Information

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

0 3000 6000 FEET

Figure 4.1-3

Prime Farmland Loudoun County

Dulles Corridor Rapid Transit Project

4.1.4 LONG-TERM EFFECTS

The long-term effects of the No Build Alternative and the full LPA on geologic resources are described in the following sections. Table 4.1-3 presents a summary of these effects.

Table 4.1-3: Summary of Effects to Geologic Resources

Geologic Resource	No Build Alternative	Locally Preferred Alternative		
		Wiehle Avenue Extension Opening Year (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
Geology	None	Minor	Minor	Minor
Topography	None	Minor	Minor	Minor
Sole Source Aquifers	None	None	None	None
Groundwater	None	Minor	Minor	Minor
Soils	None	Minor	Minor	Minor
Prime Farmlands[1]	None	None	None	Minor

[1] Affected prime farmland soils would not be usable as prime farmland because of their small size and isolated nature. In addition, prime farmlands affected within the study area are slated for conversion to urban use per the *Loudoun County Revised General Plan*.

4.1.4.1 No Build Alternative

Under the No Build Alternative, there would be no project related effects to geologic resources.

4.1.4.2 Wiehle Avenue Extension

Minor long-term effects on the geology and topography within the study area are expected from the Wiehle Avenue Extension as a result of tunneling at underground segments and pier and pile construction for the support of structures. Geotechnical investigations and subsurface studies at specific locations would be conducted prior to construction activities to ascertain more detailed information on geologic formations and soils.

The Wiehle Avenue Extension would result in an increase in impervious surface. This would have a minor effect on the groundwater recharge capacity of local aquifers. This effect would be partially offset by the increased aquifer recharge that would occur as a result of the proposed stormwater management facilities. There is no potential for impacts to sole source aquifers.

As depicted in Figure 4.1-2, the Lloyd soil type (potentially containing the asbestos mineral) lies near the Wiehle Avenue Extension around its intersection with Hunter Mill Road. According to Fairfax County Health Department directives, a compliance plan would be required for the potential of disturbing the Lloyd soil. The extent of the plan would depend on the construction activity planned for that area. It is not anticipated that soils containing natural asbestos or those with the propensity to shrink and swell would be encountered in other areas along the Wiehle Avenue Extension.

Minor effects on the soils of the project corridor are expected from the Wiehle Avenue Extension. In addition, no effects to prime farmland would occur as result of the Wiehle Avenue Extension.

4.1.4.3 Full LPA

The effects of the full LPA on geology, topography, groundwater, and soils are similar to those described above for the Wiehle Avenue Extension. However, soils that have the propensity to shrink and swell could be encountered in the portions of the corridor through Reston, Herndon, and Loudoun County; it is not anticipated that soils containing natural asbestos would be encountered west of Wiehle Avenue.

The station facilities at Route 772 and the Metrorail Service and Inspection (S&I) Yard Site 15 would affect several small, non-contiguous parcels of prime farmland. However, these areas (according to the *Loudoun County Revised General Plan* and MWAA's *Airport Land Use Plan*) are unlikely to be available for use as prime farmland. The land near the Route 772 station will be converted to urban uses regardless of the implementation of the full LPA and the land for S&I Yard 15 is part of Dulles Airport. In a letter dated July 8, 2002, the Natural Resources Conservation Service noted that impacts to prime farmland were adequately documented in the Draft EIS and accordingly had no objection to the proposal to implement the project.

4.1.5 CONSTRUCTION EFFECTS

Short-term impacts on the existing geology, topography, and soils in the area would be anticipated. Best Management Practices would be used during intrusive activity, thereby minimizing any short-term impacts to geologic structures during project construction. There would be no difference in the construction effects of the Wiehle Avenue Extension and full LPA except that the effects from the full LPA would occur along a greater area. Best Management Practices, such as pollution control devices, spill prevention programs, installation and maintenance of runoff diversion structures and secondary containment structures would be employed for all construction activities. Sediment and erosion control plans will be prepared and submitted to the appropriate soil and water conservation jurisdictions.

Potential construction effects of the LPA on the geology, topography and soils underlying the study area would be associated with the following activities: leveling for the tracks, mostly in the median of the DIAAH; clearing, grubbing, and leveling for the Metrorail S&I Yard; constructing new embankments or altering existing embankments at bridge and tunnel approaches; drilling shafts and driving piles for structure foundations, and earth removal activities for the tunnel sections in Tysons Corner and at Dulles Airport. Surface excavations, construction of tunnels, hill cuts, and pile driving would be the most intrusive construction methods.

Several soil types have moderate to poor drainage, a high to very high shrink-swell potential, and/or a high water table. In addition, some soils on steep slopes have high erosion potentials. There is also a possibility of exposing soils overlying greenstone bedrock that could contain fibrous asbestos minerals. In the event that these soils are encountered, preparation and submission of an asbestos control compliance plan to the Fairfax County Health Department prior to construction activities in areas with the potential for asbestos-containing soils will be required. The extent of the plan is contingent upon the construction activities planned for the area(s) of concern.

Because the LPA would involve construction of underground segments of the alignment, minor impacts to groundwater quality, temporary groundwater depletion, and/or stormwater run-off could occur. Excavation for retained fill sections for the stations and underground sections could encounter groundwater, but short-term effects are expected to be minimal. Where groundwater could be encountered, wells can be constructed and groundwater pumped out for the purpose of depressing groundwater elevations in the vicinity of the work. For this activity, a Groundwater Withdrawal Permit would be required from the Virginia Department of Environmental Quality (VDEQ). The underground sections would be waterproofed to inhibit the flow of groundwater into the tunnel after construction. Groundwater elevations are expected to return to preconstruction levels when construction of underground segments is complete.

If rainwater or other water seepage collects in the tunnels during construction, Virginia Pollution Discharge Elimination System (VPDES) and Virginia Water Protection permits would be required to

discharge the water into adjacent surface waters. The VPDES permit meets EPA's requirements, eliminating the need for a Federal National Pollutant Discharge Elimination System permit, although additional permitting or review by EPA may be required depending on the quantity and content of the discharge.

No construction effects to prime farmland are expected from implementing the Wiehle Avenue Extension or the full LPA.

4.1.6 MITIGATION

No long-term impacts to geologic resources (e.g. geology, groundwater, soils, and prime farmland) are anticipated. Therefore, no mitigation measures are proposed.

During construction, Best Management Practices would be used to minimize impacts to soils and groundwater resources. A Soil and Erosion Sediment Control Plan would be prepared.

4.2 WATER RESOURCES

This section describes the effects to water resources within the Dulles Corridor, including surface water (e.g., streams), wetland systems, and floodplains, as well as critical areas such as Chesapeake Bay Protection Areas, environmental quality corridors, and river and stream corridor overlay districts.

4.2.1 LEGAL AND REGULATORY CONTEXT

The Clean Water Act mandates that state and federal water quality standards are met for activities that result in the discharge of materials to "Waters of the U.S." Section 401 of the Clean Water Act requires that anyone intending to dredge or fill a waterway or wetland obtain a Certification. The U.S. Army Corps of Engineers (USACE), in accordance with Executive Order 11990, "Protection of Wetlands," and Section 404 of the Clean Water Act regulates the "Waters of the U.S.," which include wetlands. U.S. DOT Order 5660.1A requires transportation facilities and projects to assure the protection, preservation, and enhancement of the nation's wetlands to the fullest extent practicable during the planning, construction, and operations. The Virginia Water Protection (VWP) permit program regulates impacts to state waters, including wetlands, and serves as Virginia's Section 401 certification program for federal Section 404 permits. According to March 2002 legislation, the Commonwealth has delegated the regulation of isolated intrastate wetlands and waters to VDEQ. A Joint Permit Application must be submitted to the Virginia Marine Resources Commission (VMRC) for any work performed in, over, or under waters within the Commonwealth of Virginia. VMRC distributes the permit application for review and comment to USACE, VDEQ, and other relevant state, local, and federal agencies.

EPA's Total Maximum Daily Load (TMDL) program provides guidelines for identifying impaired waters and determining pollution sources. A TMDL is the amount of pollutant that surface water can assimilate without causing violation of a numeric water quality standard. Section 303(d) of the Clean Water Act requires each state to identify surface waters that do not meet water quality standards. Impaired surface waters are placed on a 303(d) list, termed the TMDL Priority List, for a specific pollutant and could be listed multiple times for different pollutants.

Pursuant to Section 402 of the Clean Water Act, a National Pollutant Discharge Elimination System (NPDES) permit is required for point source discharges. In the Commonwealth of Virginia, VDEQ

regulates Section 402 permitting through the VPDES permit process. Certain construction activities, such as land disturbance and dewatering of excavated areas that would result in stormwater discharges would require a VPDES permit. Depending upon the quantity and content of the discharge, either an individual or general VPDES permit would be required. EPA has the authority to review activities having major discharges.

Stormwater management efforts would be in accordance with Virginia Stormwater Management Regulations (VR 215-02-00 Part IV and S2.3). The Northern Virginia Best Management Practices Handbook contains the required information and calculations for post-construction stormwater quality management. The Northern Virginia Regional Commission can also provide guidance on maintaining existing Best Management Practices.

Pursuant to the Rivers and Harbors Act of 1899, activities affecting navigable waters of the U.S. are also regulated by USACE. Activities regulated under Section 10 include the construction of structures in, under, and over navigable waters, as well as the excavation and deposition of material in navigable waters.

Executive Order 11988, "Floodplain Management," and U.S. Department of Transportation (U.S. DOT) Order 5650.2, "Floodplain Management and Protection" prescribe policies and procedures for the avoidance and mitigation of floodplain impacts. In addition, VDEQ and Loudoun County have developed floodplain management measures pursuant to stormwater management ordinances. Fairfax County's floodplain management measures are contained in the County's Zoning Ordinance.

The Chesapeake Bay Preservation Act establishes criteria for use by Fairfax County to designate Chesapeake Bay Preservation Areas (CBPAs) within their jurisdictions.

The Coastal Zone Management Act of 1972 and reauthorization amendments of 1990 require that federal actions that are likely to affect any land or water use or natural resources of the coastal zone be consistent with the enforceable policies of a state coastal management program. The Commonwealth established the Virginia Coastal Resources Management Program in 1986 to protect and manage Virginia's coastal zone. In response to the 1990 amendments, the Commonwealth completed its Nonpoint Source Pollution Management Program in 1999.

The Loudoun County Revised General Plan defines a River and Stream Corridor Overlay District (RSCOD) as a designation used to classify rivers and streams draining 100 acres or more; associated 100-year floodplains; adjacent steep slope areas; a management buffer; a minimum no-build stream buffer; and wetlands, riparian forests, and historic and archaeological sites to the extent that they fall within the RSCOD.

The Federal Aviation Administration's (FAA) Advisory Circular No. 150/5200-33 recommends limiting wildlife use of wet areas within an airport's approach or departure airspace, aircraft movement areas, loading ramps, or aircraft parking areas because they may cause conditions that are hazardous to aircraft safety. Human-made or natural wet areas, such as poorly drained areas, retention ponds, and wetland systems provide a habitat for wildlife.

4.2.2 METHODOLOGY

The study area for natural resources was determined as a 600-foot-wide corridor that included the Dulles Connector Road, DIAAH, and Dulles Greenway, expanded to widths of 800 to 2,000 feet depending on

the proposed facilities. The study area was delineated based on the potential for disturbance from all conceivable project facilities.

As required by the Clean Water Act, VDEQ conducted extensive monitoring of ambient water quality parameters within Virginia's surface waters. VDEQ and the Virginia Department of Conservation and Recreation (VDCR) reported the results of this monitoring effort in the *Virginia Water Quality Assessment 1998 305(b) Report* prepared for EPA. The results of this investigation, in conjunction with sampling conducted by VDEQ in January 1999, were used to establish baseline conditions for the streams in the study area.

Flood Insurance Rate Maps (FIRM) produced by the Federal Emergency Management Agency (FEMA) were used to identify the 100-year floodplains as well as other regulatory floodways. The NRCS Soil Survey Reports for Fairfax and Loudoun counties were also used to locate riverine systems.

Wetland systems within the Dulles Corridor were identified prior to field reconnaissance using U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps and USGS topographic maps. Wetland systems within the study area were delineated between December 2000 and March 2001. Additional delineations were conducted in September 2001 and September 2004 for the Herndon-Monroe park-and-ride facilities, and stormwater management ponds, respectively.

The 1987 Corps of Engineers *Wetland Delineation Manual* was used to determine which areas met the three federal criteria for wetlands: hydrophytic vegetation, hydric soils, and wetland hydrology. Areas that do not meet these properties could also be regulated and include open-water areas, riverine systems, and certain disturbed areas. Areas that hydrologically convey water but do not exhibit all of the necessary parameters to be classified as a wetland could still be part of a wetland system. These areas are typically streams, unvegetated swales, or low areas that have apparent hydrology or hydrologic indicators but have little or no wetland vegetation or may lack hydric soils.

The functions and values of each wetland system were evaluated using *The Highway Methodology Workbook Supplement-Wetland Functions and Values: A Descriptive Approach* (i.e., the New England method). Principal functions and values are defined as an important physical component of a wetland ecosystem (function only), and/or are considered of special value to society from a local, regional, or national perspective. The functions and values defined by this methodology include: groundwater recharge/discharge, floodflow alteration, fish and shellfish habitat, sediment/toxicant/pathogen retention, nutrient removal/retention/transformation, production export, sediment/shoreline stabilization, wildlife habitat, recreation, educational/scientific value, uniqueness/heritage, and visual quality/aesthetics.

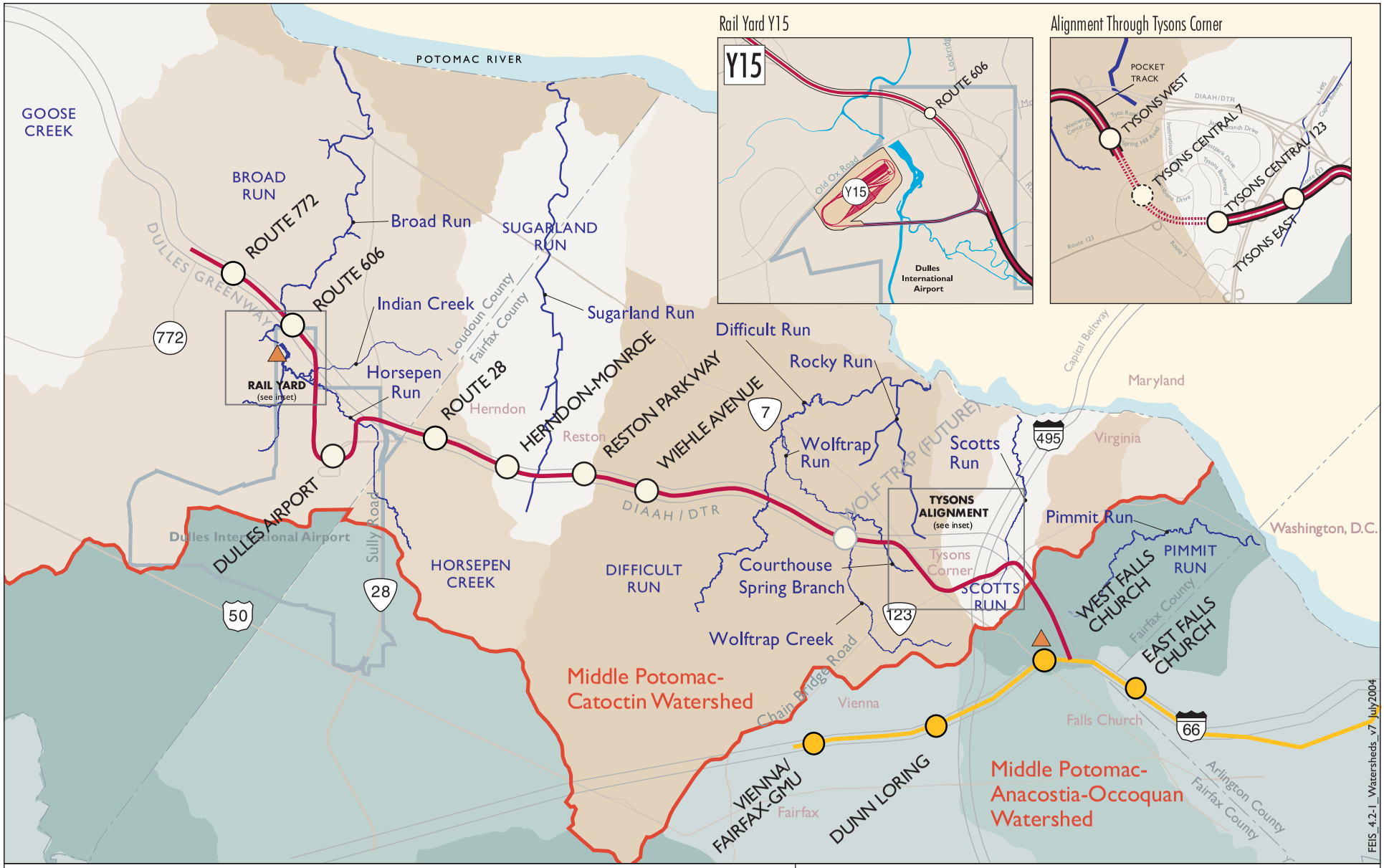
4.2.3 EXISTING CONDITIONS

Surface water resources, water quality, wetland systems, floodplains, and critical areas in the study area are discussed below. Groundwater resources are discussed in Section 4.1.

4.2.3.1 Surface Water Resources

The Dulles Corridor is located entirely within the Potomac-Shenandoah River Basin, which is separated into two USGS hydrologic units designated as the Middle Potomac-Catoctin and the Middle Potomac-Anacostia-Occoquan watersheds. A hydrologic unit or watershed is a geographic area representing part or all of a surface drainage basin, a combination of drainage basins, or a distinct hydrologic feature. As shown in Figure 4.2-1, the corridor traverses the drainage divide between the two watersheds, with most

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LEGEND

PROPOSED METRORAIL ALIGNMENT
- At-grade/Retained Fill
- Aerial
- Underground
- Aerial Yard Lead

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

VARIOUS WATERSHEDS

Boundary Between Middle Potomac-Catoctin and Middle Potomac-Anacostia-Occoquan Watersheds

Major Streams

Source: Virginia Department of Conservation and Recreation

County Boundary

Rail Yard

Proposed Station

Existing Metrorail Orange Line and Stations

0 1 2 3 MILES

Figure 4.2-1

Watershed Boundaries and Streams

Dulles Corridor Rapid Transit Project

of the streams in the Dulles Corridor draining to the Middle Potomac-Catoctin watershed. The Middle Potomac-Anacostia-Occoquan watershed lies within eastern portions of the Dulles Corridor.

Figure 4.2-1 also shows that the Dulles Corridor extends across the upper and middle portions of six smaller watersheds (Pimmit Run, Scotts Run, Difficult Run, Sugarland Run, Horsepen Run, and Broad Run). The smaller first-order streams range in size from two feet to five feet wide with an average channel depth of three feet. Larger second-order streams include Pimmit Run, Scotts Run, Courthouse Spring Branch, Wolftrap Creek, Difficult Run, Sugarland Run, Indian Creek, Horsepen Run, and Broad Run. Where two first-order streams meet, a larger second-order stream is created. The average channel width of these streams is 20 feet with a depth of five feet. Wetland systems associated with these surface waters are described in Section 4.2.3.3. Fairfax County is in the process of developing comprehensive watershed management plans for the county. A watershed management plan is under development for the Difficult Run watershed.

Surface waters identified within the eastern portion of the study area include the main stem of Pimmit Run and several headwater tributaries. These tributaries join the main stem of Pimmit Run in the highly urbanized areas of western Falls Church and Tysons Corner. An increased level of impervious cover resulting from the intense development throughout the Pimmit Run watershed has caused widespread channel degradation. Uncontrolled stormwater runoff from these impervious areas has created downstream scour and channelization of Pimmit Run and its tributaries. Most of the streams in the Pimmit Run watershed have been altered by concrete-lined substrates, which quickly convey stormwater and road runoff to Pimmit Run. Channel incision and/or widening, unstable sediment bars, and bank erosion provide evidence of this alteration. Most riparian buffers (i.e., streambank vegetation) associated with the first-order tributaries in this area have been disrupted or removed. A forested riparian buffer is associated with segments of Pimmit Run downstream of Leesburg Pike, where it provides some bank stability and shade.

The Scotts Run stream system, which flows northeast through the study area, originates in the intensely developed Tysons Corner area. The main stem of Scotts Run and its headwater tributaries drain major urban centers with very high levels of impervious cover. Portions of Scotts Run and most of its tributaries north of the DIAAH and Dulles Toll Road have been diverted through a series of road culverts that have altered stream morphology (form and structure) in the Scotts Run watershed. Over-widening and channelization of the streams near these culverts have caused erosion downstream. The headwater tributaries of Scotts Run are affected by the high percentage of impervious cover as evidenced by bank and channel instability. However, the segment of Scotts Run south of the development along Route 123 flows through a forested stream valley, which has reduced the rate of bank and channel erosion.

Between Tysons Corner and Dulles Airport, the study area bisects several large second-order streams, including Courthouse Spring Branch, Wolftrap Creek, Difficult Run, Sugarland Run and its tributaries, and tributaries to Horsepen Run. Streams in this portion of the alignment are relatively stable throughout their length north and south of the corridor. Most of the stream systems, except Sugarland Run and tributaries to Horsepen Run, are located east of Hunter Mill Road in areas of low-intensity development. Land use in this section of the alignment is composed of established or newly constructed residential areas adjacent to the forested stream valleys of these surface waters. Both Wolftrap Creek and Difficult Run are in stream valleys that have been designated as public parks. The forested riparian buffers of these streams provide bank stability and reduce the rate of erosion associated with channel alteration. However, localized erosion is occurring at the culverts and bridges along the DIAAH and Dulles Toll Road

due to the removal or displacement of the buffer for maintenance of the bridge crossings. The erosion has caused channel widening and increased sediment loads directly upstream and downstream.

The main stem of Sugarland Run and its tributaries, and the contributing surface waters of Horsepen Run are located between the towns of Reston and Herndon. The headwater tributaries of Sugarland Run drain the developed areas of Herndon and flow northeast to join the main stem of Sugarland Run along Fairfax County Parkway. Impervious areas have increased water velocities at the headwaters of these tributaries, thereby altering channel morphology. These tributaries are channelized throughout their lengths until they reach the main stem of Sugarland Run. Sugarland Run has been altered by beaver activity, which has caused several sections of the stream to become filled with sediment. In addition, the riparian buffer of this stream system has been removed to accommodate a commercial complex and overhead power lines.

Two headwater tributaries of Horsepen Run are located on the north and south sides of the DIAAH and Dulles Toll Road. The roadways serve as the drainage divide between the two streams. Both tributaries flow into larger streams that join Horsepen Run west of the DIAAH and Dulles Toll Road/Route 28 interchange. The tributary north of the DIAAH and Dulles Toll Road has been channelized throughout its length and diverted through several in-stream stormwater management ponds. The riparian buffer of the stream has been removed along the corridor and around the stormwater management facilities. The tributary south of the DIAAH and Dulles Toll Road is situated in a forested parcel that provides bank stability and reduces the rate of erosion throughout the channel. The stream is intermittent and conveys overland flow and seasonal base flows to a larger tributary of Horsepen Run.

The main stem of Horsepen Run and its tributaries run northwest through airport property and along the south side of the DIAAH and Dulles Toll Road. The main stem of Horsepen Run is relatively stable throughout its length except where it flows through undersized culverts and where localized erosion and silt deposition occurs. The banks are stabilized with riprap approximately 200 feet upstream of the proposed full LPA alignment to prevent the Dulles Greenway from being undermined by the stream. The forested buffer associated with the stream has been cleared in some areas for maintenance of access roads and property rights-of-way. The tributaries originating within airport property are channelized in their headwaters due to the removal of the buffer to accommodate parking and runway facilities. The buffers are reestablished as the tributaries flow farther north towards their confluence with Horsepen Run. A large tributary, Indian Creek, enters the main stem of Horsepen Run from the north, depositing sand and silt from an extensive beaver complex located upstream of the DIAAH and Dulles Toll Road.

Broad Run, located in Loudon County, is one of the largest second-order streams within the study area. It flows in a northeast direction and has small tributaries entering the main stem both upstream and downstream of the Dulles Greenway. The main stem of Broad Run is stable throughout its length due to a heavily forested riparian buffer and low-density land uses adjacent to the stream. However, removal of the buffer in and around the bridge span for the Dulles Greenway has caused localized erosion to occur, as evidenced by channel widening.

The tributaries entering Broad Run have been converted into ditches to convey surface runoff from adjacent construction sites. Silt and sand have been deposited in the channel substrates of these tributaries from upstream construction, and the stream's forested riparian buffers have been recently cleared for new development.

A tributary north of the Dulles Greenway flows east from the Route 607 interchange to enter the main stem of Broad Run. This stream is experiencing widespread siltation of the channel bed from increasing development within its headwaters and a beaver complex situated near its confluence with Broad Run. The beaver complex has created backwater conditions for most of the channel. A densely forested riparian buffer provides stream bank stability.

4.2.3.2 Surface Water Quality

All of the Commonwealth's surface waters that contribute to the Potomac River and its tributaries are classified according to uses designated by the VDEQ Water Quality Standards. State law dictates that surface waters are to be maintained to protect existing beneficial uses. The designated uses include aquatic life habitat, fishing, shellfish production, swimming, and drinking water. The types of waters that are monitored and evaluated for support of these designations are subdivided into six classes, and standards are applied for ambient water quality. All surface waters identified within the study area are designated as Class III or non-tidal waters.

The assessment of the Commonwealth's water quality is based on the evaluation of both ambient and biological water quality data collected by VDEQ, USGS, VDCR, the Virginia Department of Health, and the Fairfax County Department of Public Works and Environmental Services. The results of VDEQ's ambient water quality parameters monitoring were reported in the *Virginia Water Quality Assessment 1998 305(b) Report*. The results, in conjunction with sampling conducted by VDEQ in January 1999, were used to establish baseline conditions for those streams that bisect the study area. Available data for pH, dissolved oxygen, and temperature from sampling stations near the Dulles Corridor within Pimmit Run, Difficult Run, Sugarland Run, and Horsepen Run indicate compliance with the Commonwealth's water quality standards. These streams and Broad Run have been designated as fully supporting waters of all five designated uses.

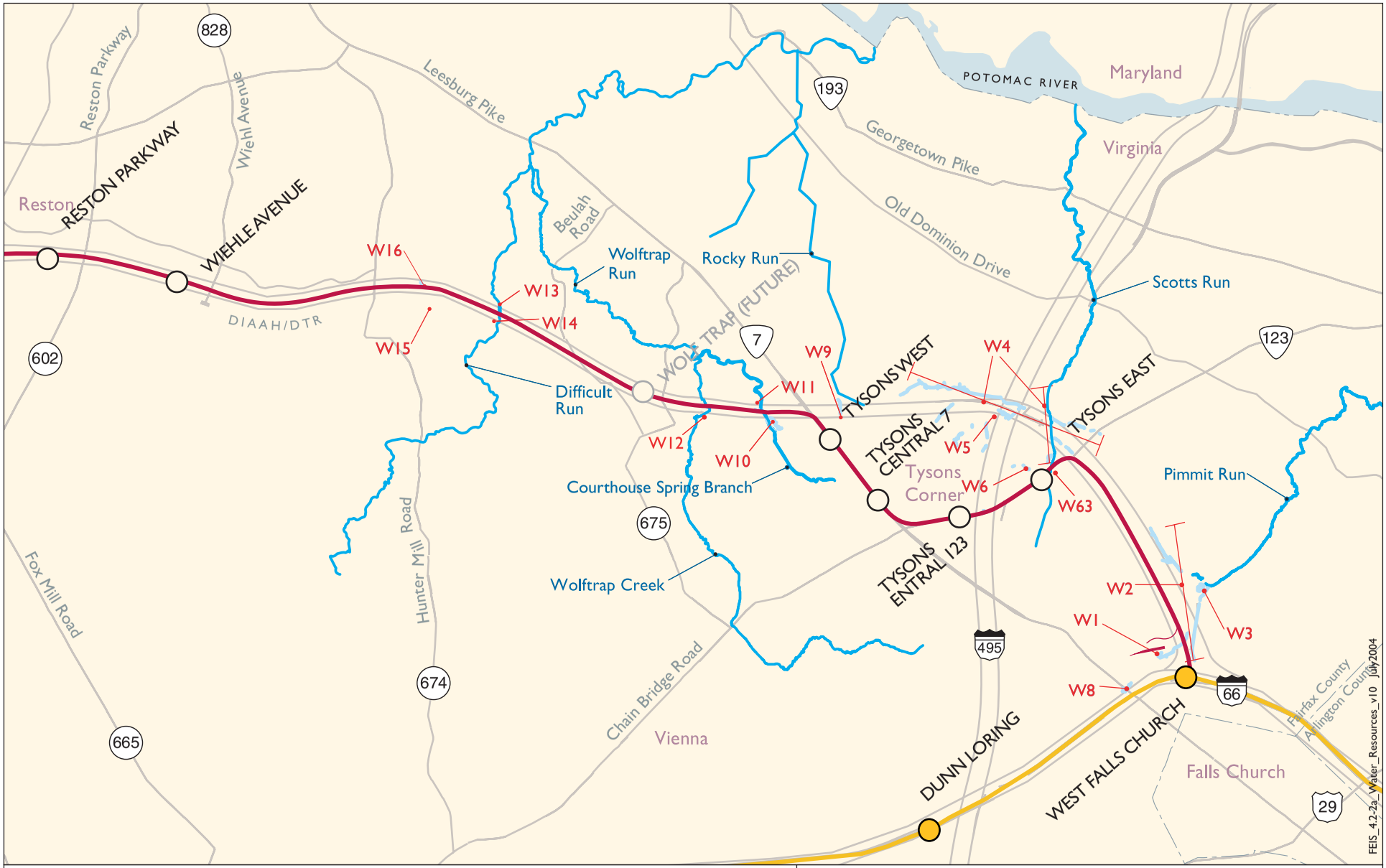
Surface waters located in the watersheds of Pimmit Run, Scotts Run, Difficult Run, and Sugarland Run were sampled for fecal coliform levels by the Fairfax County Health Department *(1999 Stream Water Quality Report,* Fairfax County 1999). The samples collected within all of these streams failed to meet the local water quality criteria, with none of the sites averaging under the limit in the past five years. Water quality data were not available for the portions of Broad Run and Horsepen Run located within the study area.

4.2.3.3 Wetland Systems

A total of 49 wetland systems were identified in the study area during field investigations conducted in December 2000 and February 2001. The locations of the wetland systems are shown on Figures 4.2-2a and 4.2-2b and listed in Table 4.2-1. For the purposes of this document, a wetland system may include a single forested, scrub-shrub, or emergent wetland, portions of perennial streams and their tributaries, and a combination of forested, scrub-shrub or emergent wetlands and any hydrologically connected streams and/or tributaries.

A jurisdictional determination by the USACE was issued on March 22, 2002, for most of the wetland systems identified within the project area (Appendix K). Wetlands identified within Dulles Airport property were delineated during the update to Dulles Airport's Master Plan. The jurisdictional determination for the wetlands on Dulles Airport was issued on September 28, 2001 (Appendix K). Jurisdictional determinations are valid for a period of five years, unless new information warrants revisions. As a result of modifications to project design, in August and September of 2004, additional coordination was

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LEGEND

- W1 — Wetland System Number
- Major Streams
- Tributary Streams
- Proposed Metrorail Alignment
- Existing Metrorail Orange Line and Stations
- Proposed Station
- County Boundary

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

0 3000 6000 FEET

Figure 4.2-2a

Water Resources

Dulles Corridor Rapid Transit Project



LEGEND

- W17 Wetland System Number
- Major Streams
- Tributary Streams
- County Boundary
- Proposed Metrorail Alignment
- Existing Metrorail Orange Line and Stations
- Proposed Station

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

0 3000 6000 FEET

Figure 4.2-2b

Water Resources

Dulles Corridor Rapid Transit Project

undertaken to supplement the jurisdictional determination near the alignment's crossing of Centerville Road (P-15).

The functions and values for the wetland systems identified within the corridor are included in Table 4.2-1.

Table 4.2-1: Wetland Systems within the Study Area

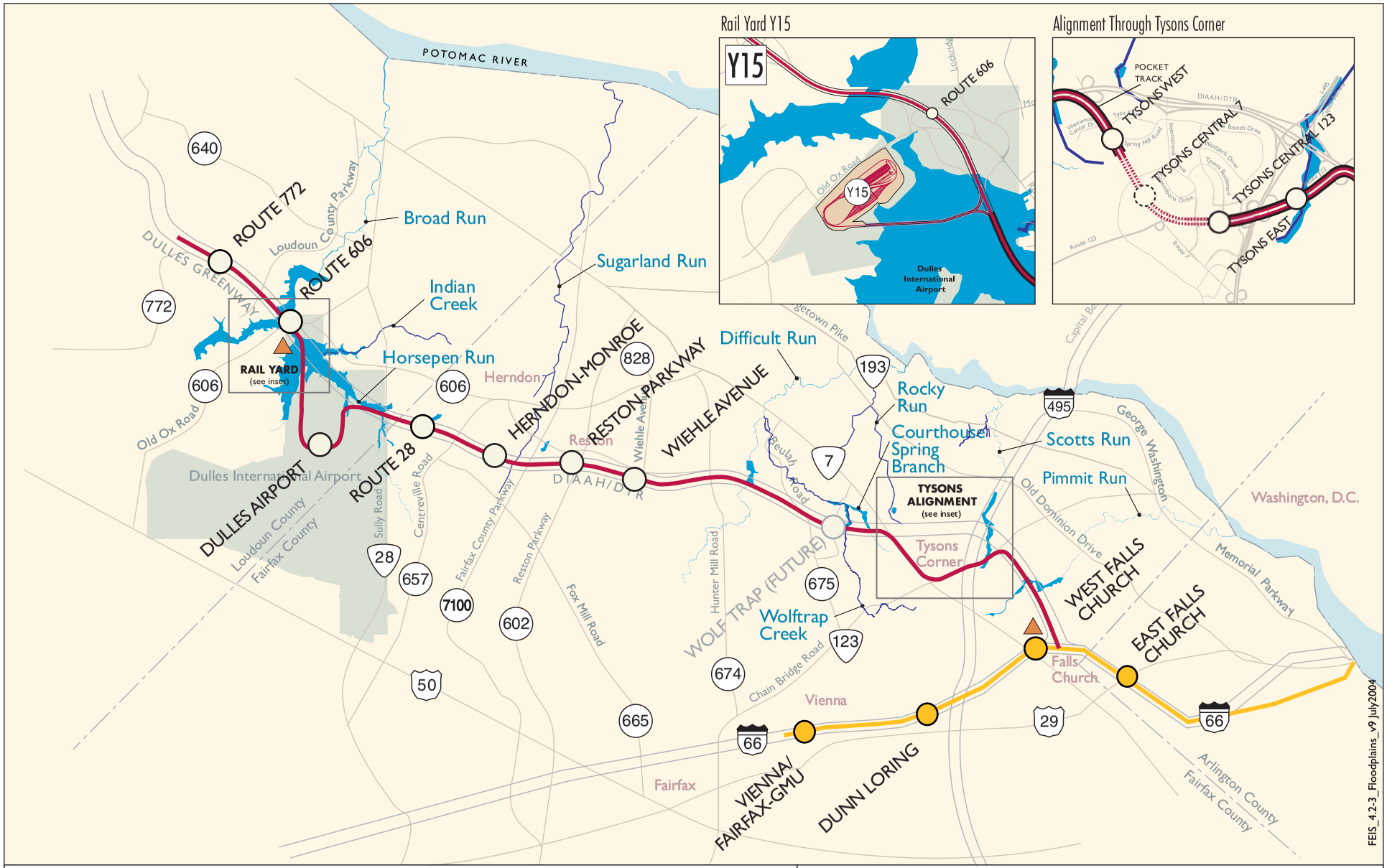
Wetland Number	Cowardin System Classification*	Principal Function(s) **
W-1	PFO1A	Floodflow Alteration, Sediment & Toxicant Retention
W-2 (tributary to Pimmit Run)	PFO1A, R2UB1, R2UB2, R4	Floodflow Alteration, Sediment & Toxicant Retention, Recreation
W-3	PFO1A	Floodflow Alteration, Sediment & Toxicant Retention
W-8	PEMIA	Sediment & Toxicant Retention
W-4 (Scotts Run)	PFO1A/C, PSS1A, R2UB1, and R2UB2	Floodflow Alteration, Fish & Shellfish Habitat, Production Export, Sediment/Shoreline Stabilization, Wildlife Habitat, Recreation, Uniqueness/ Heritage
W-63	R2UB1	n.a.
W-5	PSS1C	Groundwater Recharge/ Discharge, Floodflow Alteration, Sediment & Toxicant Retention
W-6 (Intermittent Stream)	PEM1E	Sediment & Toxicant Retention
W-9	R4SB2	n.a.
W-10	PFO1B and R2UB1	Groundwater Recharge/ Discharge, Floodflow Alteration, Sediment & Toxicant Retention, Production Export, Sediment/ Shoreline Stabilization, Wildlife Habitat, Uniqueness/ Heritage
W-11	PSS1C	Floodflow Alteration
W-12	PFO1/2B and R2UB1	Groundwater Recharge/Discharge, Fish & Shellfish Habitat
W-13 (Difficult Run)	PSS1A, PEM1A, and R2UB	Floodflow Alteration, Fish & Shellfish Habitat, Sediment & Toxicant Retention, Nutrient Removal, Production Export, Sediment/Shoreline Stabilization, Wildlife Habitat, Recreation, Uniqueness/Heritage
W-14	PSS1A	Floodflow Alteration, Sediment & Toxicant Retention, Nutrient Removal, Sediment/Shoreline Stabilization
W-15 (unnamed intermittent stream)	PFO1C and R2UB2	Sediment & Toxicant Retention, Sediment/Shoreline Stabilization
W-16 (unnamed intermittent stream)	PFO1C and R2UB2	Groundwater Recharge/ Discharge, Sediment & Toxicant Retention, Nutrient Removal, Wildlife Habitat
P-15	PEM	Stormwater Management
W-18 (Channel)	R4SB1	n.a.
W-80	PFO1A and PEM1A	Production Export, Wildlife Habitat, Floodflow Alteration, Nutrient Removal
W-17 (Sugarland Run)	PSS1A and R2UB1/S	Floodflow Alteration, Fish & Shellfish Habitat, Sediment & Toxicant Retention
W-20	PEM1C	Nutrient Removal, Wildlife Habitat
W-60	PFO1C and R4SB1	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment & Toxicant Retention, Production Export, Wildlife Habitat

Wetland Number	Cowardin System Classification*	Principal Function(s) **
W-61	PFO1C, PEM1C, R2UB2, and R2UB1	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment & Toxicant Retention, Nutrient Removal, Sediment/Shoreline Stabilization
W-62	R2UB1	n.a.
W-KKK	PEM	Floodflow Alteration
W-OWA	R2UB2	n.a.
W-FB/ FBA/F	PEM1A, PSS/PFO1A	Floodflow Alteration, Wildlife Habitat
W-RIS	PFO	Floodflow Alteration
W-26 (Unnamed Perennial Stream)	R2UB3	n.a.
W-21	PEM1A	Floodflow Alteration, Sediment &Toxicant Retention
W-22	R2UB2	n.a.
W-23	PFO1A	Floodflow Alteration, Nutrient Removal, Wildlife Habitat
W-RISA	PFO	Floodflow Alteration
W-24	PEM1A	Sediment & Toxicant Retention
W-MMMA	PEM1A	Floodflow Alteration, Sediment & Toxicant Retention
W-MMMB	PEM1A; PFO1B	Floodflow Alteration, Sediment & Toxicant Retention
W-MMMC1/ MMMC2/ MMMD/MMME	PFO1B; PEM1A	Floodflow Alteration, Sediment & Toxicant Retention
W-MMMF	PEM1A	Sediment & Toxicant Retention
W-MMMG	PFO1A	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment & Toxicant Retention, Wildlife Habitat
W-MMMI/ MMMJ	PFO1A, PFO1A	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment & Toxicant Retention, Wildlife Habitat
W-MMMK	PFO1A	Groundwater Recharge/Discharge, Floodflow Alteration, Sediment & Toxicant Retention, Wildlife Habitat
W-25 (Broadland Run)	R2UB2	n.a.
W-Y2	PEM1A, PFO1A, and R4SB2	Sediment & Toxicant Retention, Nutrient Removal, Wildlife Habitat
W-Y3	PSS1C	Groundwater Recharge/Discharge, Sediment & Toxicant Retention, Sediment/Shoreline Stabilization
W-Y1	PEM1/2B, PFO1A, and R2UB1/2	Floodflow Alteration, Sediment & Toxicant Retention, Nutrient Removal, Sediment/Shoreline Stabilization, Wildlife Habitat
W-Y5	R4UB1	n.a.
W-51	PEM1A, PFO1A, and R4SB3	Production Export
W-Y4	PFO1C	Wildlife Habitat, Visual Quality/Aesthetics
W-50	PEM1/2C, R4SB1	Sediment and Toxicant Retention

*Source: For further information about the wetlands classifications see *A Classification of Wetland and Deep-Water Habitats in the United States* (Cowardin, et al., 1979).
**Principal function as defined in the 1987 Corps of Engineers Wetland Delineation Manual
n.a. = The Wetland Delineation Manual includes functions for wetlands only.

4.2.3.4 Floodplains

According to FEMA, the 100-year floodplain refers to the areas along or adjacent to a stream or body of water that are capable of storing or conveying floodwaters during a 100-year frequency storm. Within the



LEGEND

- Floodplain Limits
- Streams
- County Boundary
- Rail Yard

PROPOSED METRORAIL ALIGNMENT

- At-grade/Retained Fill
- Aerial
- Underground
- Aerial Yard Lead

- Existing Metrorail Orange Line and Stations
- Proposed Station

Source: Federal Emergency Management Agency (FEMA)

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

0 1 2 3 MILES

Figure 4.2-3

Limits of 100-Year FEMA Floodplain within Study Area

Dulles Corridor Rapid Transit Project

study area, the 100-year floodplains are associated with larger stream systems in both Fairfax and Loudoun counties. These streams include Pimmit Run, Scotts Run, Courthouse Spring Branch, Wolftrap Creek, Difficult Run, Sugarland Run, Indian Creek, Horsepen Run, and Broad Run. Figure 4.2-3 shows the approximate locations of the 100-year floodplains within the study area.

The 100-year floodplains associated with Pimmit Run, Scotts Run, Sugarland Run, and their tributaries are situated in areas of intense development throughout Fairfax County. The encroachment of high-density commercial and residential land uses has reduced the forested component of these floodplains, replacing them with impervious cover or residential lawns. Frequent disruption and alteration of these floodplains occurs near the DIAAH and Dulles Toll Road due to the removal of vegetation for roadway maintenance and the use of concrete to stabilize stream banks.

The 100-year floodplains of Courthouse Spring Branch, Wolftrap Creek, and Difficult Run are surrounded by low-density residential land uses. Most of the forested stream valleys have been retained as public parks or recreation areas in which minimal disturbance is allowed. Vegetation has been removed within the floodplain of Difficult Run near the DIAAH and Dulles Toll Road for roadway and utility maintenance along the bridge span.

The widest 100-year floodplains (1,000 to 3,000 feet wide) within the study area occur along Broad Run, Indian Creek, and Horsepen Run. These floodplains are generally forested upstream and downstream of the study area, with some disturbance occurring near the Dulles Greenway for bridge and road maintenance. Within portions of the Indian Creek floodplain on Dulles Airport property, substantial amounts of vegetation have been removed for the construction of runways, access roads, and maintained ditches. Loudoun County's River and Stream Corridor Overlay District (RSCOD), which includes minor and major floodplains, and Chesapeake Bay Preservation Areas (CBPAs), is discussed in the following section.

4.2.3.5 Critical Areas

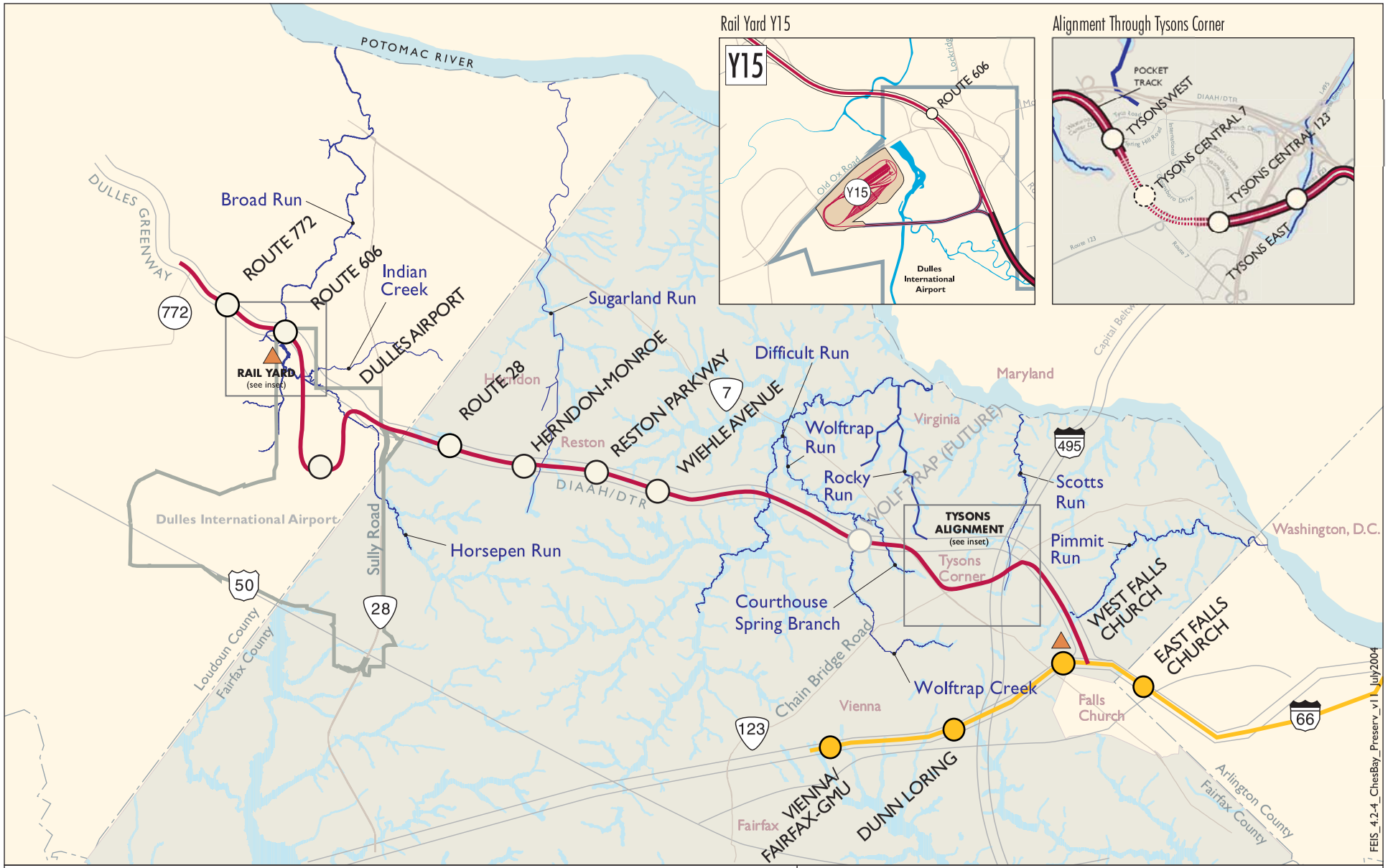
Several types of critical areas were investigated to assess whether they are present within the study area: CBPAs, coastal zone, environmental quality corridors (EQCs), RSCODs, impaired streams, wild natural trout streams, wild and scenic rivers, and hazardous wildlife attractants at or near airports.

A. Chesapeake Bay Preservation Areas

As defined in Section 4.2.1, the Chesapeake Bay Preservation Act (amended November 2003) establishes CBPAs in Fairfax County. Figure 4.2-4 depicts Fairfax County's CBPAs, which include Resource Protection Areas (RPAs) and Resources Management Areas (RMAs). The RPAs and RMAs are subject to the criteria and requirements contained in the Chesapeake Bay Preservation Ordinance (Chapter 118 of the Fairfax County Code) including the following:

- No more land shall be disturbed than is necessary to provide for the allowed use, development, or redevelopment;
- Indigenous vegetation shall be preserved to the maximum extent possible;
- Periodic maintenance of Best Management Practices shall be ensured through a maintenance agreement;
- Impervious cover shall be minimized;
- No net increase standard for phosphorus loadings, based on average imperviousness;
- Any land-disturbing activity that exceeds an area of 2,500 square feet shall comply with the sediment and erosion control requirement (Chapter 104 of the Fairfax County Code);

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LEGEND

- Resource Management Areas (RMA)
- Resouce Protection Areas (RPA)
- Major Streams

Source: Fairfax County GIS and Mapping Department

PROPOSED METRORAIL ALIGNMENT

- At-grade/Retained Fill
- Aerial
- Underground
- Aerial Yard Lead

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

- Existing Metrorail Orange Line and Stations
- Proposed Station
- County Boundary
- Rail Yard

0 1 2 3 MILES

Figure 4.2-4

Chesapeake Bay Preservation Areas (designated by RMAs and RPAs) Fairfax County, VA

Dulles Corridor Rapid Transit Project

- The Director shall require certification on all plans of development that all wetland permits will be obtained; and
- Stormwater runoff shall be controlled by the use of Best Management Practices contained in the County Code and Public Facilities Manual.

According to Fairfax County, areas designated as RPAs extend around all water bodies with perennial flow including Pimmit Run, Scotts Run, Difficult Run, Surgarland Run, and other perennial water bodies within the study area. The limits of the RPAs include a 100-foot-wide buffer on either side of these streams. Where wetlands are contiguous and connected by surface flow to tributary streams, a 100-foot buffer would be measured from the boundary of the wetland. In addition, the land within a major floodplain is considered a buffer area. The extent of the RMAs covers all areas in Fairfax County outside of the RPAs.

The construction of railroads and public roads is exempt from the Chesapeake Bay Preservation Act to the extent that the construction is allowed by the Zoning Ordinance and complies with the Erosion and Sediment Control Law (Section 10.1-560 of the Code of Virginia), Chapter 104 of the Fairfax County Code, and with the Stormwater Management Act (Section 10.1-603.1 of the Code of Virginia).

B. Coastal Zone

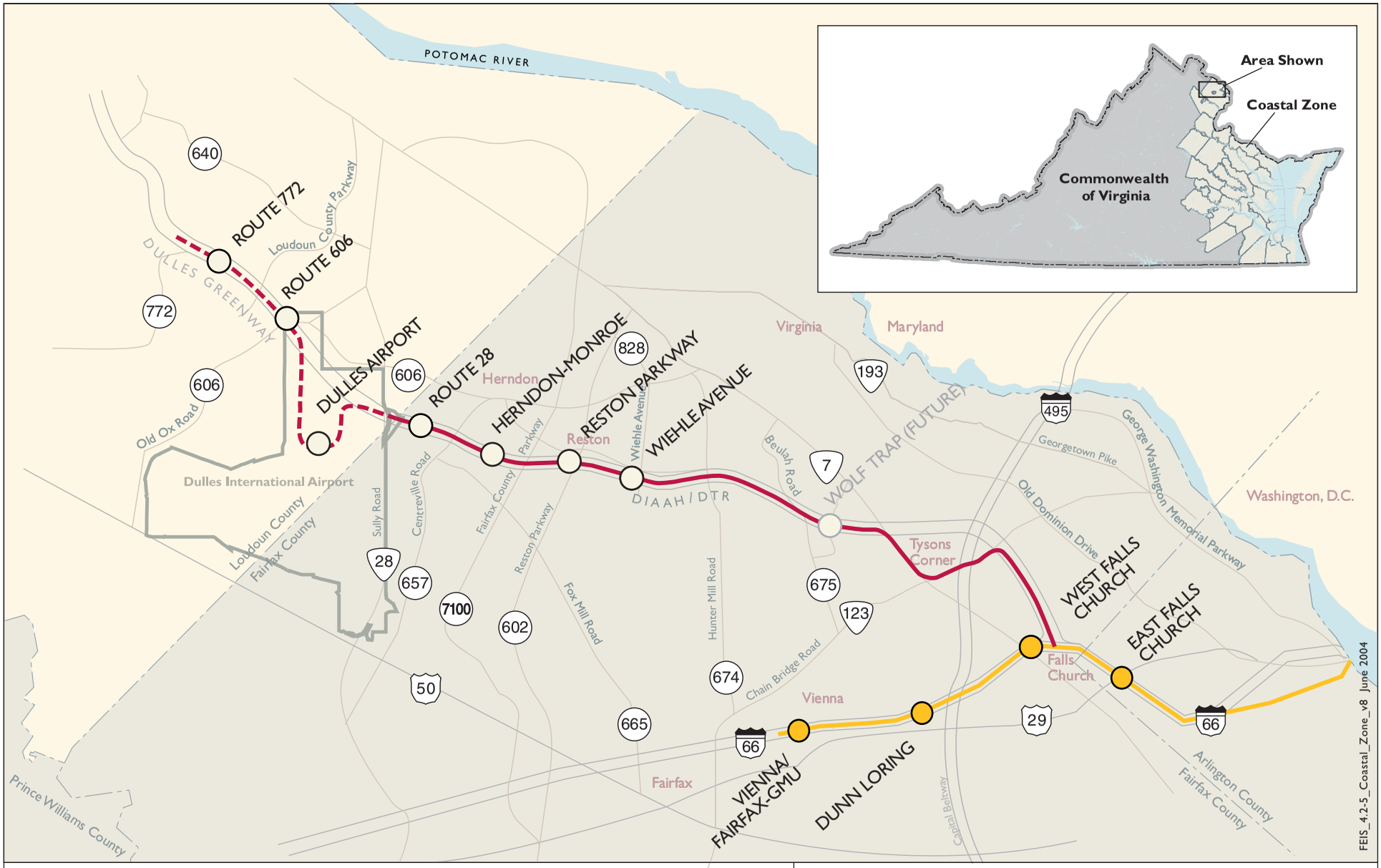
The coastal zone in the Commonwealth of Virginia encompasses 29 counties, 17 cities, and 42 incorporated towns all located in what is considered "Tidewater Virginia." Within the study area, only Fairfax County lies within the coastal zone. Figure 4.2-5 depicts the coastal zone. The Virginia Coastal Resources Management Program was established in 1986 to protect and manage the zone. The Virginia Coastal Resources Management Program is networked with several agencies administering the enforceable policies. The VDEQ, as the lead agency for Virginia's coastal program, is responsible for coordinating the Commonwealth's review of federal consistency determinations and helps agencies and localities develop and implement coordinated coastal policies. A federal Coastal Zone Management Act consistency determination for the Full LPA was issued by VDEQ in October 2004 (Appendix L).

C. Environmental Quality Corridors

Fairfax County's EQC system is based on the protection of the County's stream valleys. Efforts to minimize adverse impacts of land use and development on the County's streams are pursued under the Comprehensive Plan. The stream valley component of the EQC system includes the following elements: all 100-year floodplains as defined by the zoning ordinance; all areas of 15 percent or greater slopes adjacent to the floodplain, or if no floodplain is present, 15 percent or greater slopes that begin with 50 feet of the stream channel; all wetlands connected to the stream valleys; and all the land within a corridor defined by a boundary line which is 50 feet plus four additional feet for each percentage slope measured perpendicular to the stream bank.

The EQC designation, as policy guidance of the Comprehensive Plan, accomplishes voluntary preservation of stream valleys and associated environmentally sensitive features during the zoning process. EQC designations and boundaries are determined during the zoning process (the review of re-zonings, special exceptions, special permits, variances, and related development applications) through the application of criteria in the Comprehensive Plan. Development is controlled within the EQC only when such land is acquired by the County, when commitments are made by land owners and developers, when conditions are imposed through the zoning process, or when EQC areas also lie within regulated areas (e.g., Resource Protection Areas; floodplains).

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LEGEND

- Coastal Zone
- Water
- County Boundary
- State Boundary
- Proposed Metrorail Alignment
- Proposed Metrorail Alignment Outside the Coastal Zone
- Existing Metrorail Orange Line and Stations
- Proposed Station

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

0 2.25 4.5 9 MILES

Figure 4.2-5

Coastal Zone Commonwealth of Virginia

Dulles Corridor Rapid Transit Project

D. River and Stream Corridor Overlay District

The *Loudoun County Revised General Plan* identifies stream corridors as important in filtering out impurities in surface runoff moving toward a stream, as wildlife corridors, and in the preservation of valuable historic, archaeological, and scenic features. Figure 4.2-6 shows the River and Stream Corridor Overlay District (RSCOD) in Loudoun County. Loudoun County defines the RSCOD as containing the following:

- Rivers and streams draining 100 acres or more;
- 100-year floodplains;
- Adjacent steep slopes (slopes of 25% or greater), starting within 50 feet of streams and floodplains, extending no farther than 100 feet beyond the originating stream or floodplain;
- Adjacent management buffers that extend for 50 feet around surrounding floodplains and adjacent steep slopes; and
- Wetlands, riparian forests, and historic and archaeological sites that fall within the above elements.

A 100-foot minimum stream buffer protects rivers and streams when the 100-year floodplain and adjacent steep slope areas do not extend beyond either bank by 100 feet, and is considered part of the RSCOD. Under certain circumstances, the 50-foot management buffer could be reduced or eliminated by Loudoun County.

Loudoun County allows development and uses in the RSCOD that support or enhance the biological integrity and health of the river and stream corridor. Permitted uses are required to have minimal adverse effects on wildlife, aquatic life, and their habitats (riparian forests, wetlands, and historic and archaeological sites) and complement or enhance the hydrologic processes of the river and stream corridors including flood protection and water quality. Development within the RSCOD is limited to open space and recreational uses that are water-dependent: public water bodies; greenways and trails; historic and archaeological sites; stormwater management facilities; and agricultural and silviculture activities. Utilities and road crossings, rail crossings, bridges, and driveway crossings are allowed only when the environmental objectives of the RSCOD can be maintained or enhanced. The county also encourages land within stream corridors to be placed in permanent protective conservation easements.

E. Impaired Streams

According to the 1998 *303(d) Total Maximum Daily Load Priority List and Report*, Difficult Run is listed as an impaired stream from its confluence with Captain Hickory Run downstream to its confluence with the Potomac River. This section of Difficult Run is located several miles downstream of the study area. No other streams that bisect the study area are listed as impaired by VDEQ.

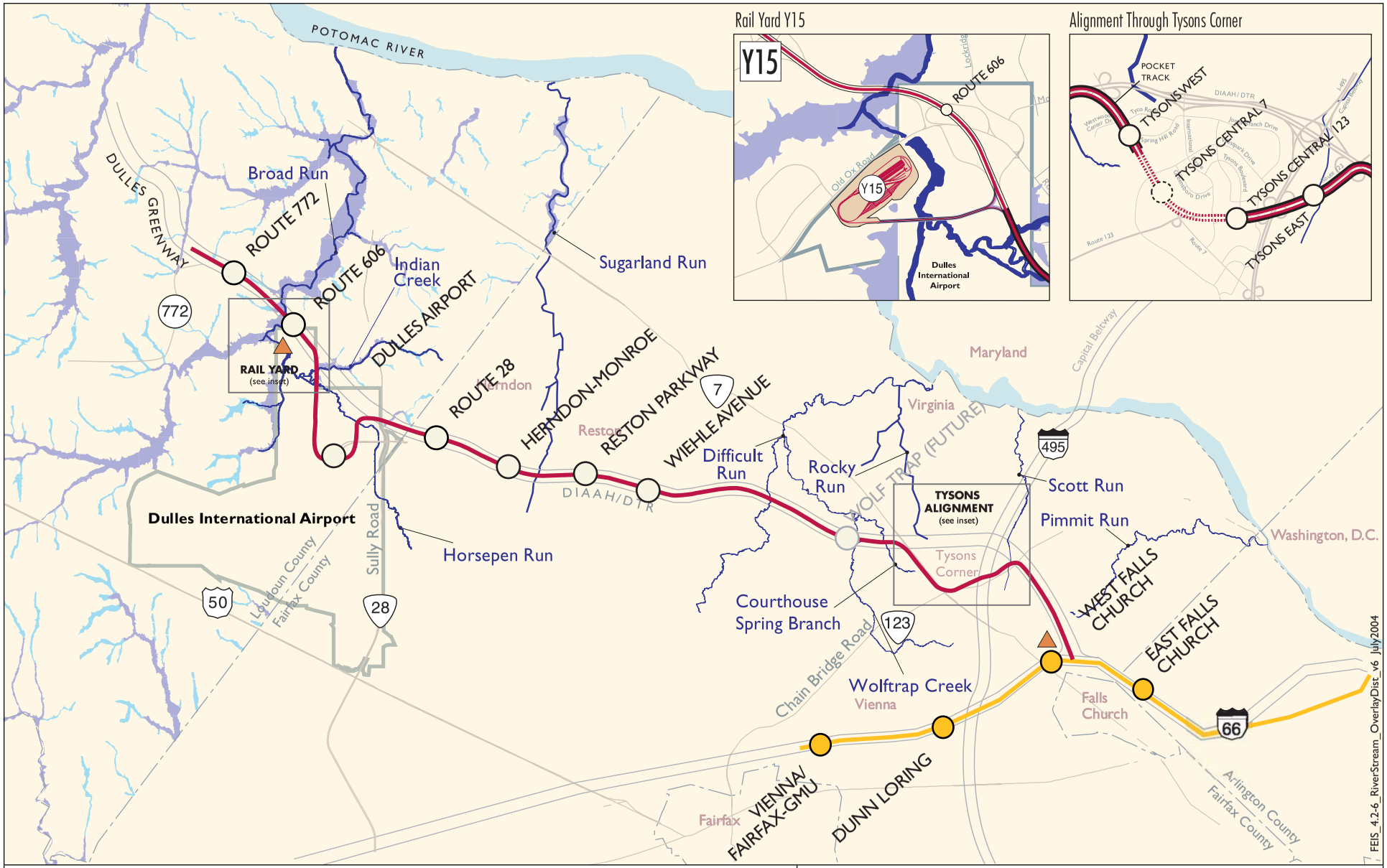
F. Wild Natural Trout Streams

The Virginia Department of Game and Inland Fisheries (VDGIF) has established a classification system for trout waters based on aesthetics, productivity, resident fish population, and stream structure. There are no surface waters in the study area that are designated as wild natural trout streams.

G. Wild and Scenic Rivers

There are no federal Wild and Scenic Rivers or State Scenic Rivers in or near the study area.

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LEGEND

- Major Floodplain
- Minor Floodplain
- Streams
- County Boundary
- Rail Yard

PROPOSED METRORAIL ALIGNMENT

- At-grade/Retained Fill
- Aerial
- Underground
- Aerial Yard Lead

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

- Existing Metrorail Orange Line and Stations
- Proposed Station

Source: Loudoun County Office of Mapping and Geographic Information

0 1 2 3 MILES

Figure 4.2-6

River and Stream Corridor Overlay District Loudoun County, VA

Dulles Corridor Rapid Transit Project

H. Hazardous Wildlife Attractants At or Near Airports

The FAA may review development and/or mitigation plans within five statute miles of an airport's aircraft movement areas, loading ramps, or aircraft parking areas to determine if such changes present potential wildlife hazards to aircraft operations. According to FAA Advisory Circular No. 150/5200-33, all species of wildlife can pose a threat to aircraft safety. However, some species are more commonly involved in aircraft strikes, such as gulls, waterfowl, raptors, doves, vultures, blackbirds, starlings, corvids (i.e., crows and ravens), wading birds, deer, and canids (i.e., wolves, foxes, coyote). The habitats for these species are mainly wetland areas that could be hazardous wildlife attractants. Based on the FAA circular, relocated wetlands, relocated and new stormwater management ponds, and similar alterations to wetlands as defined above, within up to 10,000 feet of an airport, must be assessed for their ability to increase hazardous wildlife.

4.2.4 LONG-TERM EFFECTS

The long-term effects to water resources from the proposed implementation of the No Build Alternative and the full LPA are discussed below. Long-term effects are those that would permanently alter the hydrology and function of the water resource. For example, excavating a floodplain would permanently alter its ability to attenuate floodwater; filling a wetland would permanently alter its hydrology and its ability to function as a wetland. Furthermore, failure to control stormwater and sediments from a construction site could permanently affect water quality and function of a water resource.

In compliance with Federal and state regulations, efforts were made to avoid impacts to wetland systems and floodplains. In several cases, station facilities and/or the alignment were shifted to avoid or minimize their effect on several wetlands and/or floodplains. In areas where impacts are unavoidable, appropriate and practicable compensatory mitigation would be implemented.

The following resources and designations do not occur in the Dulles Corridor and are not discussed below: wild natural trout streams, wild and scenic rivers, and state scenic rivers.

A summary of the effects of the No Build Alternative, the Wiehle Avenue Extension, and the full LPA on water resources is presented in Table 4.2-2.

Table 4.2-2: Effects to Water Resources

Water Resource	No Build Alternative (2025)	Locally Preferred Alternative		
		Wiehle Avenue Extension Opening Year (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
Pimmit Run (W-2)	None	Proximity[4] Floodplain[5] CBPA[6] Water Quality[6]	Proximity[4] Floodplain[5] CBPA[6] Water Quality[6]	Proximity[4] Floodplain[5] CBPA[6] Water Quality[6]
Scotts Run (W-4)	None	Floodplain[5] CBPA[6] EQC[6]	Floodplain[5] CBPA[6] EQC[6]	Floodplain[5] CBPA[6] EQC[6]
Unnamed Perennial Stream (W-4)	None	None	None	None
Intermittent Stream (W-63)	None	None	None	None
Intermittent Stream (W-9)	None	None	None	None
Difficult Run (W-13)	None	Proximity[4] Floodplain[5]	Proximity[4] Floodplain[5]	Proximity[4] Floodplain[5]
P-15	None	None	None	Wetland Impact (0.6 acre)
W-16	None	Proximity[1]	Proximity[1]	Proximity[1]
Sugarland Run (W-17)	None	None	None	Proximity[1]
Channel (W-18)	None	None	None	Proximity[1]
W-80	None	None	None	Wetland Impact (0.1 acre)
W-60	None	None	None	Wetland Impact (0.1 acre)
W-61	None	None	None	Proximity[1] Floodplain[2] EQC[3]
W-FB/FBA/FF	None	None	None	Wetland Impact (0.4 acre)[4] Proximity[1]
W-RIS	None	None	None	Wetland Impact (0.2 acre)[5] Floodplain[2] RSCOD[4]
Unnamed Perennial Stream (W-26)	None	None	None	Proximity[1] RSCOD[4]
W-RIS	None	None	None	Wetland Impact (3.1 acres)[5] Floodplain[2] RSCOD[4]
W-RISA	None	None	None	Wetland Impact (0.1 acre)[5]
W-MMMA	None	None	None	Wetland Impact (0.1 acre)
W-MMMB	None	None	None	Wetland Impact (0.1 acre)
W-MMCI/MMD	None	None	None	Wetland Impact (0.2 acre)
W-MMMG	None	None	None	Wetland Impact (0.2 acre)
Broad Run (W-25)	None	None	None	Floodplain[2] RSCOD[4]

Water Resource	No Build Alternative (2025)	Locally Preferred Alternative		
		Wiehle Avenue Extension Opening Year (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
W-50	None	None	None	Wetland Impact (0. 1 acre) Stream Impact (25 linear feet) RSCOD[4]
W-51	None	None	None	Wetland Impact (0.2 acre) Stream Impact (220 linear feet) RSCOD[4]

CBPA – Chesapeake Bay Preservation Areas

EQC – Environmental Quality Corridors (previously designated by Fairfax County)

RSCOD – River and Stream Corridor Overlay District

1. Proximity to construction could alter the hydrology and/or function of water resources.
2. Potential effect to 100-Year Floodplain. However, no increase in floodplain elevation of more than one foot is anticipated.
3. Minimal effects, use of Best Management Practices assumed/required. Construction of a railroad and associated facilities is exempt from the Chesapeake Bay Preservation Ordinance when construction complies with County and State codes for stormwater and sediment/erosion control.
4. Minimal effect, use of Best Management Practices assumed/required. Rail and road crossings are allowed when RSCOD environmental objectives can be maintained or enhanced.
5. Permanent and temporary impacts due to the vegetative class change from forested to emergent wetland after bridge construction.

4.2.4.1 No Build Alternative

Under the No Build Alternative, there would be no effects to water resources from the Dulles Corridor Rapid Transit Project. However, effects from improvements assumed under this alternative could occur and are the responsibility of the agencies and jurisdictions implementing the improvements.

4.2.4.2 Wiehle Avenue Extension

The Wiehle Avenue Extension crosses seven surface waters: an unnamed tributary to Pimmit Run (W-2), Pimmit Run, Scotts Run, Courthouse Spring Branch, Wolftrap Run, Difficult Run and an intermittent stream (W-15). Four wetland systems would be affected by the Wiehle Avenue Extension: W-2, W-4, W-13 and W-16. Impacts to these resources and affiliated floodplains and critical areas are discussed below.

The location of stormwater management P-6 was previously identified as having a potential wetland impact. In order to avoid this impact, the pond was shifted to be outside the wetland area.

North of the Dulles Connector Road and I-66 interchange, the alignment would cross an unnamed perennial stream (part of W-2) that is piped under the Dulles Connector Road to join a concrete-lined tributary to Pimmit Run. The proposed the Wiehle Avenue Extension alignment would use the existing stormwater management facilities along the Dulles Connector Road. Because the stream has already been piped under the existing roadway, it is not anticipated that the construction and operation of the Wiehle Avenue Extension would permanently affect the hydrology or function of the stream.

The Wiehle Avenue Extension alignment would also cross Pimmit Run. A new bridge structure would be added within the median of the Dulles Connector Road to span the stream. Piers would be placed within the 100-year floodplain of the stream to support this new bridge section. The new bridge piers would be placed parallel to existing highway bridge piers and would have minor effects on the floodplain. The new

bridges are not anticipated to constrict the channel's water flow or change the 100-year floodplain surface elevation. On-site flooding would not affect the proposed bridge structure, which would be located well above the floodplain elevation. Additionally, off-site flooding risks would not change because there would be no change in floodplain elevation.

Piers for the bridge extension over Pimmit Run would also be placed within the RPA of the stream. Despite the permanent pier structures, no further disturbance to the RPA is anticipated because most of the area near the proposed bridge spans has already been cleared and graded to support existing bridge structures. Water quality in Pimmit Run would not be substantially altered because of the limited amount of new impervious surface area added and pollution constituents that could enter Pimmit Run. Coordination will continue with Fairfax County to determine if this water resource would be designated as an EQC. If such designation occurs, appropriate Best Management Practices would be employed to avoid or minimize impacts.

Tie breaker station 2 (B-2) would be located on the north side of the Dulles Toll Road, just north of its crossing of Pimmit Run. B-2 is located near a concrete-lined flume that directs road runoff to Pimmit Run. Due to the existing conditions and the fact that the tie breaker station would not be a source of excessive runoff or pollutants, no long-term effects on the water quality or the existing hydrology of this feature or Pimmit Run are expected.

The Wiehle Avenue Extension alignment would also be located partially within the RPA of the unnamed perennial stream piped under the Dulles Connector Road that joins a concrete-lined tributary to Pimmit Run. The RPA extends along the Dulles Connector Road until Idylwood Road. However, because the Wiehle Avenue Extension alignment would be in the median of the existing roadway and would not disrupt the hydrology or function of this stream, long-term effects to the RPA are not anticipated. Because only minimal changes would occur within the designated CBPA and RPA for Pimmit Run, these critical areas would not be affected.

Proposed Tysons East Station facilities would be adjacent to Scotts Run, a designated CBPA and EQC by Fairfax County. The Tysons East Station would be an aerial station spanning the stream. Piers to accommodate the station and facilities would be located outside of Scotts Run, but within the 100-year floodplain and the RPA for the stream. To avoid long-term effects to water quality and reduce existing nonpoint source pollution in the area, Best Management Practices would be implemented including the construction of a stormwater management pond in the southwest corner of the site. The site would be designed such that runoff would flow into the pond during and after construction. Additionally, the quantity of water would be appropriately maintained. Therefore, minimal long-term effects to this surface water resource and water quality are anticipated.

The floodplain of Scotts Run would not be affected by the placement of piers for the bridge structure. The new piers would be parallel with existing bridge piers and they are not anticipated to constrict the channel's water flow. No change in the 100-year floodplain surface elevation is anticipated. On-site flooding would not affect the proposed bridge structure, and off-site flooding risk would not change. Therefore, the CBPA and EQC designations associated with Scotts Run would not be substantially affected. At the Tysons East Station, the facilities would shade a portion of a perennial stream (W-63), which would have a minimal effect on the stream. This stream drains to Scotts Run.

Several second-order streams, including Courthouse Spring Branch, Wolftrap Creek and Difficult Run, would be crossed by the alignment of the Wiehle Avenue Extension. Most of these streams, with the exception of Difficult Run, have been channeled under the DIAAH.

At the Difficult Run crossing, a concrete section would be added to span the gap between the existing DIAAH and the Dulles Toll Road bridge lanes over the stream. Piers would be placed within the 100-year floodplain of Difficult Run. However, the floodplain would not be affected by the placement of these piers, because they would be parallel to the existing piers. The bridge structures are not anticipated to constrict the channel, or change the 100-year floodplain surface elevation. The proposed bridge structure, which would be located well above the floodplain elevation, would not affect on-site flooding. Off-site flooding risk would not change either because no change in floodplain elevation would be associated with the bridge piers. For these same reasons, it is anticipated that the new bridge crossings would result in minimal long-term effects to the RPA and floodplain of Difficult Run. Coordination will continue with Fairfax County to determine if this water resource would be designated as an EQC. If such designation occurs, appropriate Best Management Practices would be employed to avoid or minimize impacts.

Water quality in Difficult Run, one of the two streams that are monitored by VDEQ within the study area, would be minimally affected because of the limited amount of new impervious surface and pollution constituents that would enter these streams. However, the proposed stormwater management facilities at the Tysons West Station would improve downstream water quality in Difficult Run by controlling nonpoint source pollution originating in Tysons Corner.

The Wiehle Avenue Extension would cross the 100-year floodplain and the RPAs of Courthouse Spring Branch and Wolftrap Creek. Because the floodplains of those streams are contained within the concrete-lined channels at the location of the proposed bridge structures, and because the piers of these bridges would not be placed within the channels, no impacts to the floodplains associated with these waters would occur.

A proposed stormwater management pond would be located immediately west of W-16. Long-term effects to W-16 are not anticipated. Best Management Practices, as described in the *Virginia Erosion and Sediment Control Handbook* would be used to prevent long-term effects, such as bank failure.

4.2.4.3 Full LPA

In addition to the effects discussed for the Wiehle Avenue Extension, the full LPA would cross two additional surface waters, Horsepen Run and Broad Run. Proximity of the Herndon-Monroe station would have minor effects on Sugarland Run. Fourteen additional wetland systems would be affected by the full LPA: W-18, W-60, W-80, W-FB/FBA/F, W-RIS (in two separate areas of this large system), W-26, W-50, W-51, W-RISA, W-MMMA, W-MMMB, W-MMMC1/MMMD, and W-MMMG. Impacts to these resources and affiliated floodplains and critical areas are discussed below.

As design of the project has progressed, planning for stormwater management has resulted in confirmation of the need for a stormwater management pond in the vicinity of an existing stormwater management facility that has established hydrophytic vegetation. As a result, stormwater management pond P-15 has been identified as having a wetland impact of 0.3 acre.

Sugarland Run is in the vicinity of the Herndon-Monroe facility. The full LPA would not cross this resource but would have minor impacts on the water quality of this stream because of the limited amount of new impervious surface resulting in runoff and pollutants that would enter these streams. Sugarland Run is one of two streams that are monitored by VDEQ within the study area.

The full LPA would cross the 100-year floodplain and the RPA associated with Sugarland Run. No long-term effects to these resources are expected because the full LPA would span the floodplain. In addition, piers associated with the bridge structures would not be located within the channel of the stream.

Another stormwater management pond would be located on a drainage ditch near the Dulles Toll Road ramp at Fairfax County Parkway. Stormwater from the drainage ditch is currently conveyed via a concrete-lined channel (W-18). Due to the existing conditions of W-18, impacts are expected to be minimal. It is likely that the stormwater facility would help to reduce sediment loads and control surges in water flow to W-18.

The southwest corner of the proposed west parking facility for the Herndon-Monroe Station would permanently affect 0.1 acre of an emergent wetland (W-80). Appropriate Best Management Practices would be used during construction to avoid additional long-term impacts to the entire wetland system.

The potential parking structure to the west of the existing structure at the proposed Herndon-Monroe Station would be located on a temporary conservation easement. The plat map shows a temporary conservation easement through Parcel 27, property of Fairfax County Board of Supervisors, Hunter Mill District, Fairfax County, Virginia. The area is described as a temporary conservation easement that shall remain valid until such time as property is developed with adequate stormwater management and Best Management Practices. The proposed west structure would cover a very small area of the easement. Adequate stormwater management facilities would be installed and appropriate Best Management Practices would be used during construction and operation of the facility.

The south entrance/exit to the south structure at Route 28 Station would permanently affect 0.1 acre of a forested wetland (W-60). Initially, the parking facility affected more of the wetland, but the facility was reconfigured to minimize wetland impacts. The hydrology of the wetland system would not be affected because a structure proposed under the entrance/exit would allow for the flow of water. An EQC associated with W-61 could be affected by the aerial pedestrian walkway to the north structure at Route 28 Station.

The crossing of the Horsepen Run stream corridor occurs within a designated RSCOD; however, no permanent impacts to the RSCOD are expected. The crossing would use established Best Management Practices to maintain and enhance the environmental objectives of the RSCOD.

The floodplain of Horsepen Run would not be affected by the placement of new piers for the bridge structure. The new piers would be parallel with the piers of the existing bridges. The bridge structure is not anticipated to constrict the channel, or change the 100-year floodplain surface elevation. On-site flooding would not affect the proposed bridge structure, which would be located well above the floodplain elevation. Off-site flooding risk would not change because there would be no change in floodplain elevation associated with the bridge piers.

As the full LPA alignment exits the western side of Dulles Airport property, the proposed aerial structure from Autopilot Drive to the median of the Dulles Greenway would affect approximately 0.4 acre of W-FB/FBA/FF and 0.2 acre of forested wetland W-RIS. Since emergent wetlands would re-establish under the bridge, the impact is considered a permanent change in vegetative classification. Additionally, the full LPA would span Horsepen Run and the associated RSCOD again. Piers to support the alignment would be placed within the forested wetlands, the 100-year floodplain, and the RSCOD for Horsepen Run (W-26). However, the piers would be designed and placed in compliance with all applicable local, state and federal regulations pertaining to wetlands and floodplain involvement. It is not anticipated that there

would be any changes in floodplain surface elevations. Therefore, the full LPA would not affect the 100-year floodplain associated with Horsepen Run. A rail crossing would be allowed within the RSCOD for Horsepen Run when the environmental objectives of the RSCOD can be maintained or enhanced. Mitigation measures are discussed in Section 4.2.7.

Piers for the bridge extension over Broad Run would be placed within the 100-year floodplain. Despite the permanent pier structures, no further disturbance to the floodplain is anticipated because most of the area near the proposed bridge spans has already been cleared and graded to support existing bridge structures. Water quality in Broad Run would not be substantially altered because of the limited amount of new impervious surface area and pollution constituents that could enter Broad Run. No long-term effects are expected to the Broad Run RSCOD designation. The crossing would use established Best Management Practices to maintain and enhance the environmental objectives of the RSCOD.

The facilities associated with the Route 606 Station, as proposed, encroach upon a small portion of the FEMA-designated and Loudoun County major floodplains of Broad Run.

The Route 772 Station facilities on the north side of the Dulles Greenway would directly affect 0.2 acre of a palustrine forested wetland (W-51) and 220 linear feet of an associated tributary to Broad Run. A road leading to substation TP-15 would affect 0.1 acre of a palustrine emergent wetland and 25 linear feet of an associated intermittent tributary to Broad Run (W-50). The stream would be piped under the road.

Where the yard lead enters S&I Yard Site 15, approximately 0.1 acre of forested wetland W-RISA and 3.1 acres of forested wetland W-RIS would be affected. Impacts to W-RISA and W-RIS would be considered permanent changes in the vegetative classification from forested to emergent wetlands. S&I Yard Site 15 and its yard lead would also affect a small portion of the 100-year floodplain of Horsepen Run associated with W-RIS as well as cross the RSCOD of Stallion Branch associated with W-RIS. Piers would be placed on the banks of the stream, within the forested 100-year floodplain of Horsepen Run so that the full LPA would span the stream and minimize impacts. In addition to spanning the streams, Best Management Practices would also be used to minimize disturbance of the streams, W-RIS, and the RSCOD.

Wetlands W-MMMA (0.1 acre) and W-MMMB (0.1 acre), located at the northwest portion of the yard, would be affected by the proposed parking area. Additionally, a portion of Wetland W-MMMC1/MMMD (0.2 acre) and W-MMMG (0.2 acre) would be affected by the S&I Yard Site 15.

4.2.5 CONSTRUCTION EFFECTS

The short-term construction effects of implementing the No Build Alternative, the Wiehle Avenue Extension, and the full LPA are discussed below.

4.2.5.1 No Build Alternative

Under the No Build Alternative, there would be no construction-related effects to water resources from the Dulles Corridor Rapid Transit Project. However, there could be construction-related effects from the improvements assumed under this alternative. Identification of those effects is the responsibility of the agencies and jurisdictions implementing the improvements.

4.2.5.2 Wiehle Avenue Extension

Construction-related effects would result from land disturbing activities that may temporarily contribute to surface water quality impacts. Best Management Practices, as outlined in the guidance, policies, standards, and specifications contained in the *Public Facilities Manual* (2001), *Virginia Erosions and Sediment Control Handbook* (1992), *Northern Virginia Best Management Practices Handbook* (1992), *Best Management Practoces Maintenance in the Occoquan Watershed* (1992), *Chapter 104 (Erosion and Sediment Control) of Fairfax County Code* (amended 2003), and all other applicable requirements/guidance, would be used to minimize construction-related impacts to these resources.

4.2.5.3 Full LPA

Construction-related impacts would be similar to those described for the Wiehle Avenue Extension, with the exception of an aerial structure that would be constructed in the vicinity of Autopilot Drive. As the full LPA exits the Dulles Airport from Autopilot Drive to the median of the Dulles Greenway, an aerial structure would be constructed over forested wetlands W-FB/FBA/F (0.4 acre) and W-RIS (0.2 acre) causing a change in the vegetative class from forest to emergent. In addition to the permanent impacts identified with this structure, bridge construction would temporarily affect the emergent wetland that would re-establish after construction is complete. In a similar circumstance, the Site 15 yard lead would be constructed over forested wetland W-RIS causing a permanent impact to the forested wetland and a temporary impact to the emergent wetland that would re-establish after construction is complete.

Wetland System W-60 would be temporarily affected by restricting surface water flow while a structure is constructed under the entrance/exit of the proposed Route 28 Station. Wetland System W-50 would be temporarily affected by restricting surface flow while an access road to an ancillary facility is being constructed.

The wetland system associated with P-15 (0.3 acre) would be temporarily impacted during construction of the planned stormwater management pond. It is expected that the wetland would reestablish over time after construction is completed. Impacts would be mitigated as described in Table 4.2-3.

4.2.6 MITIGATION

This section describes the mitigation measures for long-term effects on surface waters, wetlands, floodplains, critical areas, and hazardous wildlife attractants (at or near Dulles Airport).

4.2.6.1 Surface Waters and Water Quality

Bridges that span a stream or tributary and concrete-lined streams that are converted to pipe(s) would not require mitigation. For the two natural streams converted to culvert or pipe, Tributaries W-50 and W-51, DRPT would plant riparian buffers near affected areas. Once the project is operational, Best Management Practices would be used to minimize impacts to groundwater resources.

During construction, DRPT would develop a Stormwater Management Plan and comply with applicable federal, state regulations and local ordinances. In addition, the project team would follow Best Management Practices in the *Virginia Erosion and Sediment Control Handbook*, the *Northern Virginia Best Management Practices Handbook*, and the *Public Facilities Manual for Stormwater Management and Groundwater Protection*.

4.2.6.2 Wetland Systems

Section 404 of the Clean Water Act provides regulatory authority to the USACE to issue or deny permits for the discharge of dredged or fill material into waters of the United States, including special aquatic sites (e.g., wetlands, mud flats, riffle pool complexes, and vegetated shallows). Appropriate and practicable compensatory mitigation is required for unavoidable adverse impacts to aquatic resources. In determining compensatory mitigation, the functional values lost by the affected resource must be considered in developing the goals of the mitigation plan. U.S. DOT Order 5660.1A requires transportation facilities and projects to assure the protection, preservation, and enhancement of the nation's wetlands to the fullest extent practicable during the planning, construction, and operations.

Coordination with the USACE, VDEQ and EPA has been conducted to identify Waters of the United States, determine the extent of impact to those resources, and to determine appropriate mitigation for impacts. Wetland impacts have been avoided and minimized to the extent possible by placing the majority of the alignment within existing transportation rights-of-way and traversing wetland areas on structure as opposed to fill where possible to reduce potential impacts. For unavoidable impacts, appropriate mitigation will be provided for jurisdictional wetlands regulated under Section 404 of the Clean Water Act (33 U.S.C. 1344).

The majority of wetland impacts are associated with S&I Yard 15, located on Dulles Airport property. Alternative sites for Metrorail Storage and Inspection were evaluated to avoid and minimize impacts to wetlands. Most of these sites were eliminated due to potential extensive impacts, such as floodplain involvement, wetlands, property acquisition, including a historic resource, and physical constraints, such as steep slopes, of the sites. Later it was recommended that the initial site chosen and carried forward during the alternatives analysis be reconsidered. Several other sites were evaluated and later determined to also have extensive environmental constraints, inconsistencies with land use plans and operational constraints. As a result of the Draft EIS technical analysis, public comment, and agency coordination S&I Yard 15 was ultimately selected as the preferred site. The potential impacts to wetlands associated with this site (3.8 acres) have been minimized through design of the facility to avoid adjacent wetland areas through horizontal relocation of facilities and by use of aerial structure to span wetlands instead of requiring placement of fill in wetlands.

The USACE issued a jurisdictional determination delineating the waters of the US, including wetlands, associated with the Dulles Corridor Rapid Transit Project in March of 2002 (Appendix K). A separate jurisdictional determination was provided for waters of the US located at Dulles International Airport in September of 2001 (Appendix K). As a result of modifications to project design, in August and September of 2004, additional coordination was undertaken to supplement the jurisdictional determination near the alignment's crossing of Centerville Road (P-15).

Additional coordination between USACE, VDEQ and the EPA took place in March of 2003 (Appendices J and K). Given the length and complexity of the project, the agencies agreed that a total of one to two acres of permanent wetland impact is minimal relative to other similar projects. Furthermore, the USACE has indicated that an individual permit would be appropriate for the project. During final design, a Joint Permit Application will be filed for the project with VDEQ.

In accordance with Clean Water Act Section 404(b)(1) guidelines and U.S. DOT Order 5660.1A, project planning and design activities were conducted to avoid and minimize impacts to wetland resources to the maximum extent practicable. Based upon these efforts and coordination with the USACE, complete avoidance of impacts to waters of the United States, including wetlands, is not practicable for the full LPA.

Minor impacts would occur from bridge support piers, construction of stations and facilities, and stormwater management outfalls. However, as part of the planning and preliminary design processes, modifications and refinements were undertaken to avoid or minimize impacts to the extent possible. Table 4.2-3 details the acreages of wetland systems that would be affected by the implementation of the project and the amount (based on regulated ratios) of wetlands proposed for mitigation. Wetland systems W-RIS (two separate areas), W-FB/FBA/F, and W-RISA are located under proposed aerial structures. Due to bridge construction, these wetlands would incur a change in vegetative class from forested wetland to emergent. This change in vegetative class would result in permanent effects to the forested wetland and temporary impacts to the emergent wetland that would re-establish after construction.

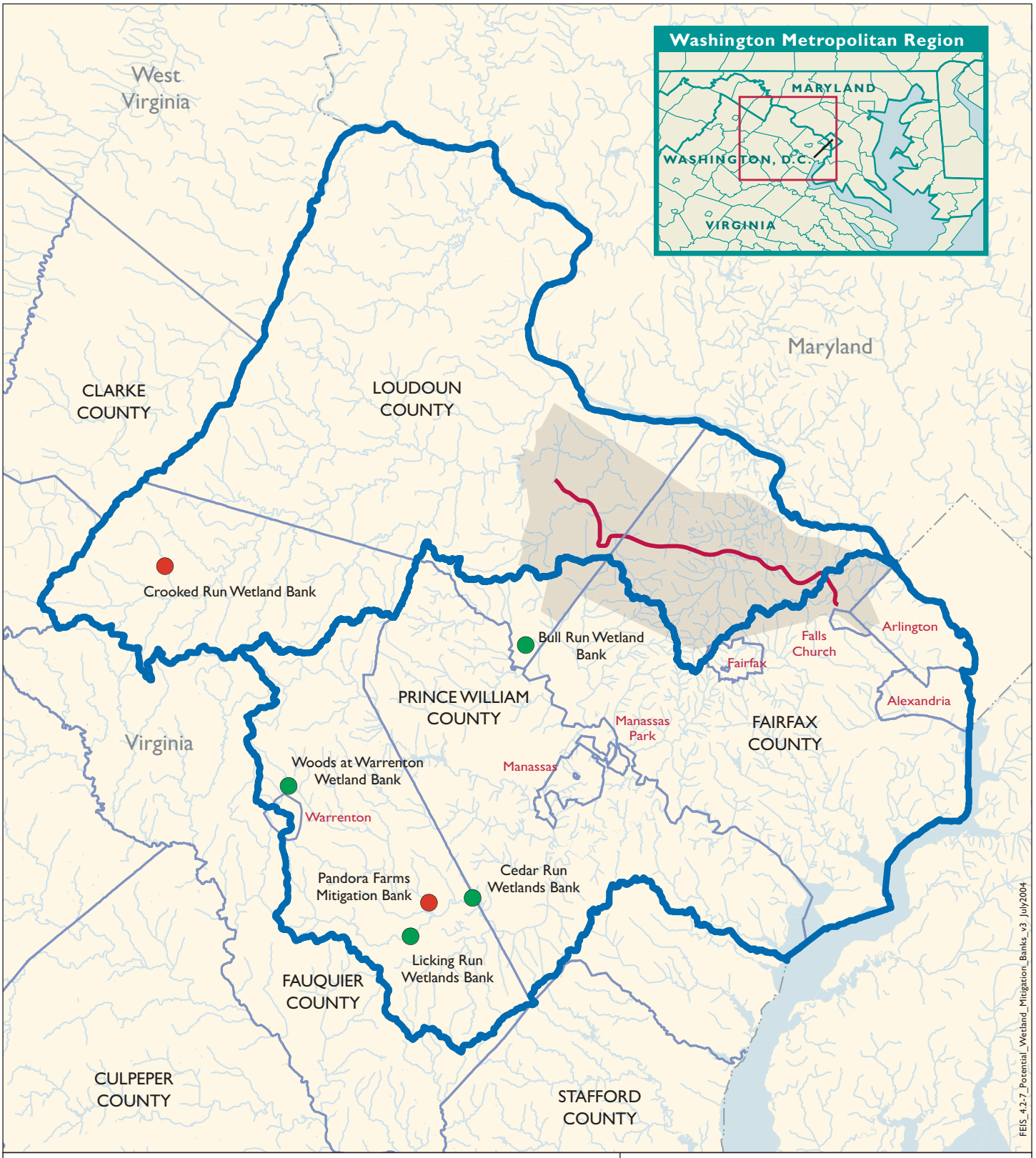
Table 4.2-3: Proposed Wetland Mitigation for the full LPA

Wetland Number	Cowardin System Class	Wiehle Avenue Extension Wetland[1] (acres)	Wiehle Avenue Extension Replacement Ratio[2]	LPA Wetland (acres)	LPA Replacement Ratio[2]
P-15	Palustrine Emergent Wetland	-	-	0.3	1:1
W-80	Palustrine Emergent Wetland	-	-	0.1	1:1
W-60	Palustrine Emergent Wetland	-	-	0.1	2:1
W-FB/FBA/F[3]	Palustrine Forested Wetland	-	-	0.4	2:1
W-RIS	Palustrine Forested Wetland	-	-	0.2	2:1
W-RISA	Palustrine Forested Wetland	-	-	0.1	2:1
W-MMMA	Palustrine Emergent Wetland	-	-	0.1	1:1
W-MMMB	Palustrine Emergent/Forested Wetland	-	-	0.1	2:1
W-MMMCI/ MMMD	Palustrine Emergent/Forest Wetland	-	-	0.2	2:1
W-RIS[3]	Palustrine Forested Wetland	-	-	3.1	1:1
W-MMMG	Palustrine Forested Wetland	-	-	0.2	2:1
W-51	Palustrine Forested Wetland	-	-	0.2	2:1
W-50	Palustrine Emergent Wetland	-	-	0.1	1:1
TOTAL		**-**	**-**	**5.2**	**-**

1. All wetland impacts occur after Wiehle Avenue, therefore there are no wetland impacts under the Wiehle Avenue Extension.
2. USACE has established replacement ratios for wetlands only.
3. This impact would be a change in vegetative classification from a forested to an emergent wetland.

DRPT would provide compensatory mitigation for unavoidable wetlands impacts. A 1:1 replacement ratio for impacts to emergent wetlands and a 2:1 replacement ratio for impacts to forested wetlands would be used. For impacts that involve a change in vegetative class from forested to emergent, a 1:1 replacement ratio would be used. Because on-site mitigation is not allowable on airport property due to potential wildlife interference with airport operations, an off-site location for mitigation would be used. Impacts would be mitigated through the purchase of credits at an existing regional wetland bank. Figure 4.2-7 shows the potential locations of wetland mitigation banks where mitigation for project impacts could take place.

To minimize impacts to wetlands during construction activities, Best Management Practices, such as pollution control devices, installation and maintenance of runoff diversion structures and secondary containment structures, would be employed. All temporarily disturbed wetland areas would be restored to pre-construction conditions by revegetating these areas with the appropriate cover type (emergent, scrub-shrub, or forested) as required by applicable permits.



LEGEND

- Water Bodies
- Hydrologic Units
- Dulles Corridor Limits
- Proposed Metrorail Alignment
- State Boundary
- County Boundary
- Approved Mitigation Banks
- Future Mitigation Banks (Under Development)

Note: Metropolitan Washington Region as defined by MWCOG

0 2.5 5 10 MILES

Figure 4.2-7

Potential Wetland Mitigation Banks

Dulles Corridor Rapid Transit Project

4.2.6.3 Floodplains

U.S. DOT Order 5650.2 requires transportation facilities and projects to give proper consideration to the avoidance and mitigation for adverse floodplain impacts. The full LPA would not increase the floodplain surface elevation at any location by more than one foot; therefore no mitigation is proposed. As the project's design is refined, plans would be reviewed with the applicable agencies and all the facilities located within floodplains would be designed to comply with the federal, state, and local regulations.

During construction, DRPT would comply with federal, state, and local regulations governing construction in floodplains.

4.2.6.4 Critical Areas

Stream corridor policies adopted in the *Fairfax County Comprehensive Plan* and *Loudoun County Revised General Plan* cover the streams that would be crossed by the project. These project-related crossings would not substantially alter the course, current, or cross-section of the streams.

Based on coordination with Fairfax County two previously designed EQCs are within the project limits: Scotts Run and a wetland system (designated for purposes of this study as W-61). Because the LPA runs within the median of existing transportation facilities, impacts to these EQCs and potential EQCs have been minimized. In order to further minimize impacts to these EQCs, Best Management Practices would be employed. All activities within these areas would be in accordance with the Erosion and Sediment Control Law (Section 10.1-560 et seq. of the *Virginia Code*) and with Chapter 104 of the Fairfax County Code and with the Stormwater Management Act (Section 10.1-603 et. Seq. of the *Virginia Code*).

The proposed new crossing of Horsepen Run and wetland complex would require review by Loudoun County for consistency with the Comprehensive Plan policies to protect water quality and habitat and RSCOD designations. Mitigation for all critical areas affected would be consistent with local ordinances.

During construction, DRPT would also comply with the terms of the federal Coastal Zone Management Act consistency determination.

4.2.6.5 Hazardous Wildlife Attractants At or Near Airports

DRPT will coordinate with FAA to ensure compliance with FAA Advisory Circular No. 150/5200-33 and control potentially hazardous wildlife from interfering with airport operations and safety. The use of "dry" water retention basins within 10,000 feet of aircraft movement areas, loading ramps, or aircraft parking areas at Dulles Airport is recommended.

4.3 AQUATIC BIOTA AND HABITAT

Aquatic biota are creatures and plants that live in water. Effects to aquatic biota are presented below. Effects to aquatic habitat are presented in Section 4.2 of this Chapter.

4.3.1 LEGAL AND REGULATORY CONTEXT

Aquatic habitats could be protected under a variety of regulations that limit their use or destruction. A detailed discussion of the aquatic habitats protected under Section 404 of the Clean Water Act can be found in Section 4.2. In addition, Virginia Department of Game and Inland Fisheries (VDGIF) regulates non-endangered wildlife at the state level. Plant and animal species whose populations have declined to

a point where extinction is imminent are afforded protection under federal and state laws. These species are discussed in more detail in Section 4.5.

4.3.2 METHODOLOGY

Aquatic biota and habitat within the study area were assessed by reviewing color aerial photographs taken in the spring of 2000 and by conducting field reconnaissance from December 2000 to February 2001. Aquatic habitat was characterized within 300 to 2,000 feet of the proposed locations of alternatives. The study area varied depending on the types of proposed facilities (e.g., stations, maintenance and storage facilities and construction staging areas).

Available data, supplemented by field observations, were used to characterize the aquatic biota and habitat in the study area. Aquatic wildlife species encountered during fieldwork for the project were identified and documented using identification keys and field guides. Data regarding general land use, stream origin and type, summary of riparian vegetation features, and measurements of in-stream parameters such as width, depth, flow and substrates were assessed to understand the health of the aquatic community. This assessment was supplemented with information obtained from federal, state, and local agencies.

Agencies including the VDEQ, USGS, VDCR, VDGIF, Virginia Department of Agriculture and Consumer Services (VDACS), Fairfax County Department of Health, Virginia Department of Public Works and Environmental Services, Northern Virginia Soil and Water District, and Fairfax and Loudoun County health departments were contacted to obtain existing information about water quality data, streams, and aquatic species within the study area.

Potential impacts to aquatic biota and habitat from the proposed project were assessed using an overlay analysis of project alternatives with the existing resources. For aquatic habitat and its corresponding wildlife, a potential impact is defined as one that would permanently alter the hydrology or biological structure of an aquatic community.

4.3.3 EXISTING CONDITIONS

The Middle Potomac-Catoctin and Middle Potomac-Anacostia-Occoquan watersheds traverse the Dulles Corridor and are part of the Potomac-Shenandoah River Basin. The study area lies entirely within this basin. A total of eight major streams and their contributing tributaries bisect the Dulles Corridor, including Pimmit Run, Scotts Run, Courthouse Spring Branch, Wolftrap Creek, Difficult Run, Sugarland Run, Horsepen Run, and Broad Run.

Perennial and intermittent non-tidal streams provide most of the aquatic habitat throughout the project corridor. There are also a few ephemeral streams (defined as having flowing water only during and for a short duration after precipitation events in a typical year, with no groundwater influence) that serve as an aquatic habitat for some biota on a seasonal basis.

Portions of Difficult Run and Broad Run are designated as natural heritage resources by the VDCR. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plan and animal species, unique or exemplary natural communities, significant geologic formations, and similar features of scientific interest. The Broad Run-Route 607 Stream Conservation Unit is designated by the Commonwealth of Virginia as a site of general bio-diversity significance associated with the yellow

lampmussel (*Lampsilis cariosa*), designated as a species of special concern by the VDGIS. The Difficult Run Stream Valley Conservation Site is also designated as a site of general bio-diversity significance associated with the wood turtle (*Glyptemys insculpta*).

Non-tidal waters are restricted to both modified/natural stream channels and ponds. Most of the ponds within the corridor are used for stormwater management in areas of intense development such as Tysons Corner or in recently developed areas within the activity centers of Reston, Herndon, and Dulles Airport. Most of the ponds observed in eastern Loudoun County were once used for agricultural purposes and are now being used to manage stormwater at construction sites and new developments. Table 4.3-1 presents a summary of the aquatic habitat and biota within the corridor as it occurs from east to west.

Table 4.3-1: Summary of Aquatic Biota and Habitat within the Dulles Corridor

Name	Species Observed	Notes/Other Characteristics
Pimmit Run and unnamed tributaries	American eel, white sucker, blacknose dace, creek chub, redbreasted sunfish	Intensely developed watershed Channelized stream sections, sediment deposition, unstable sediment bars
Scotts Run	Bluegill, blacknose dace, creek chub, largemouth bass, longnose dace, white sucker	High degree of development and impervious cover Outside study area higher quality conditions found
Unnamed ponds in Tysons Corner	Frogs, dragonflies, turtles	Provide stormwater management function for commercial complexes and townhouse communities
Courthouse Spring Branch	Blacknose dace, creek chub, tessellated darter, white sucker, American eel, rosyside dace, longnose dace, central stoneroller, common shiner, bluegill, swallowtail shiner	Gravel substrate, frequent riffle/pool sequence Surrounding land use is wooded
Wolftrap Creek	Creek chub, white sucker, longnose dace, bluegill	High impervious cover in headwaters
Difficult Run	Blacknose dace, creek chub, tessellated darter, white sucker, American eel, rosyside dace, longnose dace, central stoneroller, common shiner, bluegill, swallowtail shiner	Habitat is good upstream of DIAAH and fair downstream DIAAH
Sugarland Run and unnamed tributaries	White sucker, bluntnose minnow, creek chub, balcknose dace, yellow bullhead	Intense development and degree of impervious cover Sediment deposition, beaver dams
Horsepen Run	White sucker, green sunfish, creek chub, blacknose dace, yellow bullhead	Localized erosion and increased silt deposition near undersized roadway culverts
Horsepen Lake	Ring-necked duck, mallard, ring-billed gull	Backwater conditions due to roadway embankment that acts as a dam Active channel widening, down-cutting, moderate to severe erosion, unstable banks
Dulles Lake	Ring-necked duck, mallard, ring-billed gull	Primary stormwater management facility for Dulles Airport
Broad Run and unnamed tributaries and ponds	Pumpkinseed, yellow bullhead, largemouth bass, longnose dace	Fair conditions near Dulles Greenway, good conditions upstream from Dulles Greenway Sediment deposition due to construction upstream from Dulles Greenway
Abandoned farm ponds located in Loudoun County	Breeding areas for dragonflies, peepers, bullfrogs, spotted salamanders, wood frogs	Stagnant conditions

4.3.4 LONG-TERM EFFECTS

The long-term effects of the No Build Alternative and the LPA on aquatic biota are described in the following sections. Impacts to aquatic habitat are presented in Section 4.2, Table 4.2-2.

4.3.4.1 No Build Alternative

Under the No Build Alternative, there would be no effects to aquatic biota and habitat from the Dulles Corridor Rapid Transit Project.

4.3.4.2 Wiehle Avenue Extension

Because the alignment and facilities for the Wiehle Avenue Extension are located within developed areas away from aquatic habitats, major long-term effects to aquatic biota and habitat are not anticipated. The alignment would cross an unnamed tributary to Pimmit Run, Pimmit Run, Scotts Run, Courthouse Spring Branch, Wolftrap Run, and Difficult Run in the middle of the existing highway bridges of the DIAAH. These crossings would not affect the biological structure of the aquatic communities. With the exception of Difficult Run, all streams have been transformed to culverts under the DIAAH/Dulles Toll Road. Because these streams are channelized and the new LPA alignment would be located in the median of the DIAAH, the Wiehle Avenue Extension would have minimal long-term effects on aquatic biota and habitat.

Permanent stormwater management ponds would be located along the DIAAH/Dulles Toll Road to replace the grassy swales that are currently in the median of the DIAAH. These ponds would add a marginal amount of aquatic habitat to the study area.

4.3.4.3 Full LPA

Under the full LPA, a proposed parking structure at the Herndon-Monroe station would displace a portion (0.1 acre) of an emergent wetland (W-80); this would impact the aquatic biota and ecology afforded by the wetlands. Further details on this impact are presented in Section 4.2.

At the Route 28 Station, facilities would displace a portion (0.1 acre) of W-60 (forested wetland associated with W-61). It is anticipated that long-term effects to aquatic biota and habitat would be minimal. Further details on this impact presented in Section 4.2.

The alignment for the full LPA would cross Horsepen Run within the median of the DIAAH. The piers for this new crossing would be located outside of Horsepen Run in its floodplain. Minimal effect to aquatic biota and habitat is anticipated.

A small amount of aquatic habitat would be displaced by the LPA alignment as it exits the airport to enter the median of the Dulles Greenway. Because the alignment is aerial in this section, the amount of habitat displaced would be very small. It is not anticipated that placement of piers in this area would permanently alter the hydrology or biological structure of the aquatic community associated with these wetlands.

At the Route 772 Station, facilities located north of the Dulles Greenway, would displace a portion of an emergent wetland and approximately 220 linear feet of an associated tributary because the stream would most likely be piped under a planned access road for the facilities. Because most of the tributary has already been placed in a concrete-lined ditch to convey surface runoff, it is anticipated that there would not be any additional effects to the biological structure and hydrology of the tributary and Broad Run.

A road leading to sub station TP-15 would affect 25 linear feet of an intermittent tributary to Broad Run (W-50). The stream would be piped under the road.

The yard lead for S&I Yard Site 15 would span both Stallion Branch and Horsepen Run near their confluence. Significant long-term impacts are not anticipated for either stream due to a planned bridge span at these crossings. In addition, the riparian buffer has previously been displaced or removed near this crossing. It is unlikely that the track alignment would affect the existing water quality conditions at the Horsepen Run/Stallion Branch crossing, therefore the aquatic biota and habitat would not be affected.

4.3.5 CONSTRUCTION EFFECTS

The construction-related effects of the Wiehle Avenue Extension and full LPA on aquatic habitat and biota could include temporary effects to aquatic habitat at Dulles Airport in the area where the alignment departs the airport roadway to enter the median of the Dulles Greenway. Temporary access paths would be cleared so that the piers for the aerial alignment can be constructed.

Temporary effects to aquatic habitats would occur at P-15 during construction of the stormwater management pond.

Temporary effects to aquatic habitat would occur at areas where the lead to the S&I Yard 15 would cross streams and wetlands.

W-60 would be temporarily affected by restricting surface water flow while a structure is constructed under the entrance/exit of the Route 28 Station facility. W-50 would be temporarily affected by restricting surface flow while an access road to an ancillary facility is being constructed.

Construction effects would be minimized through adherence to erosion and sediment control, compliance with local ordinances and use of Best Management Practices. Construction of the Wiehle Avenue Extension or the full LPA would not be expected to result in any long-term effect to aquatic biota or their critical habitat.

Where the Project crosses and has the potential to affect perennial streams, VDGIF has recommended that DRPT conduct mussel surveys to determine the presence of mussel species within 6 months prior to construction activities. All mussels encountered would be relocated upstream into suitable habitat to avoid construction related impacts.

4.3.6 MITIGATION

Any effects of the Wiehle Avenue Extension and the full LPA on aquatic biota and habitat would be addressed by the mitigation proposed for water resources as discussed in Section 4.2.6. No additional mitigation measures are proposed.

4.4 TERRESTRIAL BIOTA AND HABITAT

This section refers to terrestrial biota (regional flora and fauna) and habitat resources along the corridor, including agricultural land, old fields, landscaped areas, and forest. Terrestrial biota refers to animals and plants that live on land.

4.4.1 LEGAL AND REGULATORY CONTEXT

Terrestrial habitats located outside of private or public (local, regional, state, or federal) preserves, management areas, parks, or other legally protected areas have no special regulations limiting their use. However, plant and wildlife species within these areas are afforded legal protections. VDGIF regulates non-endangered wildlife at the state level. Federal protection also occurs for non-endangered wildlife under the Migratory Bird Treaty Act of 1918, last amended in 1986. This act provides protection for all native migratory game and non-game birds with exceptions for the control of species that cause damage to agricultural or other interests. It also empowers the federal government to regulate the hunting season for all game species. Plant and animal species whose populations have declined to a point where extinction is imminent are afforded protection under federal and state laws. These species are discussed in more detail in Section 4.5.

4.4.2 METHODOLOGY

Terrestrial biota and habitat within the study area were assessed by reviewing color aerial photographs taken in the spring of 2000 and by conducting field reconnaissance from December 2000 to February 2001. Terrestrial habitat was characterized within 300 to 2,000 feet from the centerline of the DIAAH and the Dulles Greenway. The study area varied depending on the types of improvement proposed (e.g., stations, maintenance and storage facilities, and construction staging areas).

Forest cover types were classified broadly and are based on a review of aerial photography and general field observations of representative forests within the study area. To assess the potential presence of county and state champion trees (a champion tree is the largest tree of its species that occurs within a given jurisdiction such as a state or county) within the study area, consultations were conducted with urban foresters from the Urban Forestry Branch of Fairfax County's Department of Environmental Management and Loudoun County's Arborist in the Department of Building and Development. Terrestrial wildlife species encountered during fieldwork for the project were documented using identification keys and field guides.

Potential impacts to these resources from the proposed project were assessed through an overlay analysis of project alternatives with the existing resources. For terrestrial habitat and its corresponding wildlife, a potential impact is defined as a conversion of the existing habitat or land use to another habitat or land use. It is presumed that the conversion would result in the death or displacement of the wildlife dependent on that habitat.

4.4.3 EXISTING CONDITIONS

Terrestrial habitat and its corresponding wildlife within the study area occur within a mosaic of developed and undeveloped landscapes. In general, landscapes within the Fairfax County portion of the project are developed or developing rapidly and only a few natural habitats remain, primarily along streambank corridors. Landscapes within the Loudoun County portion of the study area are less developed, but are also rapidly converting to commercial, institutional, and residential uses.

These terrestrial habitats vary in their ability to support wildlife. For habitats to be suitable for wildlife species they must provide food, shelter, nesting sites, and water. Within developed or rapidly developing areas, less-mobile wildlife populations are reduced to such low numbers that local extinctions are possible. More mobile species must move into increasingly smaller habitat patches, creating extreme

competition for limited resources. This leads to overall declines in wildlife populations and allows for the invasion of more disturbance-tolerant species.

Table 4.4-1: Terrestrial Biota and Habitat Summary

Habitat Type	Location within Corridor	Species Supported	Observations/Notes
Agricultural Land	Loudoun County along Dulles Greenway near Routes 606 and 772	Birds, raccoon, and white-tailed deer, other small mammals, and snakes	Provides food but lacks suitable nesting sites. In study area, habitat type consists mostly of grain and hay fields and pastures.
Old-Field	Underdeveloped parcels within Tysons Corner and adjacent to the Dulles Airport runways	Birds, raccoon, and white-tailed deer, other small mammals, and snakes	Occurs where agricultural land has been abandoned or forests have been disturbed and the land is in various stages of plant succession. In study area, habitat type typically comprised of meadow grasses, broom-sedge briers, multiflora rose, and red cedar.
Landscaped	Along Dulles Connector Road, throughout Tysons Corner, throughout the Reston-Herndon area	European starling, house sparrow, house mouse, black rat, northern mockingbird, American robin, northern cardinal, eastern chipmunk, gray squirrel, American toad, and black rat snake.	Provides least amount of habitat for wildlife and is often comprised of small areas of non-native ornamental vegetation of limited use to wildlife species. In study area, includes residential, commercial, and institutional areas with manicured lawns and tree and shrub plantings.
Forested Habitat	Non-contiguous areas along DIAAH and Dulles Toll Road in Fairfax County, larger areas of forest along Dulles Greenway in Loudoun County including around proposed S&I Yard Site 15	White-tailed deer, raccoon, opossum, gray squirrel, southern flying squirrel, eastern chipmunk, white-footed mouse, big brown bat, star-nosed mole, short-tailed shrew, striped skunk, box turtle, wood frog, spring peeper, spotted salamander, red-backed salamander, brown snake, tufted titmouse, Carolina chickadee, white-breasted nuthatch, blue jay, red-bellied woodpecker, downy woodpecker, eastern wood-pewee, ruby-throated hummingbird, and blue-gray gnatcatcher	Provides a broad range of resources for wildlife and consequently often supports a greater diversity of species than other habitat types. Diversity varies between forests based on size, degree of disturbance, community structure, presence of streams or wetlands, and proximity to other habitats. In the study area, includes upland and wetland deciduous, upland mixed deciduous/coniferous, upland coniferous, and riparian.

Forest tracts greater than 50 contiguous acres also provide habitat for a specialized group of birds. These species require large tracts of forest to sustain viable breeding populations. The group includes colorful songbirds that breed in the mid-Atlantic region and migrate to Central and South America, as well as year-round residents and short-distance migrants. Over the past 30 to 40 years many of these species have shown consistent population declines because of habitat loss in their wintering grounds and forest fragmentation of their breeding grounds. In smaller woodlots, concealment from predators is difficult. These birds commonly encountered in Northern Virginia include red-shouldered hawk, hairy woodpecker, pileated woodpecker, Acadian flycatcher, wood thrush, red-eyed vireo, northern parula, black-and-white warbler, worm-eating warbler, ovenbird, Louisiana waterthrush, and scarlet tanager.

No trees from the Fairfax or Loudoun counties' champion tree lists are present within the study area.

4.4.4 LONG-TERM EFFECTS

The long-term effects of the No Build Alternative and the LPA on terrestrial habitat and biota are described in the following sections.

4.4.4.1 No Build Alternative

Under the No Build Alternative, there would be no effects to terrestrial biota and habitat from the Dulles Corridor Rapid Transit Project.

4.4.4.2 Wiehle Avenue Extension

Because the Wiehle Avenue Extension would primarily be located within the medians of existing roadways and in areas developed or rapidly developing, the potential long-term impacts are minimal.

Small areas and strips of forested habitat would be removed within the existing S&I Yard located near the West Falls Church Station, along a narrow swath extending from the yard onto the median of the Dulles Connector Road, and in the vicinity of two traction power substations and two tie-breaker stations. In addition, the landscaped area in the median of the Dulles Connector Road and DIAAH also would be removed.

Small areas of old-field and very narrow strips of forested habitat along Scotts Run would be removed to accommodate the Tysons East and Tysons Central 123 stations. Small areas of landscaped, old-field, and forested habitat would be removed for the station facilities at Wiehle Avenue. These small areas of habitat are located within busy urban areas, surrounded by transportation facilities. Accordingly, they are of limited importance for terrestrial wildlife, serving mostly as temporary foraging areas for birds. Minimal impacts to terrestrial biota and habitat are anticipated.

Two stormwater management ponds, P-5 and P-6, and one traction power substation, TP-7 have been identified as having potential impacts on forested areas adjacent to the DIAAH/Toll Road. These facilities would have a minimal effect on the terrestrial habitat within the corridor. To the extent possible, clearing would be minimized to reduce impacts on terrestrial habitat.

4.4.4.3 Full LPA

The effects of the full LPA on terrestrial biota and habitat are similar to those described above for the Wiehle Avenue Extension, except as described below.

Small amounts of landscaped habitat would be removed along the median of the DIAAH from Wiehle Avenue to Dulles Airport. These small areas of habitat are located within busy urban areas surrounded by transportation facilities. Accordingly, they are of limited importance for terrestrial wildlife, serving mostly as temporary foraging areas for birds. Minimal impact to terrestrial biota and habitat is anticipated.

Small areas of forested habitat would be cleared for traction power substations, tie-breaker stations, and stormwater management ponds. It is not anticipated that this would affect terrestrial wildlife, as this habitat type is present in adjacent parcels and provides minimal habitat.

Construction of the pond near Chathams Ford would reduce the available habitat for deer, but not to the point that deer would be forced onto nearby roads. Several wildlife corridors are accessible from the Chathams Ford Road vicinity and include Difficult Run, Wolftrap Run, and Courthouse Spring. Forested corridors parallel the Dulles Toll Road from Beulah Road to Route 7 and provide passage for wildlife.

The new park-and-ride facility at the Herndon-Monroe Station would include two proposed parking structures located immediately east and west of the existing structure. The proposed parking facility to the west would affect a minor amount of forested habitat. It is not anticipated that this would affect terrestrial wildlife, as this habitat type is present in adjacent parcels and provides minimal habitat.

At the Route 28 Station, landscaped and forested habitat would be displaced for the station facilities to the north and south of the DIAAH, respectively. The effects to plants and animals due to the displacement of the landscaped area would be minimal. The area to the north of the DIAAH is currently maintained for soccer fields. The station facilities to the south of the DIAAH would be located in what is currently a deciduous forest. Displacement of the forest in this area would create a large opening in the forest habitat, providing opportunities for nest predators such as brown-headed cowbirds.

Within Dulles Airport, the LPA alignment would primarily run along landscaped and paved areas in its aboveground segments. The one exception is where the northern connection heads north from the airport to the Dulles Greenway. In this area, the alignment extends through a deciduous forest for a short distance before crossing Horsepen Run and entering the median of the Greenway. While the amount of forest clearing is not extensive, it would create a new opening within a contiguous forest patch of about 100 acres. As described above, contiguous forests greater than 50 acres serve as a valuable habitat for various birds. Other wildlife species could be displaced from the area adjacent to the new rail line, but sufficient habitat would remain to ensure survival of all the species.

The Route 606 Station would be placed on a parcel that is partially wooded and would be cleared during construction. It is not anticipated that this would affect terrestrial wildlife, as this habitat type is present in adjacent parcels and the site provides minimal habitat.

Traction power substation TP-19, located just south of Loudoun County Parkway, and tie-breaker station B-8, located north of Route 772 Station, would affect minimal amounts of old-field habitat.

The Route 772 Station facilities that would be located on the north and south sides of the Dulles Greenway would result in the removal of a moderate amount of old-field and forested habitat. The Route 772 Station facilities would affect approximately eight acres of upland forest and a small area of agricultural land. Removal of this forest would further reduce the available natural areas in this rapidly developing landscape. Although placement of the station at the edge of the forest would minimize the impact, it is important to note that according to the Loudoun County Revised General Plan and the Toll Road Plan, the area around the proposed Route 772 station facilities is intended to support high-density development as a transit node.

S&I Yard Site 15 would result in approximately 20 acres of mostly deciduous forest being removed. The proposed aerial yard lead for Site 15 would create an opening in the large forest stand, reducing the overall quality of the stand. The resulting effects to terrestrial biota are anticipated to be minimal. Wildlife impacts could involve displacement of some individual animals, however, local species extinctions are not anticipated as sufficient habitat would remain.

4.4.5 CONSTRUCTION EFFECTS

Construction of the Wiehle Avenue Extension and full LPA is not expected to result in any long-term effects to terrestrial biota and habitat.

Minimal short-term effects to terrestrial biota and habitat are anticipated as a result of constructing the proposed full LPA, and could include short-term noise and vibration and air pollution from the construction equipment and activities. In coordination with VDEQ, Best Management Practices would be used and local ordinances would be followed to protect trees in construction areas from the effects of the project.

Two stormwater management ponds, P-5 and P-6, and one traction power substation, TP-7 have been identified as having potential impacts on forested areas adjacent to the DIAAH/DullesToll Road. Construction of these facilities would have a minimal affect on the terrestrial habitat within the corridor. To the extent possible, clearing would be minimized to reduce impacts on terrestrial habitat.

4.4.6 MITIGATION

Long-term or construction impacts to terrestrial biota and habitat are anticipated to be minimal. Therefore, no mitigation measures are proposed.

4.5 RARE, THREATENED, AND ENDANGERED SPECIES

This section presents a discussion of the potential effects to rare, threatened, and endangered (RTE) species within the Dulles Corridor.

4.5.1 LEGAL AND REGULATORY CONTEXT

Plant and animal species whose populations have declined to a point where extinction is imminent are afforded legal protection under federal and state laws. Federally listed threatened and endangered species and designated critical habitat are regulated pursuant to Section 7 of the Endangered Species Act of 1973. A listing of these species and their federal status is published in the Federal Register. The National Marine Fisheries Service (NMFS) and US Fish and Wildlife Service (USFWS) are authorized to identify those species in danger of extinction and provide for their management and protection. USFWS also maintains a list of candidate species that do not have threatened or endangered status but are of special concern. All of these listed species are collectively referred to as RTE.

In addition to protecting federally listed species, the Commonwealth has enacted laws and adopted regulations to protect state-designated endangered and threatened species. Under the Commonwealth's Endangered Plant and Insect Species Act of 1979, threatened or endangered plants and insects are protected. The Act provides for the listing and protection of species through Virginia Department of Agriculture and Consumer Services (VDACS) with help from the Division of Natural Heritage (DNH) of VDCR. Under the Commonwealth's Endangered Species Act of 1972 (as amended in 1977), VDGIF adopted regulations protecting mollusks, fishes, amphibians, reptiles, birds, and mammals classified as endangered or threatened.

4.5.2 METHODOLOGY

The potential presence of RTE species within the Dulles Corridor was determined through contact with the USFWS, VDCR, VDACS, and VDGIF. The initial study area for RTE species consisted of Fairfax and Loudoun counties. The area was then narrowed based on the species and habitat likely to be present near the proposed improvements. Study areas for RTE species are specific to each RTE species.

Agency responses to the project team's requests for information were used to identify areas within the Dulles Corridor where RTE issues would require investigation during future phases of the project. Species encountered during project fieldwork were documented using identification keys and field guides. Potential impacts to these resources from the proposed project were assessed through an overlay analysis of alternatives with the existing resources. For RTE species, a potential effect is defined as a taking (harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing or collecting, or attempting to engage in any such conduct) of the listed species or its critical habitat.

4.5.3 EXISTING CONDITIONS

The USFWS provided a review of the project area to identify potential species with federal status and species of concern that have been documented or could occur within Fairfax and Loudoun counties (Appendices J and K). The earleaf foxglove (*Agalinis auriculata*), discussed below, is presently being tracked as a species of concern by the USFWS. Species of concern are not federally regulated but represent species whose populations are being watched carefully because of recent declines or uncertain status. Within Fairfax County, the bald eagle (*Haliaeetus leucocephalus*) was the only federally listed animal species reported. Presently, the bald eagle is listed as threatened in the lower 48 states. It is known to nest in areas along the Potomac River, outside the study area.

Two federally listed plant species were also noted by the USFWS: the sensitive joint-vetch (*Aechynomene virginica*) and small whorled pogonia (*Isotria medeoloides*). The joint-vetch is known to occur in Prince William County and could also occur in Fairfax County. Specific distribution information for the small whorled pogonia was not available. No surveys for these listed species were recommended by USFWS. In Loudoun County, no documented occurrences of federally listed species were reported near the study area. Neither of these species was observed during field reconnaissance.

A letter from VDCR during the Major Investment Study (MIS) in January of 1995 identified an occurrence of the hairy beardtongue (*Penstemon hirsutus*) near the southwest corner of the DIAAH exit ramp to Route 28. This occurrence was not mentioned in any of the recent VDCR correspondence or agency comments.

Coordination with the VDCR and VDGIF addressed both federal- and state-listed species within the study area (Appendices J and K). Both agencies indicated that federally listed rare, threatened, or endangered species are not known to occur within the study area. However, VDGIF indicated the potential presence of two state-threatened species near the Dulles Corridor—the upland sandpiper (*Bartramia longicauda*) and wood turtle (*Clemmys insculpta*). The upland sandpiper prefers tall-grass fields in large open landscaped areas where it builds its ground nest from dried grasses. Wood turtles inhabit forested floodplains and nearby fields, wet meadows, and farmlands. The turtles are known to winter on the bottoms of creeks and streams. The streams affected by the project, including Pimmit Run, Difficult Run and Sugarland Run in Fairfax County, are designated as Threatened and Endangered Species Waters, according to the VDGIF, because of the occurrence of the wood turtle. Sightings of wood turtle have been documented within Difficult Run in Fairfax County and Sugarland Run in Loudoun County. The documented sighting of the wood turtle in Sugarland Run was well outside the study area. The VDGIF also noted that the yellow lampmussel (*Lampsilis cariosa*) is known to ocuur in the Potomac River basin in larger streams and rivers where god currents exist over sand and gravel substrate, as well as small creeks and ponds. This species is classified as a species of special concern by VDGIF; however, this designation has no legal status or protections.

The VDCR identified the presence of a unique natural community within the project corridor known as the diabase glade habitat. Diabase glades are characterized by historically fire-dominated grassland vegetation located on relatively nutrient-rich soils underlain by Triassic bedrock. Diabase flat rock, a hard dark-colored, volcanic rock, is found primarily in Northern Virginia, and is located within the geologic formation known as the Triassic Basin. Figure 4.5-1 shows bands of diabase soils crossing the Dulles Toll Road and the Dulles Greenway in western Fairfax County and eastern Loudoun County, respectively.

Several state and globally rare plant species are associated with diabase glade communities and may occur within Loudoun County near Dulles Airport, including earleaf foxglove (*Agalinis auriculata)*, white heath aster (*Aster ericoides*), blue-hearts (*Buchnera Americana*), hairy beardtongue *(Penstemon hirsutus),* downy phlox *(Phlox pilosa),* stiff goldenrod *(Oligoneuron rigidum* var. rigidum), and marsh hedgenettle (*Stachys pilosa var. arenicola*). State and federal agencies do not regulate these species, but their populations are monitored because of their uncommon occurrence in Virginia.

The most likely places to find rare diabase plants are rocky glades or in warm-season grass dominated old-field and roadside rights-of-way. The VDCR requested that specific areas within the project's predicted limits of disturbance in Loudoun County be surveyed for the rare plants associated with the diabase glade soils. Areas of particular concern were located on or near S&I Yard Site 15 located on Dulles Airport property. Other areas within the project's potential limits of disturbance in Loudoun County were ruled out because they were not underlain by diabase soils, did not contain old-field habitat and warm season grasses, and/or were already developed. Areas within Fairfax County were ruled out due to the high degree of development that has occurred.

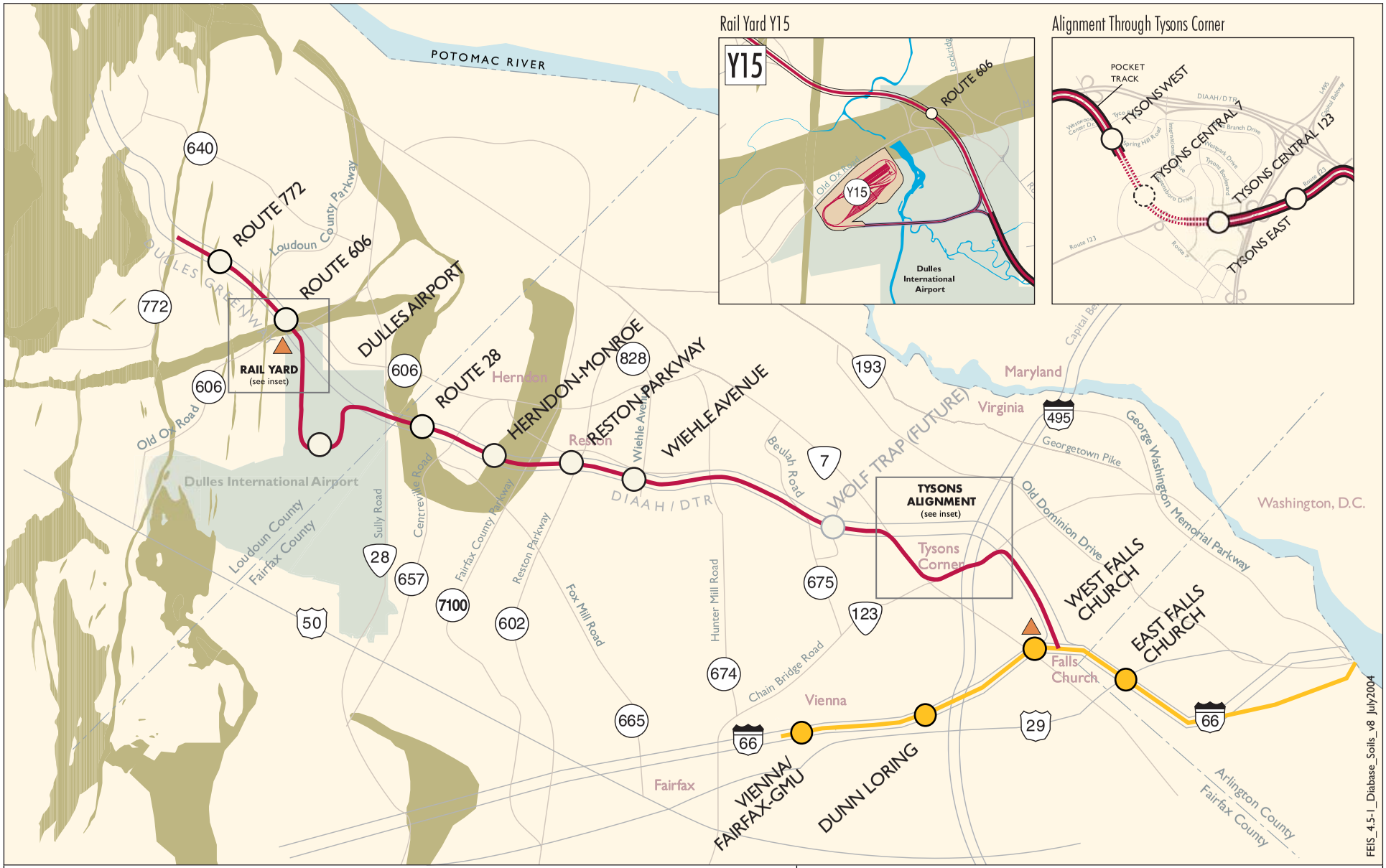
Three field investigations were conducted to look for the rare plant species associated with diabase glade communities. The surveys were conducted in April, June, and August of 2002 because these months represent the optimal times of year to observe the six targeted rare plant species when in flower. None of the surveys resulted in identification of the rare plant specimens occurring within proposed Site 15 at Dulles Airport. Small patches of warm season habitat were unevenly distributed throughout the site but no indication of state, rare plant species were observed. The dominant vegetation observed during the surveys consists of young red cedar (*Juniperus virginiana*), goldenrod (*Solidago* sp.), Indian grass (*Sorghastrum nutans*), dogbane (*Apocynum* sp.), broom-sedge (*Andropogon virginicus*), greenbrier (*Smilax rotundifolia*), bluets (*Oldenlandia* sp.), panic grass (*Panicum* sp.), yarrow (*Achillea millefolium*), sumac (*Rhus* sp.), Eastern redbud (*Cercis canadensis*), privet (*Ligustrum* sp.), and poison ivy (*Toxicodendron radicans*). The limited diversity of warm-season grasses in combination with the growth of red cedar indicates an absence of suitable habitat for rare diabase plants.

4.5.4 LONG-TERM EFFECTS

The long-term effects of the No Build Alternative and the full LPA on RTE or their critical habitats are described in the following sections.

4.5.4.1 No Build Alternative

Under the No Build Alternative, there would be no project related effects to RTE species or their critical habitat.



LEGEND

- Diabase Soils
- County Boundary
- Rail Yard

PROPOSED METRORAIL ALIGNMENT

- At-grade/Retained Fill
- Aerial
- Underground
- Aerial Yard Lead

- Existing Metrorail Orange Line and Stations
- Proposed Station

Source: Loudoun County Office of Mapping and Geographic Information

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

0 1 2 3 MILES

Figure 4.5-1

Diabase Soils

Dulles Corridor Rapid Transit Project

4.5.4.2 Wiehle Avenue Extension

No effects to RTE species or their critical habitat would occur as a result of the Wiehle Avenue Extension. Small areas and strips of forested habitat would be removed from along the Dulles Connector Road and within its interchanges and within the West Falls Church S&I Yard. In addition, landscaped areas in Tysons Corner and in the median of the Dulles Connector Road would be removed. These habitat areas are located within busy urban areas that are surrounded by transportation facilities and are of no importance to RTE species.

The alignment would span Difficult Run via new bridge structures that would be parallel to existing structures for the DIAAH and Dulles Toll Road. Documented sightings of the wood turtle have occurred within Difficult Run well outside the study limits; therefore no adverse effect is expected.

4.5.4.3 Full LPA

The effects of the full LPA on RTE species are similar to those described above for the Wiehle Avenue Extension. West of Wiehle Avenue the proposed alignment continues to run within the median of major roadways or within Dulles Airport and stations are primarily located in developed areas. Exceptions include the proposed stations at Route 28, Route 606, and Route 772. Based on the correspondence with regulatory agencies and field reviews, these sites were reviewed for the presence of two RTE species, the upland sandpiper and wood turtle. The upland sandpiper is a state-threatened species that uses a habitat of tall-grass fields in large open areas. This habitat was not found within the undeveloped portions of the study area.

Documented sightings of the wood turtle occurring in Sugarland Run are well outside the study limits; therefore no adverse effect is expected.

4.5.5 CONSTRUCTION EFFECTS

Construction of the Wiehle Avenue Extension or full LPA would not result in any long-term effect to regulated RTE species or their critical habitat. Best Management Practices for engineering, storm water management, and sediment and erosion control would be used during the construction of bridge structures and the alignment within the median of the DIAAH to avoid water quality impacts to the streams crossed by the LPA and to minimize any potential construction-related effects on protected species.

To further minimize any potential effects on the wood turtle, VDGIF recommends that Project contractors be trained in the identification and natural history of the species prior to construction activities. Any wood turtles that are encountered during construction activities would be relocated to suitable habitat and the VDGIF would be notified.

4.5.6 MITIGATION

No long-term or construction impacts to rare, threatened, and endangered species are anticipated. Therefore, no mitigation measures are proposed.

4.6 AIR QUALITY

This section describes the air quality impact analysis conducted for the Dulles Corridor Rapid Transit Project. The potential air quality impacts would occur as a result of emissions from motor vehicle traffic associated with the project. Motor vehicle emissions vary with traffic volumes, distances traveled, travel speeds, and vehicle types.

4.6.1 LEGAL AND REGULATORY CONTEXT

The applicable statutes and regulations that govern air quality in the Dulles Corridor at both the federal and state levels are described below. The procedures that were used to demonstrate compliance with these regulations and related criteria are also included.

The Clean Air Act of 1970, as amended, is the basis for most federal air pollution control programs. The Environmental Protection Agency (EPA) under the Clean Air Act regulates air quality nationally. EPA delegates authority to the Virginia Department of Environmental Quality (VDEQ) for monitoring and enforcing air quality regulations in the Commonwealth of Virginia. The *Virginia State Implementation Plan* (SIP), developed in accordance with the Clean Air Act, contains the major Commonwealth-level requirements with respect to transportation in general. VDEQ is responsible for preparing the SIP and submitting it to EPA for approval. VDEQ also works with local and regional agencies that have air quality responsibilities.

The Dulles Corridor is within the geographic jurisdiction of the Metropolitan Washington Council of Governments (MWCOG), which has air quality responsibilities related to transportation and air quality planning in the Washington, D.C. metropolitan region. MWCOG develops the region's transportation and air quality strategies.

Under the authority of the Clean Air Act, EPA established a set of National Ambient Air Quality Standards (NAAQS) for various "criteria" air pollutants. Table 4.6-1 presents the NAAQS and the Virginia Ambient Air Quality Standards, which are identical. Presently, there are NAAQS for six criteria pollutants: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM) of diameter 10 microns or less (PM10) and 2.5 microns or less (PM2.5), and lead (Pb).

The Clean Air Act also requires EPA to specify geographic areas of the country that have measured pollutant concentrations exceeding the levels prescribed by the air quality standards (non-attainment areas). It classifies non-attainment areas and specifies compliance deadlines for these areas. The Dulles Corridor is located in Fairfax and Loudoun counties, which are located in the EPA-defined Metropolitan Washington, D.C.-MD-VA severe non-attainment area for 1-hour ozone. This area is also classified as a moderate non-attainment area for 8-hour ozone. This ozone non-attainment area must demonstrate attainment with the 1-hour ozone standard by 2005 and the 8-hour ozone standard by 2010.

Table 4.6-1: National and Virginia Ambient Air Quality Standards

Pollutant	Standard Type	Averaging Period	Standard Value[a]
Carbon Monoxide (CO)[i]	Primary and Secondary[b] Primary and Secondary[b]	8-Hour average 1-Hour average	9 ppm (10 mg/m^3)[c,d] 35 ppm (40 mg/m^3)
Nitrogen Dioxide (NO_2)[i]	Primary and Secondary	Annual arithmetic mean	0.053 ppm (100 µg/m^3)[e]
Ozone (O_3)[i]	Primary and Secondary	1-Hour average	0.12 ppm (235 µg/m^3)[f]
	Primary and Secondary	8-Hour average	0.08 ppm (155 µg/m^3)[f]
Particulate Matter (PM10)[i]	Primary and Secondary	Annual arithmetic mean	50 µg/m^3 [g]
	Primary and Secondary	24-Hour average	150 µg/m^3 [g]
Particulate Matter (PM2.5)[i]	Primary and Secondary	Annual arithmetic mean	15 µg/m^3 [g]
	Primary and Secondary	24-Hour average	65 µg/m^3 [g]
Lead (Pb)	Primary and Secondary	Quarterly mean	1.5 µg/m^3
Sulfur Dioxide (SO_2)	Primary Primary Secondary	Annual arithmetic mean 24-Hour average[h] 3-Hour average	0.03 ppm (80 µg/m^3) 0.14 ppm (365 µg/m^3) 0.5 ppm (1300 µg/m^3)

a Short-term standards (1 to 24 hours) are not to be exceeded more than once per calendar year.

b Former national secondary standards for carbon monoxide have been repealed.

c ppm: parts per million.

d mg/m^3: milligrams per cubic meter.

e µg/m^3: micrograms per cubic meter.

f Maximum daily 1-hour (8-hour) average. The ozone standard is attained when the expected number of days with maximum hourly (8-hourly) average concentrations above the value of the standard, averaged over a three-year period, is less than or equal to one.

g For each particle size, the annual PM standard is met when the three-year average of the annual mean concentration is less than or equal to the value of the standard. The 24-hour PM10 (PM2.5) standard is met when the three-year average of the annual 99th (98th) percentile values of the daily average concentrations is less than or equal to the value of the standard.

h National standards are block averages rather than moving averages.

i CO, NO_2, O_3, and PM are transportation-related pollutants

Sources: National - 40 CFR 50. Virginia - 9 VAC 5, Chapter 30.

4.6.1.1 Conformity with the Virginia SIP

In compliance with the mandates of the Clean Air Act, VDEQ has developed a SIP for air pollution control. The SIP defines the process by which the ozone NAAQS would be attained, and defines the control strategies and schedule that the Commonwealth would employ to reduce emissions in order to reach attainment.

Parts of the Washington metropolitan region, including the District of Columbia, are also classified as moderate non-attainment areas for CO. However, Fairfax and Loudoun counties, including the Dulles Corridor, are in attainment for CO. Thus the SIP requirements do not apply to CO with respect to the project. Fairfax and Loudoun counties, including the Dulles Corridor, are in attainment for NO_2, PM10, Pb, and SO_2. EPA has not yet designated areas of attainment and non-attainment for PM2.5.

Under the Clean Air Act, it is the responsibility of federal agencies, such as FTA, to ensure that a proposed project conforms to the SIP. Because the study area is located in an ozone non-attainment area, a conformity determination is required under Section 176(C) of the Clean Air Act.

A project conforms to the SIP if it comes from a conforming metropolitan transportation plan. The transportation plan for the region is the Constrained Long-Range Plan (CLRP) prepared by the MWCOG Transportation Planning Board. The Dulles Corridor Rapid Transit Project is included in the CLRP, a plan which has been found by MWCOG to conform to the relevant SIPs (i.e., those of Virginia, Maryland, and D.C.). EPA, FHWA and FTA have concurred in that conformity determination for the CLRP. Therefore, the Dulles Corridor Rapid Transit Project conforms to the SIP. Near-term phases of the project are included in an approved conforming Transportation Improvement Program (TIP), for the Fiscal year 2004 element. As the dates for implementation of the later phases of the project approach, they will be included in approved and conforming TIPs.

4.6.2 METHODOLOGY

In accordance with EPA guidance, the analysis methodology consisted of an intersection assessment and a dispersion modeling analysis for computing CO concentrations at candidate intersections along the corridor. The intersection screening methods were based on EPA criteria in the *Guideline for Modeling Carbon Monoxide from Roadway Intersections* (November 1992). The study area for air quality consists of the intersections modeled.

4.6.2.1 Intersection Screening

Motor vehicles emit CO at the highest rates when they are operating at low speeds or idling. For this reason, the potential for adverse air quality impacts is greatest at intersections where traffic is most congested. An initial screening of the signalized traffic intersections in the traffic study area was performed to identify intersections where traffic volumes would likely increase due to the project. In addition, the process identified one intersection at a representative proposed park-and-ride facility. Based on the results of this initial intersection screening, the 15 sites listed in Table 4.6-2 were selected for analysis. Figure 4.6-1 illustrates the location of the intersections that were used in this analysis.

Table 4.6-2: Intersections Modeled for Air Quality Impacts

I.D. No.	Intersection
1	Route 123 and Colshire Drive
2	Route 123 and Tysons Boulevard
3	Route 123 and International Drive
4	Westpark Drive and International Drive
5	Route 7 and Westpark Drive
6	Route 7 and Spring Hill Road
7	Route 7 and Tyco Road/Westwood Center Drive
8	Wiehle Avenue and Sunset Hills Road
9	Reston Parkway and Sunset Hills Road
10	Reston Parkway and Dulles Toll Road – EB Ramps
11	Reston Parkway and Sunrise Valley Drive
12	Sunrise Valley Drive and Fairfax County Parkway
13	Monroe Street and Sunrise Valley Drive
14	Centreville Road and Worldgate Drive
15	Wiehle Avenue and Park-and-Ride Entrance

In addition to the intersection analysis, a typical park-and-ride facility was modeled to assess the potential air quality impacts of such facilities. The Wiehle Avenue park-and-ride facility was selected as a worst-case representative under the Locally Preferred Alternative because it best represents the changes

proposed under both the Wiehle Avenue Extension and the full LPA. (The Wiehle Avenue facility is likely to experience a higher degree of traffic congestion than other park-and-rides and, consequently, higher CO concentration levels.) The park-and-ride analysis also includes the adjacent intersection of Wiehle Avenue with the park-and-ride entrance road.

4.6.2.2 Modeling Analysis

At each of the intersections selected for detailed air quality modeling, maximum one-hour and eight-hour CO concentrations were predicted at several locations (receptors) in the vicinity of the intersection where the maximum concentrations would be expected and where the public would have reasonable access. The traffic data used in the air quality analysis were based on traffic volumes and growth projections that included anticipated land use and density changes discussed in Section 3.1. The traffic data were developed in coordination with the MWCOG and Fairfax and Loudoun counties.

Emission factors for motor vehicles were generated using EPA's computer program MOBILE5b consistent with the Draft EIS and the Supplemental Draft EIS. The input parameter values for MOBILE5b were selected in accordance with MWCOG guidance.

Maximum one- and eight-hour CO concentrations were predicted using EPA's CAL3QHC Version 2.0 dispersion model. Specific modeling inputs were selected in accordance with MWCOG guidance. The modeling for 2011 and 2025 accounts for roadway improvements proposed by the Virginia Department of Transportation (VDOT) at several of the intersections in the study area.

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LEGEND

- Intersections Modeled for Air Quality Analysis
- DEQ Air Quality Monitoring Station
- 38-1 Ashburn — DEQ I.D. Number and Town

PROPOSED METRORAIL ALIGNMENT

- At-grade/Retained Fill
- Aerial
- Underground
- Aerial Yard Lead

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

- Existing Metrorail Orange Line and Stations
- Proposed Station
- County Boundary
- P — Park & Ride Facility
- Rail Yard

0 1 2 3 MILES

Figure 4.6-1

Roadway Intersections Modeled for Air Quality Analysis

Dulles Corridor Rapid Transit Project

4.6.3 EXISTING CONDITIONS

This section summarizes measured ambient air quality data for the region including the study area. VDEQ maintains a statewide network of monitoring stations that routinely measure pollutant concentrations in the ambient air. These stations provide data to assess compliance with the NAAQS and Virginia Ambient Air Quality Standards and to evaluate the effectiveness of pollution control strategies. The relevant monitored pollutants are ozone, NO_2, CO, PM, and SO_2. Table 4.6-3 presents the maximum measured concentrations for these pollutants measured at representative monitoring stations nearest to the study area as reported by VDEQ for the most recent full year of data (2003).

As shown in Table 4.6-3, the highest one-hour ozone concentration in 2003 from among the representative monitoring stations was 0.122 parts per million (ppm) measured at the Ashburn station. This level is above the one-hour ozone standard of 0.12 ppm. The highest eight-hour ozone concentration in 2003 was 0.116 ppm also measured at the Ashburn monitoring station. This level is above the eight-hour ozone standard of 0.08 ppm. This area of the Commonwealth is currently classified as a Severe One-Hour Ozone Non-attainment Area and as a Moderate Eight-Hour Ozone Non-attainment Area due to past violations of the ozone standards. For example, the one-hour ozone NAAQS was exceeded at VDEQ monitoring stations in northern Virginia on 9 days in 1998, 8 days in 1999, 1 day in 2000, 1 day in 2001, 21 days in 2002 and 5 days in 2003. The actual number of ozone exceedances in a given year can vary widely due to variations in meteorology. No pollutant concentrations other than ozone exceeded their respective standards in 2003. The Washington metropolitan region is in attainment for the other pollutants listed.

Table 4.6-3: 2003 Monitored Ambient Air Quality in the Region

Pollutant	VDEQ Monitor Location (City)	Averaging Period	Maximum Concentration	Second Maximum Concentration
Carbon Monoxide (CO)	Lewinsville[a]	1 Hour 8 Hours	3.6 ppm 2.8 ppm	3.3 ppm 2.7 ppm
	Chantilly[c]	1 Hour 8 Hours	1.9 ppm 1.7 ppm	1.9 ppm 1.4 ppm
Nitrogen Dioxide (NO_2)	Lewinsville	Annual	0. 023 ppm	Not applicable
	Chantilly	Annual	0. 01 ppm	Not applicable
	Ashburn[b]	Annual	0.016 ppm	Not applicable
Ozone (O_3)	Lewinsville	1 Hour 8 Hours	0.118 ppm 0.112 ppm	0.105 ppm 0.095 ppm
	Chantilly	1 Hour 8 Hours	0.108 ppm 0.103 ppm	0.094 ppm 0.087 ppm
	Ashburn	1 Hour 8 Hours	0.122 ppm 0.116 ppm	0.101 ppm 0.095 ppm
Particulate Matter (PM10)	Lewinsville	24 Hours Annual	61 µg/m3 20.0 µg/m3	38 µg/m3 Not applicable
	Chantilly	24 Hours Annual	52 µg/m3 15.0 µg/m3	33 µg/m3 Not applicable
Particulate Matter (PM2.5)	Lewinsville	24 Hours Annual	39 µg/m3 13.6 µg/m3	35 µg/m3 Not applicable
	Ashburn	24 Hours Annual	53 µg/m3 13.1 µg/m3	36 µg/m3 Not applicable
Sulfur Dioxide	Lewinsville	3 Hours 24 Hours Annual	0.039 ppm 0.023 ppm 0.005 ppm	0.038 ppm 0.022 ppm Not applicable

Pollutant	VDEQ Monitor Location (City)	Averaging Period	Maximum Concentration	Second Maximum Concentration
	Chantilly	3 Hours	0.028 ppm	0.025 ppm
		24 Hours	0.014 ppm	0.013 ppm
		Annual	0.003 ppm	Not applicable
Lead	Washington, D.C.[d]	Quarterly	0.03[e]	0.02[e]

a Lewinsville monitoring station is located in Fairfax County at McLean Government Center, 1437 Balls Hill Road. EPA AIRS I.D. number 51-059-5001. VDEQ I.D. number L-46-A8.

b Ashburn monitoring station is located in Loudoun County at Broad Run High School, Ashburn Road (Route 641). EPA AIRS I.D. number 51-107-1005. VDEQ I.D. number 38-I.

c Chantilly monitoring station is located in Fairfax County at Cub Run Treatment Plant, Upper Cub Run Drive. EPA AIRS I.D. 51- 059-0005. VDEQ I.D. number L-46-F.

d Washington, D.C. monitoring station is located in the District of Columbia at 2150 Railroad Avenue, SE. EPA AIRS I.D. 11-001-0039.

e Data for 2002 and later were not reported to EPA. Data for 2001 are shown.

Source: Virginia Department of Environmental Quality and District of Columbia Department of Health, as reported to U.S. Environmental Protection Agency AIRData website (http://www.epa.gov/air/data). Monitor Values Report accessed July 7, 2004.

4.6.4 LONG-TERM EFFECTS

The air quality analysis consists of three components, as mandated by EPA: a dispersion modeling analysis to estimate maximum one-hour and eight-hour carbon monoxide (CO) concentrations at selected roadway traffic intersections in the study area; a similar modeling analysis to estimate CO levels in the vicinity of a typical park-and-ride facility; and an assessment of the potential for localized impacts from the proposed maintenance facilities.

For the intersections and the park-and-ride facility analyses, existing CO concentrations were evaluated for 2000, while future analysis years included the No Build Alternative, the Wiehle Avenue Extension and the full LPA. The future conditions were analyzed with 2011 as the opening year of the Wiehle Avenue Extension, 2015 as the opening year for the full LPA, and 2025 as the project design year.

Although there may be concern about severe traffic congestion along major highways of the area, there are currently no federal or state regulations or requirements to analyze the CO concentration along highway mainlines. Agency requirements focus on intersections as the “worst-case” locations (i.e., the highest CO concentrations) for assessment of project impacts. Compared to intersection conditions, adverse levels of CO due to traffic on highway mainlines are very unlikely to occur for two reasons: (1) the more efficient operation of vehicle engines at highway mainline speeds, and (2) the rapid drop off of CO concentrations due to the large distances between the travel lanes and receptors located beyond the highway right-of-way. In addition, recent model year vehicles have relatively low emission rates. For these reasons, EPA and VDEQ do not require assessment of CO concentrations from highway mainlines.

4.6.4.1 No Build Alternative

Tables 4.6-6 and 4.6-7 show the maximum predicted one- and eight-hour CO concentrations, respectively, for the No Build Alternative. These concentrations were predicted for the existing conditions in 2000, and the future conditions in 2011, 2015 and 2025, to indicate air quality trends at the intersections over time.

Table 4.6-4: Maximum Predicted 1-Hour CO Concentrations (in ppm) for No Build Alternative[1] at Modeled Intersections

I.D. No.	Intersection	Existing (2000)	No Build Alternative		
			2011	2015	2025
1	Route 123/Colshire Drive	10.3	7.8	7.8	7.7
2	Route 123/Tysons Boulevard	11.0	8.7	8.4	8.4
3	Route 123/International Drive	11.9	9.0	8.7	8.4
4	Westpark Drive/International Drive	10.0	8.1	7.7	7.7
5	Route 7/Westpark Drive	10.4	9.2	8.5	8.4
6	Route 7/Spring Hill Road	11.4	8.6	8.4	8.3
7	Route 7/Tyco Road/Westwood Center Drive	11.6	9.0	8.5	8.3
8	Wiehle Avenue/Sunset Hills Road	11.0	8.9	8.4	8.4
9	Reston Parkway/Sunset Hills Road	11.8	8.9	8.5	8.6
10	Reston Parkway/Dulles Toll Road – EB Ramps	9.6	8.2	7.5	7.5
11	Reston Parkway/Sunrise Valley Drive	12.4	9.1	8.7	8.6
12	Sunrise Valley Drive/Fairfax County Parkway	11.5	8.9	8.2	8.0
13	Monroe Street/Sunrise Valley Drive	10.3	8.6	8.1	8.0
14	Centreville Road/Worldgate Drive	11.2	8.5	8.6	8.5
15	Wiehle Avenue Park-and-Ride Facility	7.1	8.3	8.1	8.0

[1]NAAQS is 35 ppm for 1-hour CO concentrations.

Table 4.6-5: Maximum Predicted 8-Hour CO Concentrations (in ppm) for No Build Alternative[1] at Modeled Intersections

I.D. No.	Intersection	Existing (2000)	No Build Alternative		
			2011	2015	2025
1	Route 123/Colshire Drive	6.0	4.3	4.3	4.2
2	Route 123/Tysons Boulevard	6.5	4.6	4.4	4.4
3	Route 123/International Drive	7.1	5.1	4.9	4.7
4	Westpark Drive/International Drive	5.8	4.5	4.2	4.2
5	Route 7/Westpark Drive	6.1	5.2	4.8	4.7
6	Route 7/Spring Hill Road	6.8	4.8	4.7	4.6
7	Route 7/Tyco Road/Westwood Center Drive	6.9	5.1	4.8	4.6
8	Wiehle Avenue/Sunset Hills Road	6.5	5.0	4.7	4.7
9	Reston Parkway/Sunset Hills Road	7.1	5.0	4.8	4.8
10	Reston Parkway/Dulles Toll Road – EB Ramps	5.5	4.5	4.1	4.1
11	Reston Parkway/Sunrise Valley Drive	7.5	5.2	4.9	4.8
12	Sunrise Valley Drive/Fairfax County Parkway	6.9	5.0	4.5	4.4
13	Monroe Street/Sunrise Valley Drive	6.0	4.8	4.5	4.4
14	Centreville Road/Worldgate Drive	6.6	4.8	4.8	4.8
15	Wiehle Avenue Park-and-Ride Facility	3.8	4.6	4.5	4.4

[1]NAAQS is 9 ppm for 8-hour concentrations.

For the 2011 No Build Alternative, the maximum predicted one- and eight-hour CO concentrations occurred at Site Number 5, Route 7 with West Park Drive, and are 9.2 ppm and 5.2 ppm, respectively. Predicted one-hour CO concentrations at the remaining sites ranged from 8.2 ppm to 9.2 ppm. Predicted eight-hour CO concentrations at the remaining sites ranged from 4.3 ppm to 5.2 ppm.

For the 2015 No Build Alternative, the maximum predicted one- and eight-hour CO concentrations occurred at two Sites, Number 3, Route 123 and International Drive and Number 11, Reston Parkway and Sunrise Valley Drive, and are 8.7 ppm and 5.2 ppm, respectively. Predicted one-hour CO concentrations at the remaining sites ranged from 7.5 ppm to 8.7 ppm. Predicted eight-hour CO concentrations at the remaining sites ranged from 4.1 to 4.9 ppm.

For the 2025 No Build Alternative, the maximum one-hour CO concentration in the project study area was predicted to be 8.6 ppm and occurred at two Sites, Number 9, Reston Parkway and Sunset Hills Road and Number 11, at the intersection of Reston Parkway and Sunrise Valley Drive. The maximum predicted eight-hour CO concentration was 4.8 ppm and occurred at the same intersections. Predicted one-hour CO concentrations at the remaining intersections ranged from 7.5 ppm to 8.5 ppm. Predicted eight-hour CO concentrations at the remaining intersections ranged from 4.1 ppm to 4.8 ppm.

All predicted CO concentrations for the 2000 Existing Conditions and for the 2011, 2015 and 2025 No Build Alternative are less than the NAAQS of 35 ppm for one hour and 9 ppm for eight hours.

The maximum one- and eight-hour CO levels for the 2025 No Build Alternative are also lower than the corresponding levels for the 2000 Existing Conditions. This decrease in CO concentrations is mainly due to the decrease in the exhaust emission factors from 2000 to 2025, as older and more polluting vehicles in the nation's fleet are replaced with new vehicles which have lower emission rates, as prescribed in the Federal Motor Vehicles Emission Control Program (FMVECP) mandated in the Clean Air Act. This reduction in the vehicle emission rates more than offsets the increase in traffic volumes from 2000 to 2025.

Ambient concentrations in the vicinity of the proposed Wiehle Avenue park-and-ride site under the existing and future No Build Alternatives are predicted to be slightly above the ambient background levels of 6.0 and 3.0 ppm for the 1- and 8-hour periods, respectively. Ambient one-hour CO concentrations at this location without the Wiehle Avenue Park-and-Ride Facility are predicted to range from 7.0 ppm under the Existing Condition in 2000, to 6.6 ppm in 2011, 6.5 ppm in 2015 and 6.6 ppm in 2025 under the No Build Alternative. No new maintenance facilities would be constructed under the No Build Alternative.

4.6.4.2 Wiehle Avenue Extension

Tables 4.6-6 and 4.6-7 show the maximum predicted CO concentrations for the Wiehle Avenue Extension and the full LPA under all future years, as well as the predicted concentrations for existing conditions in 2000. Due to changes in projected traffic conditions between the SDEIS and the FEIS, CO concentrations were revised at all Intersection Sites except 1, 2, 3, 4 and 5.

Table 4.6-6: Maximum Predicted 1-Hour CO Concentrations (in ppm) for the LPA[1] at Modeled Intersections

I.D. No.	Intersection	Existing (2000)	Wiehle Avenue Extension		Full LPA	
			2011	2025	2015	2025
1	Route 123/Colshire Drive	10.3	7.9	7.8	7.9	7.8
2	Route 123/Tysons Boulevard	11.0	8.7	8.4	8.3	8.3
3	Route 123/International Drive	11.9	8.4	8.3	8.4	8.0
4	Westpark Drive/International Drive	10.0	8.1	8.0	7.8	8.1
5	Route 7/Westpark Drive	10.4	9.1	8.3	8.5	8.3
6	Route 7/Spring Hill Road	11.4	8.6	8.3	8.5	8.3
7	Route 7/Tyco Road / Westwood Center Drive	11.6	8.8	8.3	8.8	8.3

I.D. No.	Intersection	Existing (2000)	Wiehle Avenue Extension		Full LPA	
			2011	2025	2015	2025
8	Wiehle Avenue/Sunset Hills Road	11.0	8.7	8.5	8.5	8.5
9	Reston Parkway/Sunset Hills Road	11.8	9.1	8.9	8.9	8.9
10	Reston Parkway/Dulles Toll Road – EB Ramps	9.6	8.5	8.3	8.3	8.3
11	Reston Parkway/Sunrise Valley Drive	12.4	9.0	8.6	8.7	8.7
12	Sunrise Valley Drive/Fairfax County Parkway	11.5	9.3	8.8	8.8	8.7
13	Monroe Street/Sunrise Valley Drive	10.3	9.2	8.0	9.0	8.8
14	Centreville Road/Worldgate Drive	11.2	8.6	8.3	8.5	8.3
15	Wiehle Avenue Park-and-Ride Facility	7.1	10.2	9.5	9.0	9.5

[1]NAAQS is 35 ppm for 1-hour CO concentrations.

Table 4.6-7: Maximum Predicted 8-Hour CO Concentrations (in ppm) for the LPA[1] at Modeled Intersections

I.D. No.	Intersection	Existing (2000)	Wiehle Avenue Extension		Full LPA	
			2011	2025	2015	2025
1	Route 123/Colshire Drive	6.0	4.3	4.3	4.3	4.3
2	Route 123/Tysons Boulevard	6.5	4.6	4.4	4.4	4.4
3	Route 123/International Drive	7.1	4.7	4.6	4.7	4.4
4	Westpark Drive/International Drive	5.8	4.5	4.4	4.3	4.5
5	Route 7/Westpark Drive	6.1	5.2	4.6	4.8	4.6
6	Route 7/Spring Hill Road	6.8	4.8	4.6	4.8	4.6
7	Route 7/Tyco Road/Westwood Center Drive	6.9	5.0	4.6	5.0	4.6
8	Wiehle Avenue/Sunset Hills Road	6.5	4.9	4.8	4.8	4.8
9	Reston Parkway/Sunset Hills Road	7.1	5.2	5.0	5.0	5.0
10	Reston Parkway/Dulles Toll Road – EB Ramps	5.5	4.8	4.6	4.6	4.6
11	Reston Parkway/Sunrise Valley Drive	7.5	5.1	4.8	4.9	4.9
12	Sunrise Valley Drive/Fairfax County Parkway	6.9	5.4	5.0	5.0	4.9
13	Monroe Street/Sunrise Valley Drive	6.0	5.2	4.4	5.1	5.0
14	Centreville Road/Worldgate Drive	6.6	4.8	4.6	4.8	4.6
15	Wiehle Avenue Park-and-Ride Facility	3.8	5.9	5.4	5.1	5.4

[1]NAAQS is 9 ppm for 8-hour CO concentrations.

The air quality modeling analysis for the LPA was conducted in the same way as for the No Build Alternative.

All predicted CO concentrations for the 2025 the Wiehle Avenue Extension and the full LPA are less than the NAAQS of 35 ppm for one hour and 9.0 ppm for eight hours. The maximum one- and eight-hour CO levels for the 2025 the Wiehle Avenue Extension and the full LPA are also lower than the corresponding levels for the 2000 Existing Conditions, despite the increase in hourly traffic volumes at all the modeled intersections from 2000 to 2025.

As shown in Tables 4.6-4 and 4.6-5, all maximum predictions are below the respective NAAQS. Only Wiehle Avenue park-and-ride facility showed an increase over the existing 2000 condition.

The proposed park-and-ride facility at Wiehle Avenue is designed to provide parking for a maximum of 2,300 cars. Vehicle traffic at the facility would include Express Buses, feeder buses and automobiles, and would typically be highest during the a.m. and p.m. peak commuting periods. Thus, CO emissions from idling and moving vehicles at the facility would be highest during those times.

The analysis of the park-and-ride facility included two components: 1) estimating CO concentrations at receptors located in the immediate vicinity of the facility to assess impacts from the facility itself; and 2) estimating CO concentrations near the two traffic intersections immediately next to the park-and-ride facility which would allow access into and out of the facility.

The maximum predicted one- and eight-hour CO concentrations from the Wiehle Avenue park-and-ride facility in 2011 under the Wiehle Avenue Extension occurred at a curbside receptor located near the intersection, and are 10.2 ppm and 5.9 ppm, respectively. The maximum predicted one- and eight-hour CO concentrations from the facility in 2015 under the full LPA occurred at a curbside receptor located near the intersection, and are 9.0 ppm and 5.1 ppm, respectively.

Additional storage tracks and new rail connections would be constructed at West Falls Church S&I Yard. Air quality effects at the West Falls Church S&I Yard with the Wiehle Avenue Extension would reflect the change in operations at the West Falls Church S&I Yard. Additional maintenance and service operations, for example, would result in an incremental increase in the air quality effects at the West Falls Church S&I Yard.

4.6.4.3 Full LPA

Tables 4.6-6 and 4.6-7 on the previous pages show the maximum predicted CO concentrations for the full LPA. For the 2015 full LPA, the maximum predicted one- and eight-hour CO concentrations occurred at Site Number 13, Monroe Street and Sunrise Valley Drive, and are 9.0 ppm and 5.1 ppm, respectively. Predicted one-hour CO concentrations at the remaining sites ranged from 7.8 ppm to 8.9 ppm. Predicted eight-hour CO concentrations at the remaining sites ranged from 4.3 ppm to 5.0 ppm.

For the 2025 Full LPA, the maximum one-hour CO concentration in the project study area was predicted to be 8.9 ppm and occurred at Site Number 9, Reston Parkway and Sunset Hills Road. The maximum predicted eight-hour CO concentration was 5.0 ppm and occurred at two locations: Site Number 9, Reston Parkway and Sunset Hills Road, and Site Number 13, Monroe Street and Sunrise Valley Drive. Predicted one-hour CO concentrations at the remaining intersections ranged from 7.8 ppm to 9.5 ppm. Predicted eight-hour CO concentrations at the remaining intersections ranged from 4.3 ppm to 5.4 ppm.

The predicted maximum CO concentrations would differ only slightly between the No Build Alternative and the full LPA (see Tables 4.6-4 through 4.6-7). For example, compared to the No Build Alternative in 2025, the predicted maximum CO level with the full LPA would be slightly lower at 4 intersections, slightly higher at 9 intersections, and would remain unchanged at 2 intersections. Localized increases in traffic volumes predicted along the access routes to the rail stations and park-and-ride facilities would be responsible for the slightly higher CO levels at some locations. However, other locations would experience decreases in traffic volumes because some drivers would choose to ride Metrorail, and these decreases would be responsible for the slightly lower CO levels.

At Wiehle Avenue park-and-ride, the maximum predicted one- and eight-hour CO concentrations from the facility under the Wiehle Avenue Extension and the full LPA in 2025 occurred at a receptor also located near the intersection, and are 9.5 ppm and 5.4 ppm, respectively. The predicted decrease in CO

concentrations between the Wiehle Avenue Extension and the full LPA is due to the reduction in traffic in the vicinity of the park-and-ride under the full LPA when Route 772 becomes the Metrorail end station.

The potential emission sources at S&I Yard Site 15 would be similar to those at the West Falls Church S&I Yard. The emission sources that would operate at the rail yard would be typical of such facilities. Rail vehicle maintenance may include major and minor repairs such as electrical work, welding, wheel grinding, bodywork, and painting, as well as routine maintenance and overnight storage.

The nearest residence to Site 15 is located approximately 3,400 feet from the closest potential source of emissions at that site. At this distance, ambient pollutant concentrations caused by the facility would be low because of the dilution effects due to atmospheric dispersion. Therefore, no adverse air quality impacts would be experienced from S&I Yard Site 15. Some of the proposed maintenance activities, such as paint booths, would require air quality permits from VDEQ. Permits would be obtained as a separate activity after approval of this Final EIS. The VDEQ permit application process requires that potential air quality impacts such as odors from solvent evaporation be considered and mitigated if necessary.

4.6.5 CONSTRUCTION EFFECTS

Construction activities can result in short-term impacts on ambient air quality. These potential impacts include direct emissions from construction equipment and trucks, increased emissions from motor vehicles on the streets due to disruption of traffic flow, and fugitive dust emissions. These impacts would be temporary, and would affect only the immediate vicinity of the construction sites and their access routes. Emissions from project-related construction equipment and trucks would be much less than the total emissions from other industrial and transportation sources in the region, and therefore, are expected to be insignificant with respect to compliance with the NAAQS.

The LPA would involve construction activities and equipment to support construction of railbed, tracks, and signals in the median of the Dulles Connector Road and the DIAAH; Metrorail connections to the West Falls Church S&I Yard; traction power substations and tie-breaker stations; the elevated structures in Tysons Corner; and underground facilities in Tysons Corner and at Dulles Airport.

Roadway traffic disruption due to lane closures, detours, and construction vehicles accessing the sites can cause congestion, which can increase motor vehicle exhaust emissions. Fugitive dust emissions could occur during demolition, ground excavation, material handling and storage, movement of equipment at the site, and transport of material to and from the site.

4.6.6 MITIGATION

No long-term impacts to regional air quality are anticipated from the construction and operation of the project. Therefore, no mitigation measures are proposed.

During construction, to mitigate construction-related effects on air quality, the project team would comply with VDEQ requirements for fugitive dust and emissions outlined in 9 VAC 5-50-90.

4.7 NOISE

This section includes an introduction to basic noise concepts, including noise descriptors, the prediction methodologies and modeling assumptions used for the project, the ambient noise monitoring program, and the evaluation of potential impacts along the Dulles Corridor.

4.7.1 HUMAN PERCEPTION OF NOISE

Noise is “unwanted sound” and by this definition the perception of noise is a subjective process. Several factors affect the actual level and quality of sound (or noise) as perceived by the human ear and can generally be described in terms of loudness, pitch (or frequency), and time variation. The loudness, or magnitude, of noise determines its intensity and is measured in decibels (dB) that may range from 40 decibels (the rustling of leaves) to over 100 decibels (a rock concert). Pitch describes the character and frequency content of noise such as the very low “rumbling” noise of stereo sub-woofers, or the very high-pitched whistle noise. Finally, the time variation of some noise sources can be characterized as continuous, such as a building ventilation fan; intermittent, such as for a train passby; or impulsive, like a car backfire.

Various sound levels are used to quantify noise from transit sources, including a sound's loudness, duration, and tonal character. For example, the A-weighted decibel (dBA) is commonly used to describe the overall noise level because it is an attempt to take into account the human ear's response to audible frequencies. Because the decibel is based on a logarithmic scale, a 10-decibel increase in noise level is generally perceived as a doubling of loudness, while a three-decibel increase in noise is just barely perceptible to the human ear. Typical A-weighted sound levels from transit and other common sources are shown in Figure 4.7-1.

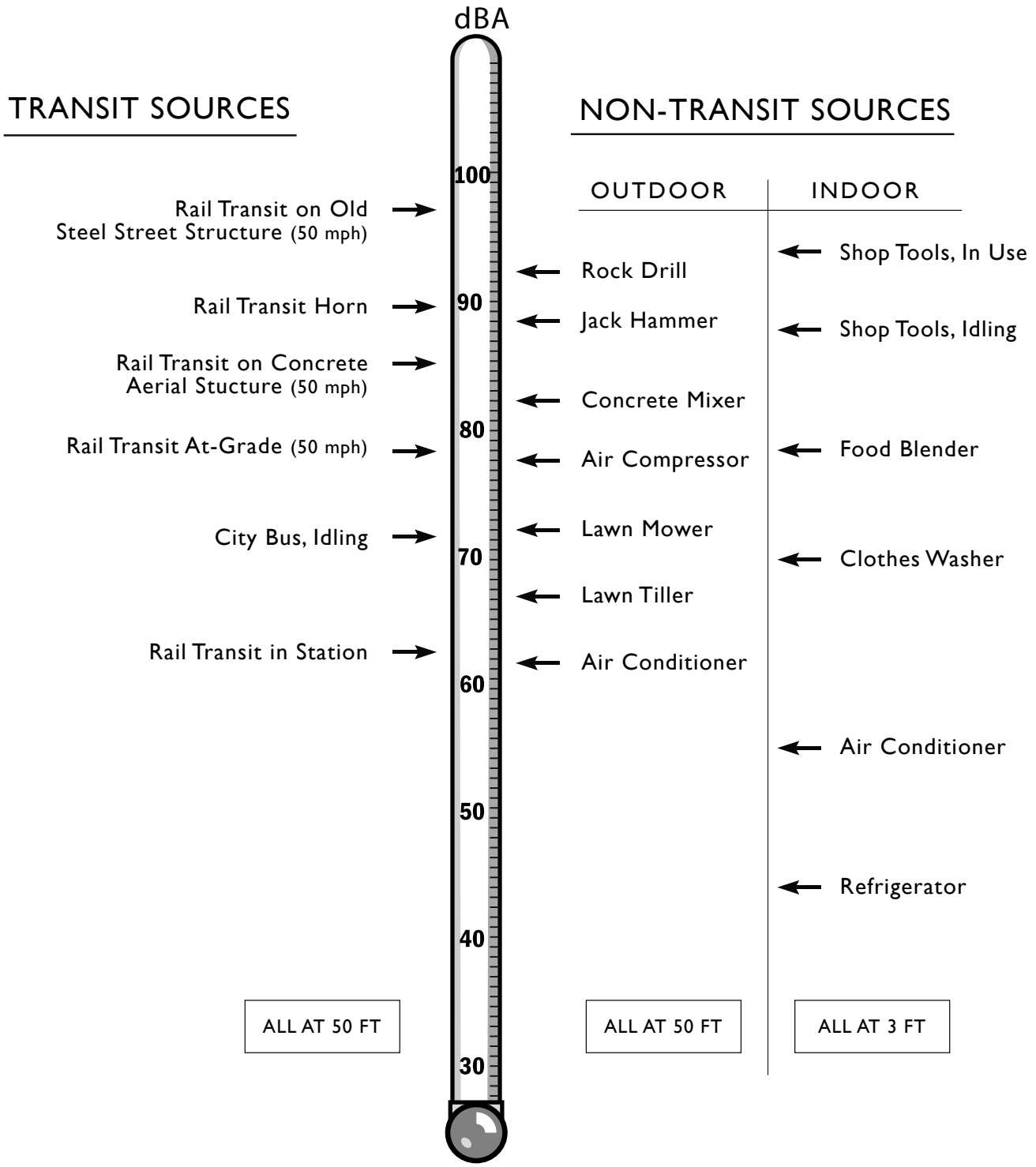
Several A-weighted noise descriptors were used to determine impacts from transit-related sources including the Lmax, which represents the maximum noise level that occurs during a single event or train passby; the Leq, which represents a level of constant noise with the same acoustical energy as the fluctuating noise levels observed during a given interval, such as one hour; and the Ldn, or the 24-hour day-night noise level that includes a ten-decibel penalty for all nighttime activity between 10 p.m. and 7 a.m.

4.7.2 EVALUATION CRITERIA

An introduction to the evaluation criteria used to determine noise impacts during operation and construction is described in the following subsections.

4.7.2.1 Federal Noise Guidelines

The FTA’s *Transit Noise and Vibration Impact Assessment* guidance manual (DOT-95-16, April 1995) presents the basic concepts, methods, and procedures for evaluating the extent and severity of noise impacts from transit projects. Under the FTA guidelines, transit noise impact assessments are based on land use categories and sensitivity to noise from transit sources. For example, operational impacts at residential receptors (FTA Category 2) are evaluated using the 24-hour Ldn noise level while the peak-hour Leq noise level is used to evaluate impacts at institutional receptors such as schools and churches (FTA Category 3). The Leq noise level is also used to evaluate impacts at serene parks or other outdoor uses where quiet is an integral part of its use (FTA Category 1). As shown in Figure 4.7-2, the FTA noise impact criteria are defined by two curves that allow increasing project noise levels as existing noise

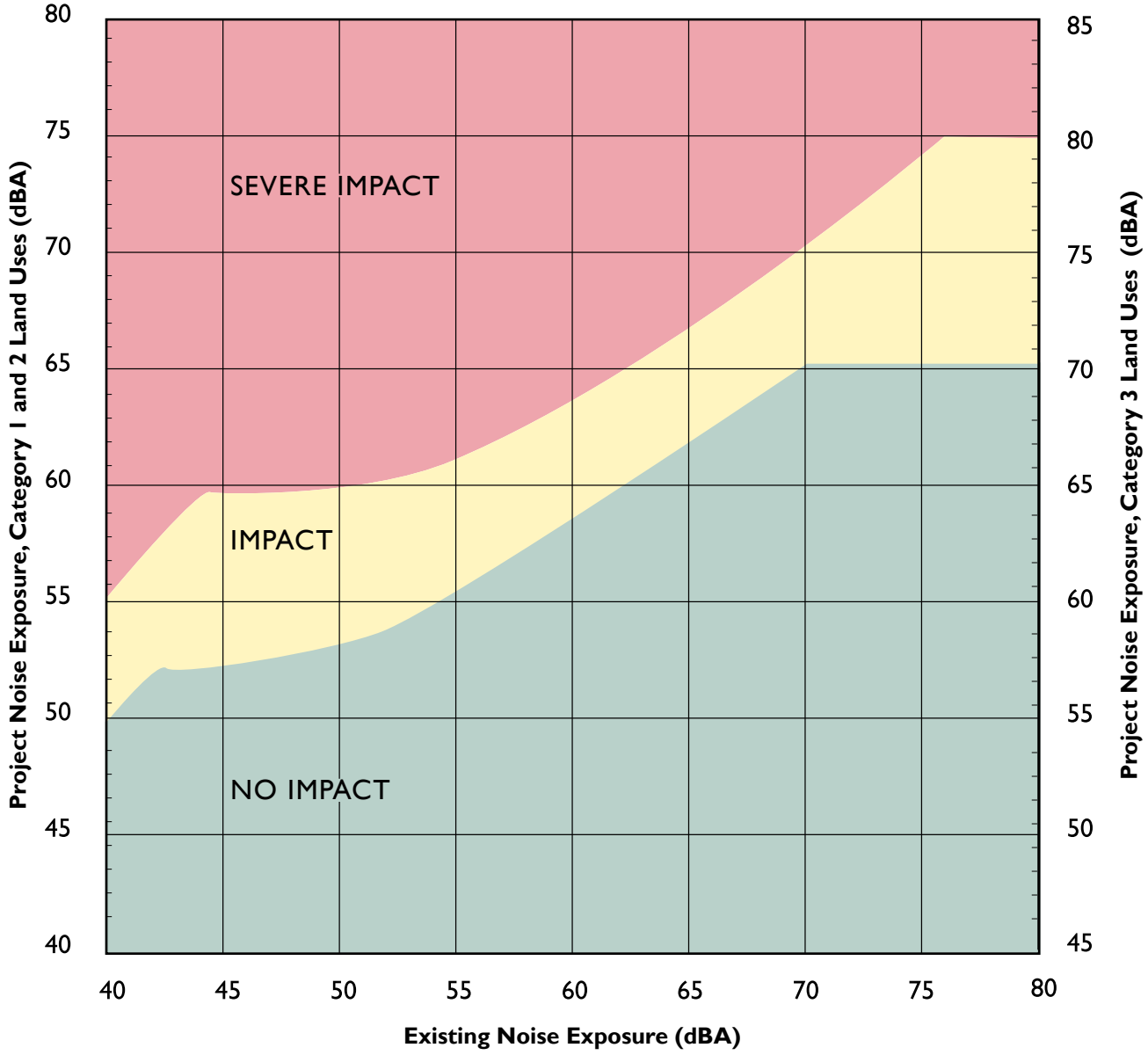


Source: Transit Noise and Vibration Impact Assessment - Final Report. Federal Transit Administration, Washington, D.C., April 1995

Figure 4.7-1

Typical A-Weighted Sound Levels

Dulles Corridor Rapid Transit Project



FEIS_4.7-2_FTANoiseImpact_v1 October2003

Note: To use this table find the existing noise level along the bottom row and follow the line up to the projected noise level using the scale on the left for Category 1 or 2 Land Uses. At the intersection of the existing and projected levels, the colored background shows *no impact* (blue), *impact* (yellow), or *severe impact* (red).

Noise exposure is in terms of Leq(h) for Category 1 and 3 Land Uses; Ldn for Category 2 Land Uses.

Source: *Transit Noise and Vibration Impact Assessment - Final Report,* Federal Transit Administration, Washington, D.C., April 1995

Figure 4.7-2

FTA Noise Impact Criteria for Transit Projects

Dulles Corridor
Rapid Transit Project

increases up to a point, beyond which impact is determined on project noise alone. The two FTA noise criteria categories, *impact* and *severe impact,* define the level of adverse reaction or annoyance from the community based on the predicted project noise level. The level of impact at any specific site can be established by comparing the predicted project noise level at the site to the existing noise level at the site. The FTA noise impact criteria for all three land use categories are shown in Figure 4.7-2.

During the environmental analysis and preliminary engineering phases of a project, the FTA guidelines suggest evaluating proposed construction scenarios against the one-hour Leq noise thresholds of 90 dBA for residences (80 dBA during nighttime construction) and 100 dBA at all non-residential receptors. These limits are evaluated against noise levels from the two loudest pieces of construction equipment that, under worst case conditions, are assumed to operate continuously for one hour during both the daytime (7 a.m. to 10 p.m.) and nighttime (10 p.m. to 7 a.m.) periods.

4.7.2.2 WMATA Noise Criteria

Potential noise impacts were also evaluated using WMATA noise criteria. While the FTA noise impact criteria are based on cumulative exposure to predict transit noise, the WMATA criteria are based on single-event maximum vehicle passby noise levels. Maximum noise levels (or Lmax) from transit vehicle passbys are applicable to single- and multi-family residences, as well as commercial receptors located in various communities. The WMATA maximum passby noise levels were applied to all modes of transit, including BRT and Metrorail passbys.

Project noise levels related specifically to facility operations, such as at passenger stations and maintenance facilities, were assessed using the WMATA "Transit Systems Ancillary Facility" criteria. Noise criteria were developed for both transient (short-time-duration) events, such as a train passby, and continuous (long-time-duration) events, such as rooftop ventilation fans. The WMATA criteria were applied to all noise—sensitive locations (receptors) identified along the Dulles Corridor. Randomly occurring noises from service and inspection yards, such as wheel squeal or railcar auxiliary equipment, were also evaluated at nearby residences using the WMATA criteria.

4.7.2.3 VDOT Noise Policy

VDOT's "State Noise Abatement Policy" (January 1, 1997) established evaluation criteria for Type I and II highway projects. These criteria include both the FHWA Noise Abatement Criteria (NAC) adopted by VDOT and a relative increase over the existing noise level criterion for various land use categories. For the relative increase over existing noise level criterion, a "substantial" increase of 10 dBA or more defines an impact from highway noise, especially at remote receptors currently not affected by existing traffic. The VDOT noise criteria were applied only to those residences located adjacent to the proposed realignment of the DIAAH and Dulles Toll Road, to create space for Metrorail pocket tracks or median transit stations. No other roadway changes affecting either capacity or elevation are expected anywhere else along the Dulles Corridor.

4.7.2.4 Local Ordinances

In addition to the FTA, WMATA, and VDOT criteria, an inventory of local and county noise ordinances was compiled for all municipalities along the Dulles Corridor. Local noise ordinances generally set limits on construction and other nuisance noises but not on transit operations. However, local noise ordinances were used to evaluate impacts from stationary sources, such as the proposed Metrorail S&I Yard and the parking garages in Fairfax County. To determine impact at these locations, maximum facility noise levels were evaluated against the residential threshold of 55 dBA and a commercial threshold of 60 dBA. Although no identified limits on maximum construction equipment noise levels are in force in any of the

communities along the Dulles Corridor, local ordinances along the Dulles Corridor generally permit construction activities during the daytime hours, from 7 a.m. to 6 p.m.

4.7.3 METHODOLOGY

The modeling methodologies and the types of noise sources included in the modeled prediction for this project are introduced herein.

Potential transit noise impacts along the Dulles Corridor were evaluated according to the FTA modeling prediction guidelines. The noise prediction modeling included all new sources of noise proposed in the study area: Metrorail train passbys, articulated express bus passbys, wheel squeal along curves, Metrorail auxiliary equipment at stations, public address systems at stations, express and feeder bus idling at stations and at park-and-ride lots. Operations data were adjusted based on the existing topography, such as acoustically hard or soft ground, terrain cuts, earthen berms, and other noise barrier walls. Project noise levels from facilities operations, such as parking garages and rail yards, were predicted using the FTA guidelines. More than 2,600 individual receptor locations were identified including single-family and multi-family residences, hotels, schools, churches, amphitheaters, offices, parks, and historic resources. Noise levels were predicted at all identified noise-sensitive receptor locations under the Wiehle Avenue Extension and the full LPA.

Construction noise expected along the Dulles Corridor was also estimated according to the procedures outlined in the FTA guidelines. Potential construction scenarios, which were estimated based on the Project elements proposed (such as at-grade and aerial track construction, stations, bridges, etc.), included both stationary and mobile equipment. For each construction scenario, the two noisiest pieces of equipment expected to be operating during each phase were selected. According to the FTA guidelines, this approach is expected to identify any potential noise impacts during the initial phases of the project when specific construction details are still preliminary.

4.7.4 EXISTING CONDITIONS

In accordance with FTA guidelines, a noise-monitoring program was conducted along the Dulles Corridor to (1) establish the existing ambient background levels within the study area and (2) develop project noise criteria.

Noise measurements were originally obtained at 30 discrete noise-sensitive receptor locations along the Dulles Corridor during the peak travel, midday off-peak, and late night hours. However, nine receptors were previously identified for other alternatives and do not appear in these tables. The total number of receptors for the Final EIS is 21. The results were used to establish baseline noise levels for both residential and non-residential receptors. The monitoring locations shown in Figure 4.7-3 were selected to be representative of the types of neighborhoods and land uses found along the corridor. The results of the noise-monitoring program are summarized in Table 4.7-2 of the Long Term Effects. The measured noise levels were fairly typical for both urban areas and community developments along highway corridors.

In addition to the community noise-monitoring program, measurements were taken to establish noise reference levels from existing sources and were intended to supplement and validate the FTA reference levels through direct comparison with project-specific levels. For example, wayside noise measurements were conducted along a section of straight track near the WMATA Arlington Cemetery Blue Line station.



LEGEND

- Noise Monitoring Location
- County Boundary
- Rail Yard

PROPOSED METRORAIL ALIGNMENT

- At-grade/Retained Fill
- Aerial
- Underground
- Aerial Yard Lead

- Existing Metrorail Orange Line and Stations
- Proposed Station

0 1 2 3 MILES

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

Figure 4.7-3

Community Noise Monitoring Locations along the Dulles Corridor

Dulles Corridor Rapid Transit Project

Similarly, wheel squeal (the high-pitched, pure tone noise caused by steel wheels rubbing against steel rails) was measured from existing Metrorail trains at Ronald Reagan Washington National Airport (National Airport) and the West Falls Church S&I Yard. Wheel squeal events were recorded along revenue tracks (at National Airport) with a curve radius of approximately 770 feet and non-revenue tracks (S&I Yard) with a curve radius of only 300 feet. The observed source noise levels were used to supplement the reference noise levels included in the FTA guidelines.

4.7.5 LONG-TERM EFFECTS

A noise assessment was completed to determine the potential noise-related impacts at various sensitive receptor locations within approximately 1,000 feet of the Dulles Corridor. The noise levels at various receptors were predicted using the FTA guidelines and methodologies under both the Wiehle Avenue Extension and full LPA. These levels were then evaluated using the Project criteria to determine the onset of impact. The general locations of potentially affected noise receptors throughout the corridor is illustrated in Figure 4.7-4.

4.7.5.1 No Build Alternative

In accordance with FTA guidelines, noise impacts from the future Build Alternatives are not compared to the No Build Alternative to determine impacts. Instead, the FTA analysis methodology establishes project criteria noise limits based on existing measured noise levels in the study area. Therefore, FTA guidelines do not require a noise assessment for the No Build Alternative.

4.7.5.2 Wiehle Avenue Extension

A. FTA Criteria

Under the Wiehle Avenue Extension, peak-hour Leq noise levels, as shown in Table 4.7-2, are predicted to range from well below background at non-residential receptor locations along underground sections of track in Tysons Corner to 60 dBA at Receptors R7, R13 and R18 in Tysons Corner. The peak hour Leq(h) noise levels are not predicted to exceed the FTA Land Use Categories 1 and 3 *impact* or *severe impact* criteria threshold at any of the selected discrete receptors.

At specific residential receptors (Category 2) evaluated as part of the noise assessment, 24-hour Ldn levels under the Wiehle Avenue Extension are predicted to range from well below background at locations along underground sections of track in Tysons Corner to 65 dBA at R3 (a residence on Norwalk Street) in Falls Church. As shown in Table 4.7-2, three exceedances of the FTA Land Use Category 2 *impact* and *severe* impact criteria are predicted from Metrorail operations at locations R3, R5 and R19.

Table 4.7-2: FTA Noise Impact Summary at Discrete Receptors Under the Wiehle Avenue Extension and the Full LPA (dBA)

Receptor		Community	FTA Category	Existing Background	Wiehle Avenue Extension Noise Level (dBA)	Full LPA Noise Level (dBA)	FTA Impact Criteria Threshold (dBA)	
No.	Description						Impact	Severe Impact
R1	Pavilion, Falls Church Drive	Falls Church	2	62 Ldn	47	47	59	64
R2	2134 Greenwich Street	McLean	2	66 Ldn	61	61	61	67

Receptor		Community	FTA Category	Existing Background	Wiehle Avenue Extension Noise Level (dBA)	Full LPA Noise Level (dBA)	FTA Impact Criteria Threshold (dBA)	
No.	Description						Impact	Severe Impact
R3	7103 Norwalk Street	McLean	2	62 Ldn	[65][1]	[65][1]	59	64
R4	1726 Baldwin Drive	McLean	2	57 Ldn	49	49	56	62
R5	7405 Hallcrest Drive	McLean	2	59 Ldn	[64][1]	[64][1]	57	63
R6	7798 Dolley Madison Bouelvard	Tysons Cornder	3	66 Leg	n.a.[2]	n.a.[2]	67	72
R7*	7900 Westpark Drive	Tysons Corner	3	64 Leq	60	60	65	70
R13**	1961 Chain Bridge Road	Tysons Corner	3	66 Leq	60	60	67	72
R18	8595 Leesburg Pike	Tysons Corner	3	64 Leq	60	60	65	71
R19	Westwood Village	Tysons Corner	2	54 Ldn	***61***[1]	***61***[1]	55	61
R20	1468 Carrington Ridge Lane	Vienna	2	64 Ldn	59	59	60	66
R21	Filene Center (Wolf Trap National Park)	Vienna	1	54 Leq	41	41	55	61
R22	1533 Red Rock Court	Vienna	2	54 Ldn	48	48	55	61
R23	1606 Chathams Ford Drive	Vienna	2	63 Ldn	58	58	60	65
R24	1709 Landon Hill Road	Reston	2	57 Ldn	47	47	56	62
R25	11810 Sunrise Valley	Reston	2	61 Ldn	43[3]	57	58	64
R26	12708 Roark Court	Reston	2	57 Ldn	50[3]	47	56	62
R27	2204 Westcourt Lane	Herndon	2	69 Ldn	45[3]	61	64	69
R28	13300 Apgar Place	Herndon	2	61 Ldn	25[3]	46	58	64
R29	Rail S&I Yard (Y7)	Ashburn	3	62 Leq	39[3]	54	64	69
R30	21971 Shellhorn Road	Ashburn	2	57 Ldn	46[3]	45	56	62

1 Assessment of impacts is displayed as follows: No impact, ***Impact***, [Severe Impact].
2 Not applicable. Due to other developments along the Dulles Corridor (not associated with the project), several receptors would be removed.
3 Receptor noise levels west of Wiehle Avenue are due to express buses under the Wiehle Avenue Extension.
* Discrete receptors R8 through R12 all lie along Westpark Drive and were originally selected to evaluate the former T4 alignment and therefore have been removed.
** Discrete receptors R14 through R17 all lie along Route 7 where the Metrorail tunnel is proposed and would not experience noise effects from Metrorail operations.



LEGEND

- Buildings Potentially Impacted by Noise
- County Boundary
- Rail Yard

PROPOSED METRORAIL ALIGNMENT

- At-grade/Retained Fill
- Aerial
- Underground

- Existing Metrorail Orange Line and Stations
- Proposed Station

0 1 2 3 MILES

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

Figure 4.7-4

Potential FTA Noise Impact Locations

Dulles Corridor Rapid Transit Project

As shown in Table 4.7-3, corridor-wide project noise levels are predicted to exceed the FTA Category 2 Land Use *impact* criteria at 174 receptors under the Wiehle Avenue Extension and the *severe impact* criteria would be exceeded at an additional 10 receptors. Project noise levels are not predicted to exceed any FTA Land Use Category 1 or 3 criteria anywhere along the corridor.

Table 4.7-3: Number of FTA Noise Impacts under the Wiehle Avenue Extension and the Full LPA

Impact Criteria	Wiehle Avenue Extension Impacts		Full LPA Impacts	
	Category 2	Category 3	Category 2	Category 3
Impact	174	0	173	0
Severe Impact	10	0	10	0
Sum	184	0	183	0

B. WMATA Criteria

Lmax noise levels from train passbys and stationary events, such as public address announcements at the stations, would range from well below the ambient background at receptors located near underground sections of track in Tysons Corner, to 78 dBA at R3 (a residence along Norwalk Street in McLean) from train passbys, as shown in Table 4.7-4. As a result, maximum passby noise levels are predicted to exceed the WMATA transit criteria threshold under the Wiehle Avenue Extension at Discrete Receptor R3 (a residence on Norwalk Street in McLean).

Table 4.7-4: WMATA Noise Impact Summary at Discrete Receptors under the Wiehle Avenue Extension and the Full LPA (dBA)

Receptor		Community	WMATA Category	Wiehle Avenue Extension Noise Level (dBA)	Full LPA Noise Level (dBA)[1]	WMATA Impact Criteria (dBA)
No.	Description					
R1	Pavilion, Falls Church Drive	Falls Church	MFAM V	59	59	85
R2	2134 Greenwich Street	McLean	SFAM V	75	75	80
R3	7103 Norwalk Street	McLean	SFAM III	***78***[1]	***78***[1]	75
R4	1726 Baldwin Drive	McLean	SFAM III	62	62	75
R5	7405 Hallcrest Drive	McLean	MFAM V	77	77	85
R6	7798 Dolley Madison Boulevard	Tysons Corner	COM IV	n.a.[2]	n.a.[2]	85
R7*	7900 Westpark Drive	Tysons Corner	COM IV	75	75	85
R13**	1961 Chain Bridge Road	Tysons Corner	COM IV	74	74	85
R18	8595 Leesburg Pike	Tysons Corner	COM IV	76	76	85
R19	Westwood Village	Tysons Corner	MFAM V	73	73	85
R20	1468 Carrington Ridge Lane	Vienna	SFAM III	72	72	75
R21	Filene Center (Wolf Trap National Park)	Vienna	Park	56	56	65
R22	1533 Red Rock Court	Vienna	SFAM II	61	61	75
R23	1606 Chathams Ford Drive	Vienna	SFAM II	71	71	75
R24	1709 Landon Hill Road	Reston	SFAM II	61	61	75

Receptor						
No.	Description	Community	WMATA Category	Wiehle Avenue Extension Noise Level (dBA)	Full LPA Noise Level (dBA)[1]	WMATA Impact Criteria (dBA)
R25	11810 Sunrise Valley	Reston	COM V	71[3]	73	85
R26	12708 Roark Court	Reston	SFAM III	60[3]	59	75
R27	2204 Westcourt Lane	Herndon	MFAM V	72[3]	74	80
R28	13300 Apgar Place	Herndon	MFAM III	58[3]	59	80
R29	Rail S&I Yard (Y7)	Ashburn	COM V	67[3]	69	85
R30	21971 Shellhorn Road	Ashburn	SFAM I	59[3]	54	70

1 Assessment of impact is displayed as follows: No impact and ***impact***.
2 Not applicable. Due to other developments along the Dulles Corridor (not associated with the project), several receptors would be removed.
3 Receptor noise levels west of Wiehle Avenue are due to express buses under the Wiehle Avenue Extension.
* Discrete receptors R8 through R12 all lie along Westpark Drive and were originally selected to evaluate the former T4 alignment and therefore have been removed.
** Discrete receptors R14 through R17 all lie along Route 7 where the Metrorail tunnel is proposed and would not experience noise effects from Metrorail operations.

Overall, single-event Lmax noise levels under the Wiehle Avenue Extension are predicted to exceed the WMATA noise criteria threshold at 48 locations (46 residential and 2 commercial) as shown in Table 4.7-5.

Table 4.7-5: Number of WMATA Noise Impacts under the Wiehle Avenue Extension and the Full LPA

Land Use[1]	Wiehle Avenue Extension Impacts	Full LPA Impacts
Residential	46	47
Commercial	2	2
Other	0	0

1 Residential (Res.) land uses include all single- and multi-family buildings while commercial (Com.) receptors include all non-residential receptors such as offices. Other specific receptor types (Other) include schools and amphitheaters.

C. Project Facilities

Although the overall impact assessment included the noise contribution from project facilities such as passenger stations, feeder bus facilities, and parking garages, their individual contributions were also evaluated against the WMATA criteria and those from Fairfax County. Lmax noise levels from idling buses at passenger stations were predicted to range from below 20 dBA at a residence in McLean, to 51 dBA at the LaMadeleine Restaurant in Tysons Corner under the LPA. Similarly, project noise levels from parking facilities were expected to range from below the ambient background at receptors over 2,000 feet away, to 36 dBA at Moore Cadillac in Tysons Corner, which would be less than 750 feet away from the Tysons West station facilities. However, Lmax noise levels from facility activities associated with the new storage tracks at the West Falls Church S&I Yard are predicted to exceed the Fairfax County stationary noise criterion of 55 dBA at six residences in McLean. No other exceedances of the FTA or the WMATA facility criteria are predicted under the LPA.

D. Historic Resources

At all historic resources within the area of potential effect (APE), none of the predicted future noise levels are predicted to exceed the FTA or the WMATA impact criteria under the Wiehle Avenue Extension. However, at specific historic receptor locations, including Ash Grove historic site (29-2) and The Plantation (29-188), cumulative future ambient day-night noise levels under the Wiehle Avenue Extension are predicted to increase slightly by less than three dBAs. At the Lewinsville Post Office, cumulative future noise levels are not predicted to change from the existing ambient levels.

4.7.5.3 Full LPA

A. FTA Criteria

Under the full LPA, Metrorail service would operate from the Orange Line Connection near West Falls Church to Dulles Airport and beyond to Route 772 in Loudoun County. However, as shown in Tables 4.7-3, the total number of receptor locations where project noise levels are predicted to exceed the FTA Land-Use Category 2 *impact* criteria is predicted to decrease slightly from 174 under the Wiehle Avenue Extension to 173 under the full LPA. The number of residential locations where project noise levels are predicted to exceed the FTA Land-Use Category 2 *severe impact* criteria is predicted to remain unchanged at 10 under the full LPA. This reduced number of impacts under the LPA is due primarily to the elimination of idling express buses at the station.

B. WMATA Criteria

As shown in Table 4.7-5, the total number of receptor locations where maximum project passby noise levels are predicted to exceed the WMATA impact criteria is predicted to increase slightly from 46 residences under the Wiehle Avenue Extension to 47 under the full LPA. This increase of one WMATA impact (The Launders Historic House) between the Wiehle Avenue Extension and the full LPA is due to Metrorail operations that occur west of Wiehle Avenue. The number of WMATA impacts at commercial receptors remains unchanged at two locations under the full LPA.

In the vicinity of stationary sources, Lmax noise levels from facility activities associated with the new storage tracks at the West Falls Church S&I Yard are also predicted to exceed the Fairfax County stationary noise criterion of 55 dBA at six residences in McLean under the full LPA. However, project noise levels from S&I Yard Site 15 in Loudoun County, such as wheel squeal, are also not predicted to exceed the selected Project criteria limits at any nearby receptor locations under the full LPA.

C. Historic Resources

As discussed for the Wiehle Avenue Extension, the full LPA predicted noise levels would not exceed FTA or WMATA criteria at historic resources within the APE. The Launders House (29-240) would experience a noise level of 58 dBA. However, at the house on Route 643 (53-23), cumulative future ambient day-night noise levels under the full LPA are predicted to increase slightly.

D. FHWA Criteria

Due to the proposed realignment of the DIAAH, the Dulles Toll Road and the Dulles Greenway at all stations west of Tysons Corner, peak-hour traffic noise levels were compared with the FHWA Noise Abatement Criteria. Although future peak-hour Leq noise levels under the full LPA are expected to approach or exceed the FHWA Land-Use Category C criterion of 72 dBA at several commercial receptor locations, there is no change from the existing noise levels. Due to the negligible change in noise levels between the existing condition and the future Build Condition, there are no exceedances of the VDOT “substantial increase over existing” criterion predicted under the Full LPA.

4.7.6 CONSTRUCTION EFFECTS

Noise levels from construction activities along the Dulles Corridor, although temporary, could create a nuisance condition at nearby sensitive receptors. Exposure to excessive noise levels varies depending on the types of construction activity and the types of equipment used for each stage of work. Project construction activities would include track-laying, station construction, bridge rehabilitation, feeder bus

facility construction, and parking garage construction. The following subsections describe the predicted noise levels and potential noise impacts associated with the project construction activities.

4.7.6.1 No Build Alternative

The No Build Alternative includes changes to the operating characteristics of the existing transportation network separate from the Dulles Corridor Rapid Transit Project. Therefore, a construction impact assessment was not conducted for the No Build Alternative.

4.7.6.2 Wiehle Avenue Extension

Under the Wiehle Avenue Extension, guideway construction activities would occur from the Orange Line Connection to Wiehle Avenue Station only. Construction activities would also include Metrorail stations, express bus stops, bridges, parking garages and feeder bus facilities. The distances at which an exceedance of the FTA daytime noise limits of 90 dBA at residential receptors is predicted range from 32 feet during station construction to 40 feet during at-grade guideway construction. The distances at which an exceedance of the FTA daytime noise limits of 100 dBA at commercial receptors would occur range from 10 feet during station construction to 13 feet during at-grade guideway construction. As a result, construction activities are not predicted to exceed the FTA daytime noise limits anywhere along the Project corridor.

The distances at which an exceedance of the WMATA daytime noise limits of 75 dBA at residential receptors as predicted range from 182 feet during at-grade guideway construction to 223 feet during aerial track construction. The distances at which an exceedance of the WMATA daytime noise limits of 80 dBA at commercial receptors as predicted range from 102 feet during guideway construction to 126 feet during aerial guideway construction. As a result, noise levels from any cut-and-cover construction activities under the Wiehle Avenue Extension are predicted to exceed the WMATA daytime noise limits at 3 commercial receptor locations in Tysons Corner. These receptors include a bank at the corner of Gosnell Road and Leesburg Pike, a Wendy's restaurant on Leesburg Pike and a hotel at the corner of International Drive and Chain Bridge Road.

4.7.6.3 Full LPA

The total number of construction noise impacts under the full LPA is predicted to be the same as those reported for the Wiehle Avenue Extension. Construction activities are not predicted to exceed the FTA daytime noise limits anywhere along the project corridor under the full LPA. However, noise levels from any cut-and-cover construction activities under the full LPA are predicted to exceed the WMATA daytime noise limits at 3 commercial receptor locations in Tysons Corner: a bank and a Wendy's restaurant along Route 7, and a hotel at the corner of International Drive and Chain Bridge Road.

4.7.7 MITIGATION

Proposed measures to mitigate noise impacts associated with the Wiehle Avenue Extension and the full LPA are described below. These mitigation measures would be refined during preliminary engineering and/or final design.

4.7.7.1 Operations

Three-foot parapets are proposed along all aerial Metrorail Sections (except on Airport property). To mitigate further long-term noise effects from Metrorail operations, four- to six-foot parapet and trackside barriers would be installed along the alignment at the locations and heights shown in Table 4.7-6 and Figure 4.7-5. Due to two single crossovers just west of Pimmit Run in McLean (related to TBS-2), 4-foot

parapet barriers will be extended 1,000 feet from Sta. No. 800+00 to 810+00 on the outbound side. This barrier is intended to reduce noise from Metrorail passbys over the rail discontinuities due to the pair of switches at Sta. Nos. 803+00 and 806+00. The new lead track and existing loop track at the West Falls Church Yard would be enclosed to reduce wheel squeal noise impacts from yard operations. In addition, the DRPT and WMATA would analyze reflective highway noise impacts to the Hallcrest Heights residential community during preliminary engineering or final design.

Table 4.7-6: Recommended Location and Dimensions of Aerial Parapets and At-Grade Barriers

Station Location	Height[1]	Length	Type	Alternative
Outbound side of the Metrorail Corridor				
Sta. No. 474+00 to 480+00	4 ft	600 ft	At Grade	Wiehle & LPA
Sta. No. 730+00 to 734+00	6 ft	400 ft	At Grade	Wiehle & LPA
Sta. No. 743+00 to 756+00	4 ft	1,300 ft	At Grade	Wiehle & LPA
Sta. No. 764+00 to 779+00	4 ft	1,500 ft	Aerial	Wiehle & LPA
Sta. No. 780+00 to 785+00	6 ft	500 ft	Aerial	Wiehle & LPA
Sta. No. 796+00 to 810+00	4 ft	1,400 ft	At Grade	Wiehle & LPA
Sta. No. 830+00 to 867+00	4 ft	3,700 ft	At Grade	Wiehle & LPA
Sta. No. 1028+00 to 1045+00	4 ft	1,700 ft	Aerial	Wiehle & LPA
Sta. No. 1121+00 to 1140+00	4 ft	1,900 ft	At Grade	Wiehle & LPA
Sta. No. 1194+00 to 1200+00	4 ft	600 ft	At Grade	Wiehle & LPA
Sta. No. 1242+00 to 1246+00	4 ft	400 ft	At Grade	Wiehle & LPA
Sta. No. 1520+00 to 1540+00	4 ft	2,000 ft	At Grade	Wiehle & LPA
Inbound side of the Metrorail Corridor				
Sta. No. 483+00 to 486+00	6 ft	300 ft	At Grade	Wiehle & LPA
Sta. No. 731+00 to 735+00	6 ft	400 ft	At Grade	Wiehle & LPA
Sta. No. 770+00 to 785+00	4 ft	1,500 ft	Aerial	Wiehle & LPA
Sta. No. 790+00 to 792+00	4 ft	200 ft	At Grade	Wiehle & LPA
Sta. No. 793+00 to 810+00	6 ft	1,700 ft	At Grade	Wiehle & LPA
Sta. No. 813+00 to 849+00	4 ft	3,600 ft	At Grade	Wiehle & LPA
Sta. No. 855+00 to 863+00	6 ft	800 ft	At Grade	Wiehle & LPA
Sta. No. 864+00 to 882+00	4 ft	1,800 ft	Aerial	Wiehle & LPA
Sta. No. 1015+00 to 1040+00	4 ft	2,500 ft	Aerial	Wiehle & LPA
Sta. No. 1117+00 to 1140+00	4 ft	2,300 ft	At Grade	Wiehle & LPA

[1] Proposed barrier height determined by mitigation analysis measured from top of rail. Actual barrier height as measured from outside of structure will conform to WMATA design criteria (52 or 76 inches).

4.7.7.2 Construction Activity

During construction, DRPT would comply with noise limits established by FTA and WMATA guidelines, Federal law (for Wolf Trap Farm Park), and time-of-day restrictions specified in local noise ordinances. If necessary, temporary mitigation measures would be employed

4.8 VIBRATION

This section introduces some basic ground-borne vibration and ground-borne noise concepts, including the prediction methodologies and modeling assumptions used for the project, the results of the existing source vibration measurement program, and the evaluation of impacts in the study area.

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LEGEND

- Noise Parapet Barrier
- Proposed Metrorail Alignment
- County Boundary
- Existing Metrorail Orange Line and Station
- Proposed Station

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

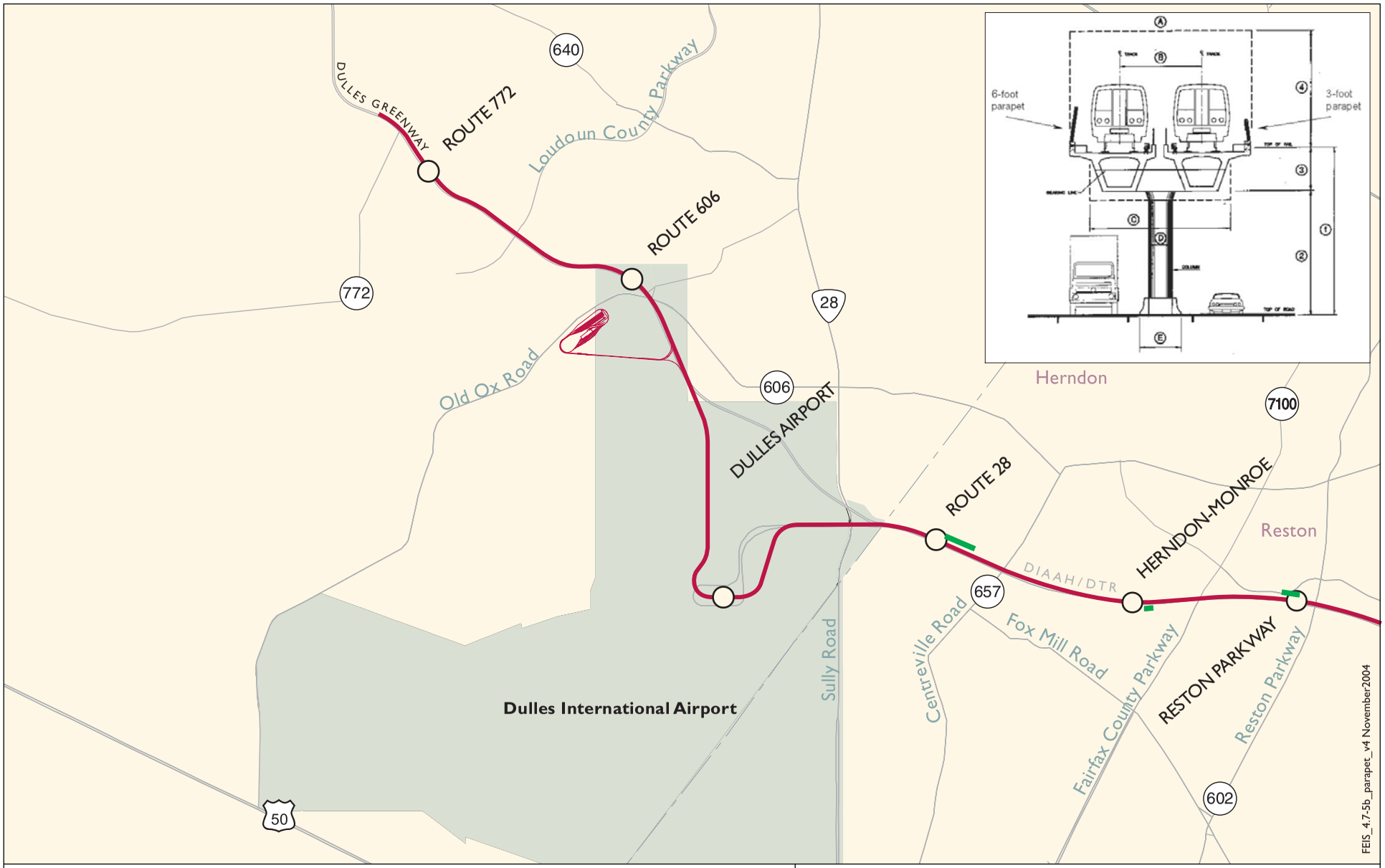
Three-foot parapets are proposed along all aerial Metrorail sections, except on Airport property or as shown

0 3000 6000 FEET

Figure 4.7-5a

Proposed Four- to Six-Foot Sound Barrier/Parapet Locations and Cross-Section

Dulles Corridor Rapid Transit Project



LEGEND

- Noise Parapet Barrier
- Proposed Metrorail Alignment
- County Boundary
- Proposed Station

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

0 3000 6000 FEET

Figure 4.7-5b

Proposed Four- to Six Foot Sound Barrier/Parapet Locations and Cross-Section

Dulles Corridor Rapid Transit Project

4.8.1 HUMAN PERCEPTION OF VIBRATION

Ground-borne vibration associated with vehicle movements is usually the result of uneven interactions between the wheel and the rail surfaces. Examples of such interactions (and subsequent vibrations) include train wheels over jointed rail and an untrue railcar wheel with "flats."

Unlike noise, which travels in air, transit vibration typically travels along the surface of the ground. Depending on the geologic properties of the surrounding ground and the type of building structure exposed to transit vibration, vibration propagation may be more or less efficient. Similarly, ground-borne noise results from vibrating room surfaces located near a heavily traveled transit corridor, such as a subway line. Consequently, annoyance resulting from the "rumbling" sound of ground-borne noise is only evaluated indoors and is described using the A-weighted decibel.

Vibration induced by vehicle passbys can generally be discussed in terms of displacement, velocity, or acceleration. However, human responses and responses by monitoring instruments and other objects are more accurately described with velocity. Therefore, the vibration velocity level is used to assess vibration impacts.

Vibration is described using an average vibration amplitude called the root mean square (RMS) amplitude, which is used to assess impacts. The RMS velocity is expressed in inches per second (ips) or decibels (VdB). All VdB vibration levels are referenced to 1 micro inch per second (μips).

To evaluate the potential for damage to buildings, the peak particle velocity (PPV) is also used to characterize the vibration. Typically expressed in units of ips, PPV represents the maximum instantaneous vibration velocity observed during an event. Typical ground-borne vibration levels from transit and other common sources are shown in Figure 4.8-1.

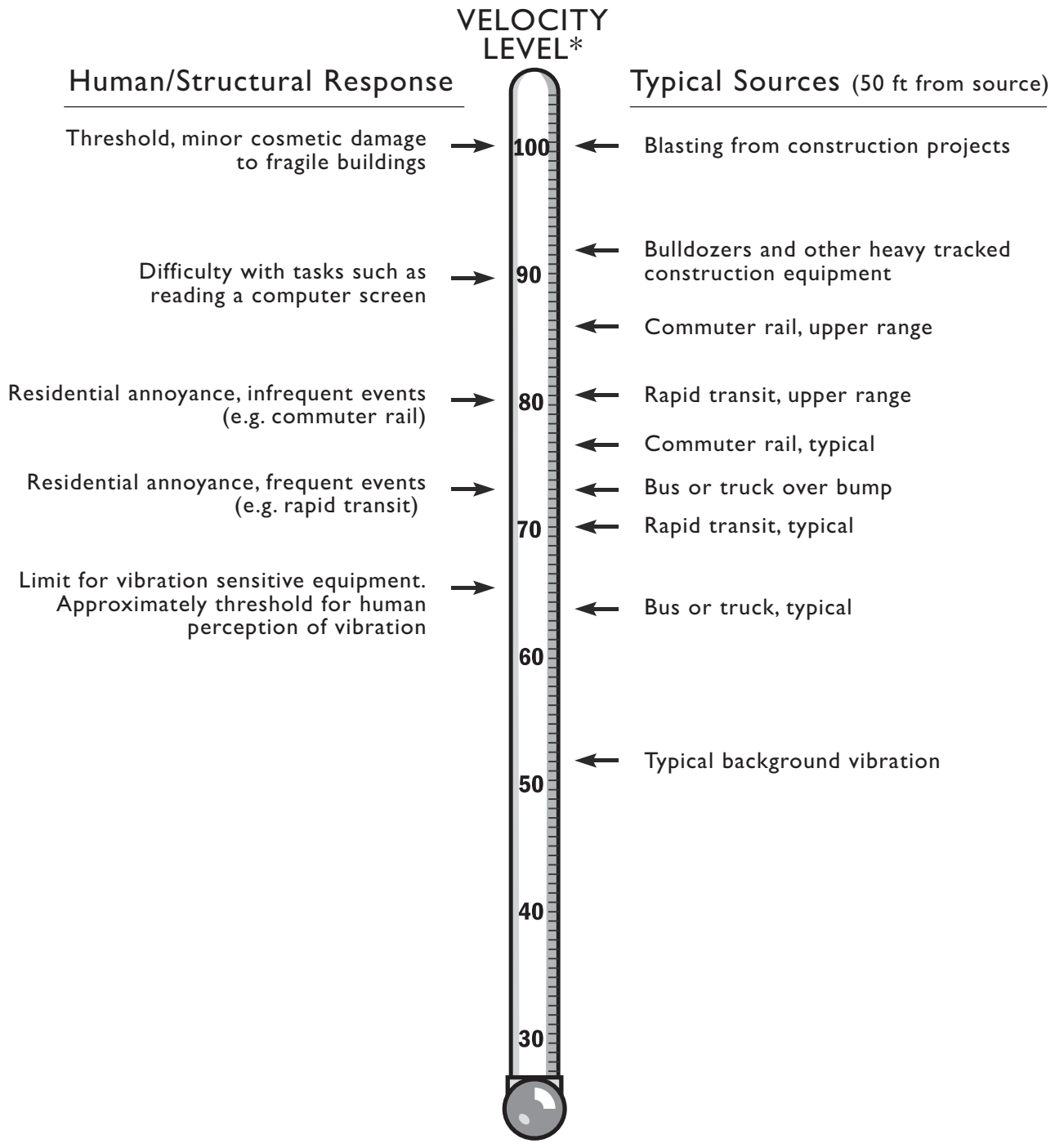
4.8.2 EVALUATION CRITERIA

Both FTA and WMATA criteria are used to evaluate vibration from single-event transit passbys and construction activities.

4.8.2.1 Federal Criteria

The FTA vibration criteria for evaluating ground-borne vibration impacts from train passbys at nearby sensitive receptors are shown in Table 4.8-1. These vibration criteria are related to ground-borne vibration levels that are expected to result in human annoyance, and are based on RMS velocity levels expressed in VdB. The FTA's experience with community response to ground-borne vibration indicates that when there are only a few train events per day, it would take higher vibration levels to evoke the same community response that would be expected from more frequent events. This is taken into account in the FTA criteria by distinguishing between projects with frequent and infrequent events, where the frequent-events category is defined as more than 70 events per day. The vibration criteria levels shown in Table 4.8-1 are defined in terms of human annoyance for different land use categories such as high sensitivity (Category 1), residential (Category 2), and institutional (Category 3). In general, the threshold of human perceptibility of vibration is approximately 65 VdB.

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Source: Transit Noise and Vibration Impact Assessment-Final Report. Federal Transit Administration, Washington, D.C., April 1995.

* RMS Vibration Velocity Level in VdB relative to 10^{-6} inches/second

Figure 4.8-1

Typical Ground-Borne Vibration Levels

Dulles Corridor Rapid Transit Project

The vibration levels shown in Table 4.8-1 are well below the damage criteria levels of approximately 95 to 100 VdB. It is extremely rare for vibration from train operations to cause any sort of building damage, including minor cosmetic damage. The potential for damage from vibratory or impact devices are discussed further under the construction criteria.

Table 4.8-1: FTA Ground-Borne Vibration Impact Criteria for Annoyance

Receptor Land Use		RMS Vibration Levels (VdB)		Ground-Borne Noise Levels (dBA)	
Category	**Description**	**Frequent Events**	**Infrequent Events**	**Frequent Events**	**Infrequent Events**
1	Buildings where low vibration is essential for interior operations	65	65	n.a.[1]	n.a.[1]
2	Residences and buildings where people normally sleep	72	80	35	43
3	Daytime institutional and office use	75	83	40	48
Specific Buildings	TV/Recording Studios/Concert Halls	65	65	25	25
	Auditoriums	72	80	30	38
	Theaters	72	80	35	43

1. Not applicable. Vibration-sensitive equipment is not affected by ground-borne noise.
Source: *Transit Noise and Vibration Impact Assessment - Final Report*, Federal Transit Administration, Washington, D.C., April 1995.

While vibration criteria are generally used to assess annoyance from transit sources at the exterior facade of receptors, ground-borne noise, or the rumbling sound due to vibrating room surfaces, is typically assessed indoors. In general, the relationship between vibration and ground-borne noise depends on the dominant frequency of the vibration and the acoustical absorption characteristics of the receiving room. Typical soil conditions were assumed everywhere along the corridor for computing ground-borne noise.

4.8.2.2 WMATA Criteria

Similar to the FTA criteria, the WMATA vibration and ground-borne noise criteria were developed for various community land use categories, as well as for specific building types. As shown in Table 4.8-2, the WMATA criteria were used to assess impacts from single event passbys for the full LPA.

Table 4.8-2: WMATA Criteria for Single Event Maximum Vibration and Ground-Borne Noise from Metrorail Operations

Community Area Category		RMS Vibration Levels (VdB)[1]			Ground-Borne Noise Levels (dBA)[1]		
		SFAM	MFAM	COM	SFAM	MFAM	COM
I	Low-density Residential	70	70	70	30	35	40
II	Average Residential	70	70	75	35	40	45
III	High-density Residential	70	75	75	35	40	45
IV	Commercial	70	75	75	40	45	45
V	Industrial/Highway	75	75	75	40	45	50
Specific Building Types		**RMS Vibration Levels (VdB)**			**Ground-Borne Noise Levels (dBA)**		
Concert Halls, Television Studios		65			25		
Auditoriums and Music Rooms		70			30		
Church, Theaters, and Hospitals		70			35		
Courtrooms, Universities, Offices		75			35		
Schools and Libraries		75			40		
Commercial Buildings		75			45		
Industrial Buildings		75			n.a.[2]		
Vibration-Sensitive Laboratories		60			n.a.[2]		

1. Land use categories include single-family (SFAM), multi-family (MFAM), and commercial (COM) receptors.
2. Not applicable. Industrial buildings and laboratories are not sensitive to ground-borne noise.
Source: WMATA Noise and Vibration Design Criteria (2001).

4.8.2.3 Construction Criteria

Vibration impacts due to construction activities were assessed using the FTA and the WMATA criteria to determine the onset of annoyance and structural damage. The vibration levels shown in Table 4.8-1 were used to evaluate vibration annoyance according to the FTA from various construction scenarios expected in the study area. Additionally, although damage is unlikely, the recommended FTA criteria limits that were used to assess minor structural damage, such as small cracks in plaster walls, in PPV are 0.20 ips for fragile buildings and 0.12 ips for extremely fragile or older historic buildings.

Unlike the FTA criteria, the WMATA criteria utilize PPV vibration levels that range from 0.03 ips for sustained construction activities of more than one hour per day to 0.10 ips for intermittent activities that occur less than 10 minutes per day. The WMATA limits are used to evaluate the potential for annoyance and interference to occupants of affected buildings.

4.8.3 METHODOLOGY

Vibration levels from Metrorail passbys, as well as during construction, at sensitive receptors in the study area were determined using the FTA guidelines. Railcar passbys along continuously welded rail track and rail discontinuities, such as switches and crossovers, were the dominant source of vibration in the modeling analysis. Due to their lighter weight and slower speeds, vibration levels from Express Buses are predicted to be well below the ambient level at all receptors located between Wiehle Avenue and Route 772 in Loudoun County.

A vibration measurement program was conducted to better determine the extent of ground-borne vibration levels from existing Metrorail trains as well as provide insight into the type of soil conditions found in the study area. The results of the measurement program are discussed in Section 4.8.4.

Changes to the vibration modeling assessment between the Draft, the Supplemental Draft and the Final EIS include revised switch locations, updated travel speeds, and modifications affecting the alignment relocation and elevation.

4.8.4 EXISTING CONDITIONS

Vibration measurements were conducted along an existing Metrorail line to determine the vibration propagation characteristics of the existing terrain and the vibration levels of a Metrorail train passby. These reference vibration levels were used to provide a more detailed understanding of the ground propagation characteristics in the study area. These measurements were also used to supplement the vibration curves contained in the FTA guidelines. As shown in Figure 4.8-2, the ground-surface propagation curves developed from the measured data observed along the Metrorail Blue Line near Arlington Cemetery Station are approximately 3 VdB lower than the FTA curve for rapid transit vehicles. However, due to the difficulty in determining the wave propagation characteristics everywhere along the study area, the FTA surface curves were used in the modeling prediction to provide a slightly more conservative estimate than was actually measured.

4.8.5 LONG-TERM EFFECTS

Vibration impacts from Metrorail vehicles and express buses were evaluated at discrete receptors using the FTA and WMATA criteria based on maximum single event passbys as described in the following sections (see Figure 4.8-3). Unlike the cumulative noise criteria, vibration criteria are evaluated based on single-event passbys. The results of the impact assessment are described in the following sections.

4.8.5.1 No Build Alternative

In accordance with FTA guidelines, vibration impacts are only assessed from new proposed vibration sources such as Metrorail passbys. Under the No Build Alternative, the full LPA would not be completed along the Dulles Corridor. Therefore, because no new sources of vibration are expected under the No Build Alternative, a vibration impact assessment is not required. Existing sources that contribute to the ambient background vibration level include motor vehicles, buses, trucks and other ongoing construction activities along the Dulles Corridor.

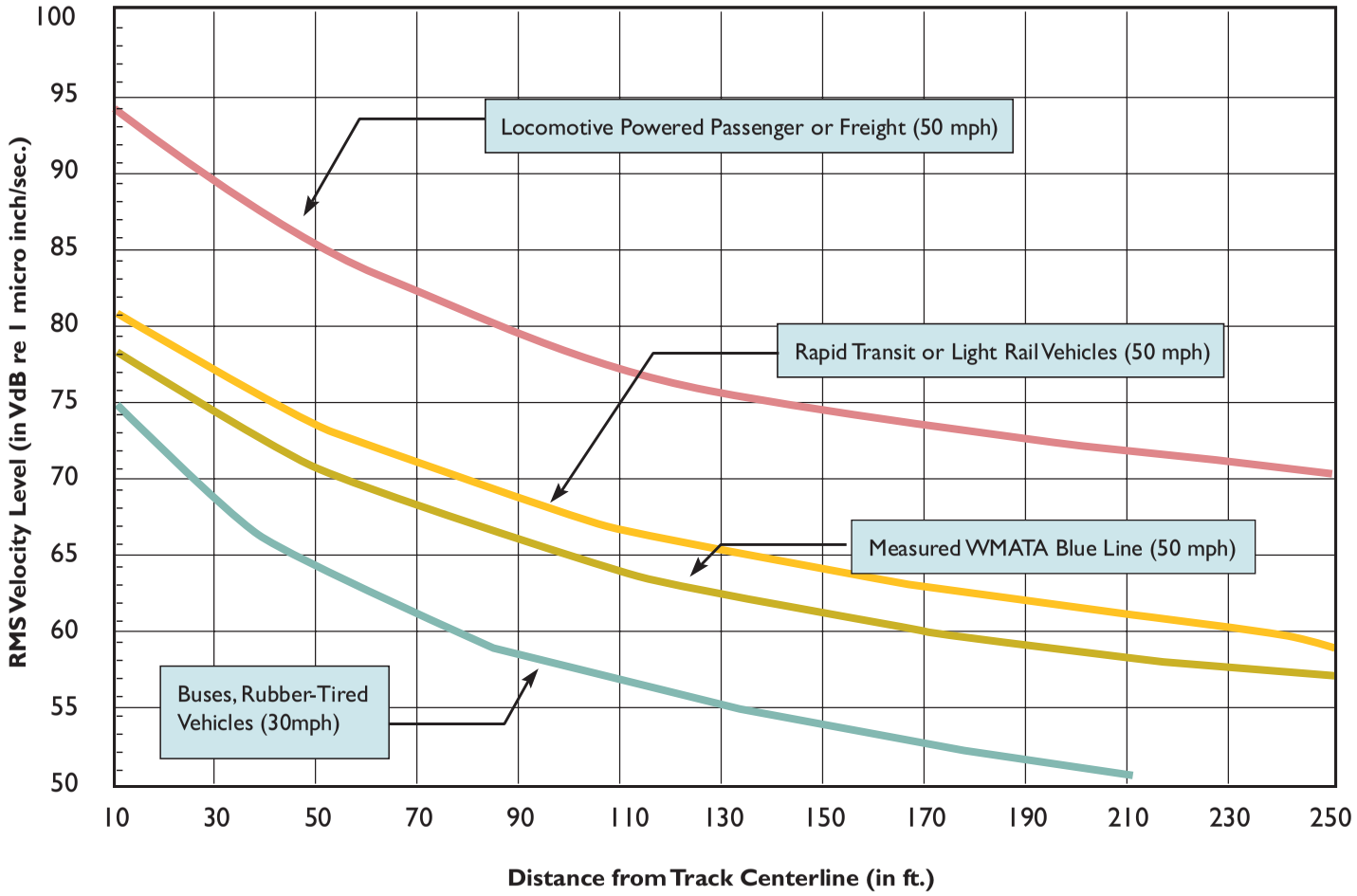
4.8.5.2 Wiehle Avenue Extension

The results of the vibration and ground-borne noise assessments for the Wiehle Avenue Extension are described in the following sub-sections.

A. FTA Criteria

Under the Wiehle Avenue Extension, new continuously welded rail track is proposed from the Orange Line to Wiehle Avenue. Most of the track alignment would be at grade in the median of a roadway, or elevated to accommodate the existing roadways and cross streets. In general, elevated track provides additional attenuation from train passbys due to the mass of the track structure itself, no direct track-to-soil coupling, as well as the extra distance that the vibration must travel between the source and the receptor.

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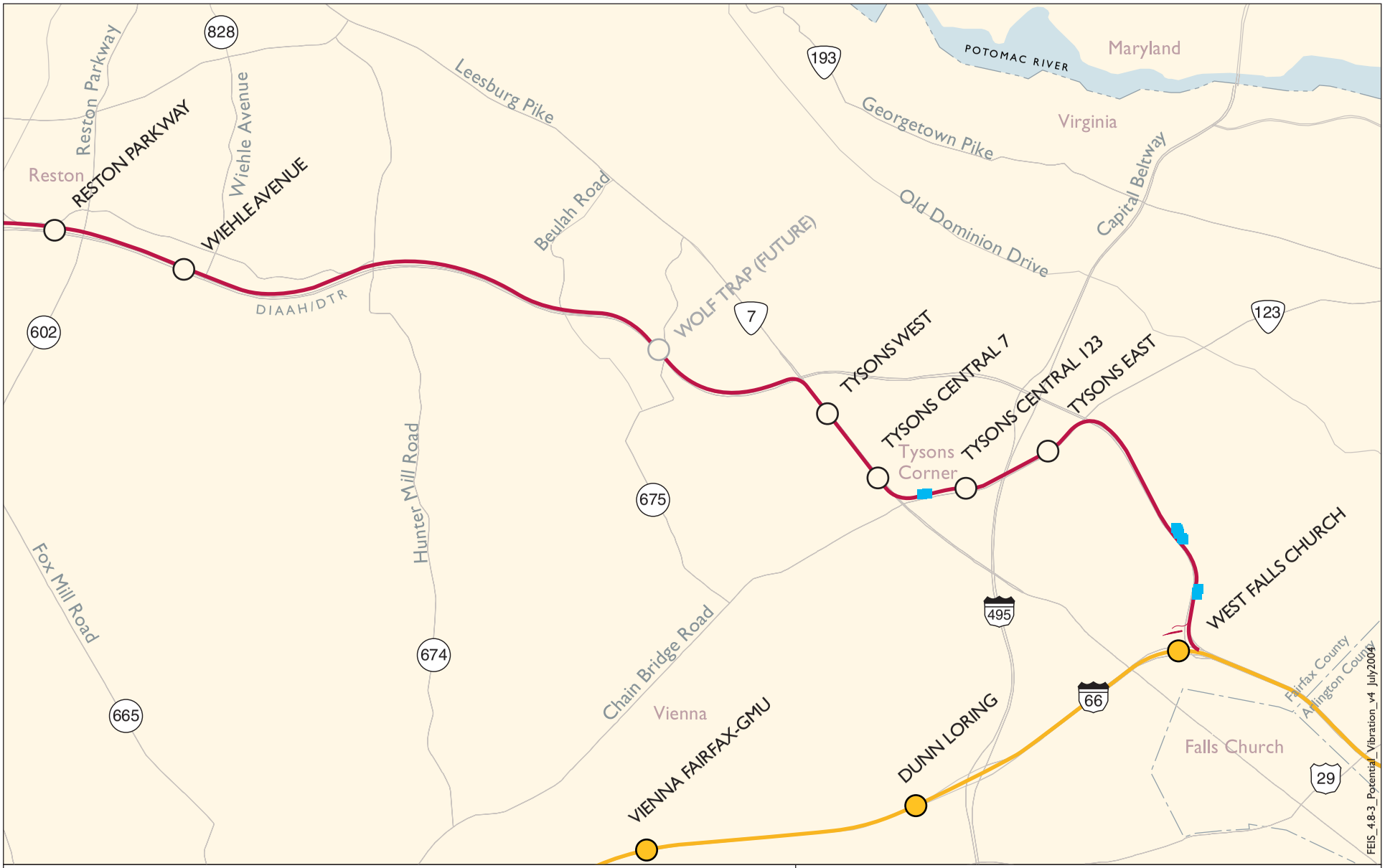
Source: Transit Noise and Vibration Impact Assessment - Final Report, Federal Transit Administration, Washington, DC, April 1995.

WMATA Blue Line data collected by Capital Transit Consultants (2001).

Figure 4.8-2

FTA Generalized Ground Surface Vibration Curves

Dulles Corridor
Rapid Transit Project



LEGEND

- Potential Impacts
- Proposed Metrorail Alignment
- County Boundary
- Existing Metrorail Orange Line and Station
- Proposed Station

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

0 3000 6000 Feet

Figure 4.8-3

Potential FTA/WMATA Vibration & Ground-Borne Noise Impact Locations

Dulles Corridor Rapid Transit Project

Predicted vibration levels are expected to be well below the FTA frequent events impact criteria at most of the FTA Land Use Category 1, 2, or 3 receptors identified in the study area. For example, predicted RMS vibration levels from Metrorail passbys are expected to range from well below the ambient background level of 15 VdB at several receptors to 58 VdB at a residence at Hallcrest Heights in McLean to 66 VdB at Moore Cadillac in Tysons Corner. These levels are below the FTA impact criteria of 65 and 75 VdB, respectively. However, due to the location of switches and crossovers, RMS vibration levels from Metrorail passbys are predicted to exceed the FTA Land Use Category 2 impact criteria at up to six residences in the Orange Line Connection area and the FTA Land Use Category 3 impact criteria at one non-residential receptor in Tysons Corner (The Business Bank on Route 7). No exceedances of FTA Land Use Categories 1 are predicted anywhere under the Wiehle Avenue Extension.

Similarly, maximum ground-borne noise levels due to Metrorail passbys are expected to range from less than 20 dBA at a residence in Reston to 31 dBA at Moore Cadillac in Tysons Corner. Ground-borne noise levels are predicted to exceed the FTA Land Use Category 2 impact criteria at up to 14 residences located adjacent to track switches in the Orange Line Connection. Similarly, ground-borne noise levels are predicted to exceed the FTA Land Use Category 3 impact criteria at only one location, The Business Bank in Tysons Corner along Route 7. There are no exceedances of FTA Land Use Category 1 impact criteria predicted anywhere along the corridor under the Wiehle Avenue Extension.

Due to their light weight and large distance between the closest receptors and the proposed median alignment, vibration levels from Express Bus passbys (at the maximum speed of 35 mph during the off-peak) are not predicted to exceed the FTA impact criteria at any residence.

B. WMATA Criteria

The same peak passby ground-borne vibration and noise levels used to assess impact according to the FTA criteria were also used to assess impacts using the WMATA criteria. As a result, up to 14 exceedances of the WMATA RMS vibration design criteria are predicted at residential receptors along the Orange Line Connection under the Wiehle Avenue Extension. Similarly, RMS vibration levels are predicted to exceed the WMATA commercial receptor impact criteria at only one location, The Business Bank in Tysons Corner along Route 7. Similarly, ground-borne noise levels are also predicted to exceed the WMATA criteria at the same receptor locations as were reported for the RMS vibration levels.

Vibration levels from Express Bus passbys are not predicted to exceed the WMATA impact criteria at any residence.

C. Project Facilities

Due primarily to distance and low impact activities, ground-borne vibration and ground-borne noise levels from activities at project facilities are expected to be well below the ambient background levels. Therefore, no exceedances of the FTA or the WMATA impact criteria are expected at project facilities under the Wiehle Avenue Extension.

D. Historic Resources

Vibration levels from Metrorail passbys near historic resources are predicted to range from well below the ambient background level of less than 15 VdB at several locations to 42 VdB at the Plantation along the DIAAH. These levels are all well below the FTA Land Use Category 1, 2, and 3 impact criteria. Similarly, ground-borne noise levels at historic resources are also not predicted to exceed the FTA Land Use Categories 1, 2, or 3 impact criteria under the Wiehle Avenue Extension. Predicted vibration levels are well below the threshold for minor cosmetic damage of 95 VdB.

4.8.5.3 Full LPA

All receptors where project vibration levels are predicted to exceed the FTA criteria limits are located east of Wiehle Avenue. Therefore, the results of the vibration impact assessment under the full LPA are the same as those reported for the Wiehle Avenue Extension.

4.8.6 CONSTRUCTION EFFECTS

Similar to noise, vibration levels from construction activities in the study area could also create a nuisance condition at nearby sensitive receptors. In addition to a nuisance condition, the potential for minor structural damage was also analyzed. Based on the vibration-monitoring program, average ground propagation characteristics were assumed as part of the vibration modeling assessment. Vibration levels were determined for the same scenarios selected for the noise assessment including track-laying, station, bridge, parking garage, feeder bus bays and rail yard construction.

4.8.6.1 No Build Alternative

No construction activities are proposed as part of the Dulles Corridor Rapid Transit Project under the No Build Alternative. Furthermore, because the FTA guidelines do not require a modeling impact assessment for the No Build Alternative, a construction vibration impact assessment was not conducted.

4.8.6.2 Wiehle Avenue Extension

Vibration impacts from proposed construction activities were evaluated for the Wiehle Avenue Extension and are discussed in the following subsections using the FTA and the WMATA impact criteria.

A. FTA Criteria

Under the Wiehle Avenue Extension, passenger stations and track would be constructed to accommodate Metrorail service between the Orange Line connection and Wiehle Avenue. Maximum RMS vibration levels from track laying construction activities are expected to range from less than 50 VdB at residences along Westpark Drive in Tysons Corner to 69 VdB at Hallcrest Heights in McLean to 79 VdB at Moore Cadillac in Tysons Corner. Although most of these levels are well below the FTA impact criteria, several exceedances of the FTA residential (72 VdB) and institutional (75 VdB) annoyance impact criteria are predicted. All predicted vibration levels from construction activities under the Wiehle Avenue Extension are well below the threshold for minor cosmetic damage of 95 VdB.

Based on the construction equipment selected, exceedances of the FTA vibration RMS criteria are predicted at 20 residences and 6 non-residential receptors during track construction under the Wiehle Avenue Extension. No other exceedances of the FTA impact criteria are predicted in the study area.

B. WMATA Criteria

The distance at which an exceedance of the WMATA damage criteria is predicted to occur ranges from 21 feet for bridge construction during intermittent construction activity to 97 feet during sustained activities. No exceedances of the WMATA vibration damage criteria are predicted at any sensitive receptors under any of the prototypical construction scenarios.

4.8.6.3 Full LPA

The receptors where vibration levels are predicted to exceed the FTA construction annoyance criteria limits are located east of Wiehle Avenue under the Wiehle Avenue Extension. Therefore, the results of the construction vibration impact assessment under the full LPA are the same as those reported for the Wiehle Avenue Extension.

4.8.7 MITIGATION

Utilization of dampening materials or devices under switches and crossovers are proposed to reduce vibration impacts from Metrorail operations. The final locations for these mitigation measures would be determined during preliminary engineering and/or final design consistent with WMATA criteria.

During construction, DRPT would use construction methods that minimize vibration and comply with any local regulations governing vibration.

4.9 HAZARDOUS AND CONTAMINATED MATERIALS

This section describes the potential for discovering hazardous or contaminated materials during implementation of the project, and presents a summary of the recommendations to determine the extent of any suspected contamination and mitigation measures.

Hazardous and contaminated materials evaluations were completed in 2001 and 2003 for the No Build Alternative and the full LPA. The results of the studies are summarized in this section and documented in detail in the *Hazardous and Contaminated Materials Technical Report* (June 2002) and the *Phase I Environmental Site Assessment* (November 2003). The hazardous materials evaluations were conducted in accordance with the scope and limitations of the American Society for Testing and Materials (ASTM) Standard for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process (E-1527-00).

4.9.1 METHODOLOGY

The principal objective of the hazardous materials evaluations was to identify recognized environmental conditions in the Dulles Corridor relative to the ASTM Standard.

To identify recognized environmental conditions, a Phase I Environmental Site Assessment was conducted for the study area. A Phase I assessment is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner defense to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA, commonly known as Superfund) liability; that is, the practices that constitute “all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice.”

Recognized environmental conditions (RECs) within the study area were identified and evaluated by reviewing regulatory database files and VDEQ files to obtain detailed information regarding spills, violations, contamination, and status of remediation activities reported in database files. Publications, maps, and reports about the surficial natural features of the study area prepared by the USGS, Northern Virginia Soil and Water Conservation District, and the Loudoun County office of the Natural Resources Conservation Service (NRCS) were also reviewed.

Historical aerial photographs of the area surrounding the proposed alignments, dated 1957 and 1962, 1967, 1974, 1981, and 1991, and historical topographic maps dated from 1956 to 1994;

Field surveys and site visits to confirm the sites listed in the database files, and to identify any additional sites, focusing on properties with the potential to contain underground storage tanks (USTs), petroleum contamination, and/or hazardous materials use, storage, or disposal;

A drive-by reconnaissance of the corridor and accessible adjoining properties was made to observe signs of spills, stressed vegetation, evidence of the presence of buried tanks or buried waste, subsidence, unusual soil discolorations, or any other unnatural items that may indicate the possible presence of environmental impacts on the properties;

Photographs of sites were taken to document features such as unusually discolored soil, stressed vegetation or other significant features and available property owners and people familiar with the sites were interviewed.

The study area for hazardous and contaminated materials was determined as a 600-foot wide corridor that included the Dulles Connector Road, DIAAH and Dulles Toll Road, and Dulles Greenway, expanded to widths of 800 to 2,000 feet, where appropriate and to encompass proposed facilities. The study area for these activities is based on the ASTM Standard, except for the Tysons Corner area, Dulles Airport, and S&I Yard Site 15. In the Tysons Corner area, the database search was expanded to include all of the area within Tysons Corner, which includes the roughly triangular area with the DIAAH and Dulles Toll Road as the northern boundary, Route 123 and I-495 as the eastern boundary, and Route 7 as the western boundary. The database search area for Dulles Airport was also expanded to include all of the airport property, which extended from the Dulles Greenway to Route 50. For S&I Yard Site 15, a location adjacent to the site, the intersection of Mercure Circle and Quicksilver Drive was chosen, and the search extended two miles from this location.

A total of 236 sites of potential concern were initially identified for the study area in the preliminary assessment. However, not all sites identified on the Environmental Data Report (EDR) report were considered sites of potential concern. After reviewing the locations of these sites in relation to the initial project alternatives and the approximate limits of disturbance (LOD) for each, the list was refined to 28 sites.

To complete the Phase I ESA, the project team conducted another general reconnaissance of the Dulles Corridor, interviews with persons familiar with the sites including Metropolitan Washington Airports Authority (MWAA) personnel at Dulles Airport, and site visits and VDEQ file reviews for each of the 28 identified sites of potential concern for the Metrorail Alternative on Alignment T6. Based on new information provided by MWAA, seven additional RECs were identified as potentially affecting the project.

For the Wiehle Avenue Extension and the full LPA, the project team conducted additional field reconnaissance (windshield survey) in the spring of 2003 to confirm the existence of all reported sites and additional sites identified during the review of historic information. During the reconnaissance, several sites were identified within the study area that were not listed in the EDR reports but, based on professional judgment, are likely to contain RECs including gasoline stations, automobile dealerships, and areas with visible debris and garbage piles. To further ensure comprehensive site identification, the project team conducted a review of the Property Identification Plans in November 2003. Sites with recognized environmental conditions were then screened so that the list contained only sites of potential concern with respect to the construction of the project. This screening process is detailed in the *Phase I Environmental Site Assessment* (November 2003).

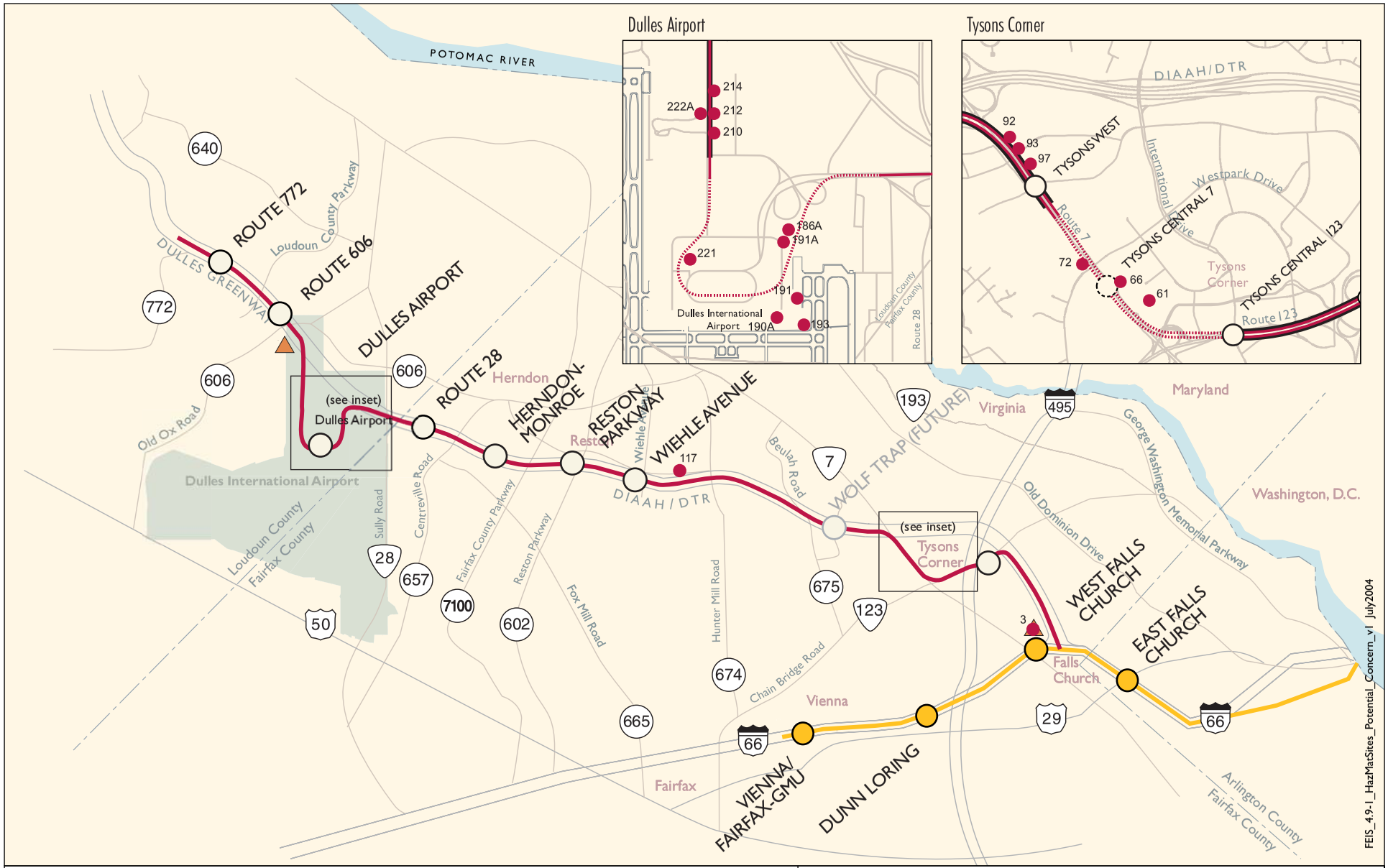
4.9.2 EXISTING CONDITIONS

Eighteen sites of potential concern were identified for the full LPA. The sites are presented in Table 4.9-1 and the locations of these sites are shown on Figure 4.9-1. These sites are recommended for further evaluation.

Table 4.9-1: Environmental Sites of Potential Concern

Site No.	EDR Report Site Name	Address	EDR Database/Status
3	West Falls Church Metrorail Yard	7251B & 7305 Idylwood Road	RCRIS-SQG - No violations reported FINDS LUST - Investigation closed 12-10-93 UST - 3 Active, 2 Removed
61	Former Fletcher Transmission	8346 Leesburg Pike	LUST – Investigation closed VRP – Case closed 2002
66	Merchants Tire & Auto Center	8350 Leesburg Pike	RCRIS-SQG - No violations reported FINDS UST – Active LUST – Investigation closed 12-3-01 Unpermitted discharge to state waters
72	Shell (formerly Mobil) Service Station	8411 Leesburg Pike	LUST – Investigation closed 7-17-97 USTs – 3 Active
92	Security Storage Co. of Washington	8600 Leesburg Pike	LUST - Investigation closed 10/11/94 UST - 2 Active
93	HBL, Porsche/Audi (formerly Templeton Oldsmobile, Inc.)	8598 Leesburg Pike (Service Shop – 1550 Tyco Road)	UST - 2 Removed RCRIS-SQG - No violations reported Field ID - Underground hoists
97	Peacock Buick	8590 Leesburg Pike	LUST – Investigation closed 1-8-98
117	VDOT Reston Area Headquarters	10907 Sunset Hills Road	RCRIS-LQG – No violations reported
186A	Construction Trailer Storage Area	Wind Sock Drive	Field ID – Possible HAZMAT storage
190A	Utility Buildings B1 & B2	45011 & 45021 Compass Court	File Review = LUST – Investigation closed 9-14-94
191	Signature Flight Support	23940 Windsock Drive	LUST – Investigations closed Interview – Active ASTs
191A	Drainage Channel North of Signature Flight Support	Windsock Drive	LUST – Investigation closed 8-18-94
193	Ogden Allied (Formerly Air BP)	301 E Terminal Road	UST LUST – Investigations closed 10-5-93 & 9-10-96
210	Hertz Rent A Car	23540 Autopilot Drive	LUSTs – Investigations closed USTs – 3 Active ASTs – 4 Active
212	National Car Rental	400 North Service Road	LUST - Investigation closed 7-2-97 UST - 4 Active, 1 Removed
214	Budget Rent A Car	Dulles Airport North Service Road	RCRIS-SQG - No violations reported FINDS UST – Not in Use LUST - Investigations closed 7-24-95, 2-18-99
221	Taxi Cab Pad & Fueling Station	Dulles Airport	UST – Active
222A	Hangars A, B, and C	Autopilot Drive	File Review LUST – Investigation closed 8-18-94

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LEGEND

- Potential Hazardous Waste and Contaminated Material Sites
- Proposed Station
- Existing Metrorail Orange Line and Stations
- Rail Yard
- County Boundary

PROPOSED METRORAIL ALIGNMENT

- At-grade/Retained Fill
- Aerial
- Underground

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

0 1 2 3 MILES

Figure 4.9-1

Hazardous Materials Sites of Potential Concern

Dulles Corridor Rapid Transit Project

The hazardous and contaminated materials evaluation also identified asbestos-containing soils as a potential hazardous materials concern. Greenstone bedrock is a rock type known to contain naturally occurring fibrous asbestos minerals. Three soil types related to the greenstone bedrock were identified in a portion of the study area, as discussed in Section 4.1, and shown on Figure 4.1-2. These soils are found in the area to the north, south, and southeast of the DIAAH and Dulles Toll Road near Hunter Mill Road.

The findings of the hazardous and contaminated materials evaluation are based on preliminary information only and are not intended to replace more detailed studies such as individual site assessments and subsurface soil and groundwater investigations.

4.9.3 LONG-TERM EFFECTS

Long-term effects of the No Build Alternative, the Wiehle Avenue Extension, and the full LPA on hazardous and contaminated materials sites are described below. Of the 18 sites of potential concern identified, 11 could be affected by on-site construction activities and the remaining seven were identified to be adjacent to construction activity. Sites potentially affected by on-site construction are summarized in Table 4.9-2.

Table 4.9-2: Sites of Potential Concern Affected by On-Site Construction Activities

			Locally Preferred Alternative		
Site No.	Site Name & Address	No Build	Wiehle Avenue Extension (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
3	West Falls Church Metrorail Yard, 7251B & 7305 Idylwood Road	No Effect	Construction Activities on Site	Construction Activities on Site	Construction Activities on Site
66	Merchants Tire & Auto Center, 8350 Leesburg Pike	No Effect	Construction Activities on Site	Construction Activities on Site	Construction Activities on Site
72	Shell Service Station, 8411 Leesburg Pike	No Effect	Construction Activities on Site	Construction Activities on Site	Construction Activities on Site
117	VDOT Reston Area Headquarters, 10907 Sunset Hills Road	No Effect	Construction Activities on Site	Construction Activities on Site	Construction Activities on Site
186A	Construction Trailer Storage Area, Windsock Drive	No Effect	No Effect	No Effect	Construction Activities on Site
191	Signature Flight Support, 23940 Windsock Drive	No Effect	No Effect	No Effect	Construction Activities on Site
191A	Drainage Channel North of Signature Flight Support, Windsock Drive	No Effect	No Effect	No Effect	Construction Activities on Site
210	Hertz Rent A Car, 23540 Autopilot Drive	No Effect	No Effect	No Effect	Construction Activities on Site
212	National Car Rental, 400 North Service Road	No Effect	No Effect	No Effect	Construction Activities on Site
214	Budget Rent A Car, Dulles Airport North Service Road	No Effect	No Effect	No Effect	Construction Activities on Site
221	Taxi Cab Pad & Fueling Station, Dulles Airport	No Effect	No Effect	No Effect	Construction Activities on Site

4.9.3.1 No Build Alternative

Under the No Build Alternative, there would be no effects from hazardous materials sites related to the Dulles Corridor Rapid Transit Project. Implementation of improvement projects related to the No Build Alternative could result in impacts to sites with hazardous materials or contamination. Although there could be some long-term effects, the most substantial effects would be addressed during construction. If

contamination is encountered during construction of any of these improvements, then impacts are possible. These effects would be the responsibility of agencies and jurisdictions implementing the improvements.

4.9.3.2 Wiehle Avenue Extension

Four sites of potential concern have been identified between the East Falls Church Station and Wiehle Avenue that could be affected by on-site construction activities associated with the Wiehle Avenue Extension (See Table 4.9-2). Although there could be some long-term effects such as long-term remediation of contaminated sites, the most substantial impacts from sites with potential hazardous materials or contamination are short-term effects that would be handled during construction.

The following sites of potential concern have been identified as being adjacent to construction activities for the Wiehle Avenue Extension:

- Site No. 61, former Fletcher Transmission located at 8346 Leesburg Pike
- Site No. 92, Security Storage Company of Washington located at 8600 Leesburg Pike
- Site No. 93, HBL Porsche/Audi located at 8598 Leesburg Pike
- Site No. 97, Peacock Buick located at 8590 Leesburg Pike

As a result, site visits, sampling and analysis are recommended as part of construction efforts adjacent to these sites.

Under the Wiehle Avenue Extension, the West Falls Church S&I Yard would have some long-term effects, which would include the use, storage, and disposal of hazardous materials and waste generated by operations at the sites.

Three stormwater ponds (P-10, P-11, and P-12) and a substation (B-5) would be located near Hunter Mill Road. The soils in this area may contain naturally occurring fibrous minerals. Construction in these areas could result in exposure to contamination and/or hazardous materials found at these sites. All soil excavation in these areas should be coordinated with Fairfax County to determine the extent and exact locations of these soils.

There would be no effects to potential sites of concern west of Wiehle Avenue as a result of the Wiehle Avenue Extension.

4.9.3.3 Full LPA

In addition to the four sites of potential concern identified for the Wiehle Avenue Extension, seven sites of potential concern have been identified between Wiehle Avenue and the Route 772 Station (See Table 4.9-2) bringing the full LPA to a total of 11 sites that could be affected by construction activities. Although there could be some long-term effects such as long-term remediation of contaminated sites, the most substantial impacts from sites with potential hazardous materials or contamination are short-term effects that would be handled during construction.

In addition to the sites adjacent to construction activities for the Wiehle Avenue Extension, the following sites have been identified as being adjacent to construction activities for west of Wiehle Avenue:

- Site No. 190A, Utility Buildings B1 and B2 located at 45011 and 45021 Compass Court
- Site No. 193, Air BP located at 301 East Terminal Road
- Site No. 222A, Hangars A, B, and C located on Autopilot Drive

As a result, site visits, sampling and analysis are recommended as part of construction efforts adjacent to these sites.

The full LPA would pass near several sites of potential concern on Dulles Airport property. Since the Dulles Airport Station would be located underground, there is the potential for substantial impacts related to underground construction of this segment. According to VDEQ files and airport officials, there have been a number of past releases and small surface spills at Dulles Airport. Airport activities such as deicing, fueling, and maintenance could have resulted in contamination in the areas where the full LPA would be constructed. Soil sampling and analysis need to be conducted prior to construction.

Under the full LPA, the S&I Yard Site 15 would have some long-term effects, which would include the use, storage, and disposal of hazardous materials and waste generated by operations at the sites.

4.9.4 CONSTRUCTION EFFECTS

The presence of soil and/or groundwater contamination or the existence of hazardous materials within existing or proposed right-of-way can have an adverse impact on the cost and schedule to complete a transportation project. Contaminated groundwater drawn into the dewatering system during construction could require special treatment and permitting prior to disposal. Contaminated soil unearthed during construction could require treatment and disposal and would not be usable for backfilling operations. In addition, it could be necessary to notify contractors about contaminated sites if worker exposure to hazardous conditions is anticipated.

Construction impacts related to hazardous materials or contamination could result from activities occurring in proximity to generators of those materials, removal or excavation around tanks or underground hoists, and activities occurring in proximity to spill or release sites. Construction activities under the Wiehle Avenue Extension and the full LPA would require soil disturbance. Although all efforts would be made to identify contaminated sites prior to construction, unknown contaminated soils and/or groundwater could be encountered during construction. If unknown contaminated soils and/or groundwater is encountered or a release occurs, the unknown material should be identified through testing. Coordination with the Virginia Department of Environmental Quality (VDEQ) would then be required to determine appropriate mitigation.

Construction activities can also involve the use of hazardous materials. If these materials are handled, used, stored improperly, or accidentally spilled, it could result in adverse impacts to both human health and the environment.

4.9.5 MITIGATION

Contamination may be present at properties to be acquired in the Tysons Corner and Dulles Airport areas. DRPT would undertake Phase II investigations to determine the nature and extent of that contamination. Remediation may be required depending on the nature of the contamination. In completing Phase II investigations and remediation, DRPT would comply with applicable federal, state, and local environmental laws. All activities related to hazardous materials would be coordinated with the VDEQ, and, if required, the US EPA.

During construction, DRPT would comply with federal, state, and local regulations governing the use and handling of hazardous materials and obtain all necessary permits or approvals. A Hazardous Materials

Management Plan would be prepared for the use of any hazardous materials during construction activities. This plan would cover the proper storage, handling, and use of hazardous materials required during construction, as well as emergency response procedures for any hazardous material spills.

4.10 ENERGY

This section documents the impact of the project on transportation-related energy consumption in the Dulles Corridor. The methodology used to assess the energy consumption impacts of the project is outlined in the Federal Highway Administration (FHWA) report entitled *Energy and Transportation Systems*, (July 1983) and in the *Energy and Transportation* manual (Caltrans, 1983). The energy consumption factors used for each mode of transportation are from the *Transportation Energy Book: Edition 16*, 1996. This methodology is consistent with that described in the FTA's *Reporting Instructions for the Section 5309 New Starts Criteria* (April 2004).

The energy analysis calculates the direct and indirect energy expenditures that would be associated with the Dulles Corridor Rapid Transit Project. The limits of this regional energy analysis are the entire Metropolitan Washington Council of Governments modeling area, which includes portions of northern Virginia, suburban Maryland, and the District of Columbia.

Direct energy involves all energy consumed by vehicle propulsion and is presented in British Thermal Units (BTUs) and Barrels of fuel (Bbls). Indirect energy consumption involves the non-recoverable, one-time energy expenditure that would be used in constructing the physical infrastructure associated with the project.

4.10.1 EXISTING CONDITIONS

The Dulles Toll Road, an eight-lane, limited-access facility now carries about 120,000-vehicle trips daily. The current energy consumption for the region is 385,826,336 million BTUs (73,242,834 Bbls). Approximately 2,650,595,747 gallons of fuel are consumed annually in the region. Calculated current and future energy consumptions are based on vehicle miles traveled (VMT) estimates for the entire study corridor.

4.10.2 LONG-TERM EFFECTS

The long-term effects of the No Build Alternative and the full LPA on energy usage are described in the following sections. Energy usage estimates are based on forecast vehicular and Metrorail traffic volumes, speeds, and corridor lengths. Vehicle mix information was obtained from the MWCOG Urban Vehicle Miles Traveled (VMT) mix for the Maryland-Virginia-Washington, D.C. region. The estimated fuel consumption figures take into account expected future fuel efficiency improvements. Results of the direct energy analysis are discussed below and summarized in Table 4.10-1.

Table 4.10-1: Direct Energy Consumed

	No Build (2011)	No Build (2025)	Locally Preferred Alternative		
			Wiehle Avenue Extension (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
Annual Roadway BTUs (including Bus) (millions)	435,817,129	503,407,067	434,018,340	502,990,335	499,876,839
Total Roadway Fuel Consumed (gallons)	3,032,826,230	3,503,180,706	3,020,308,559	3,500,280,688	3,478,836,614
Percent Change From No Build Alternative	-	-	-0.412	-0.083	-0.694
Annual Metrorail BTUs (millions)	5,405,695	6,341,108	6,025,752	6,969,868	7,371,585
Total Annual BTUs Consumed (millions)	441,221,824	509,748,175	440,044,091	509,960,204	507,248,427
Total Annual Bbls Consumed	76,072,728	87,887,616	75,869,671	87,924,173	87,456,625
Percent Change From No Build Alternative	-	-	-0.27	+0.04	-0.49

BTUs- British thermal units
Bbls- Barrels of fuel

4.10.2.1 No Build Alternative

Any impacts to energy resources that would occur as a result of existing or committed projects would be the responsibility of the agencies and jurisdictions implementing the improvements. The No Build Alternative reflects the condition for the region without the Dulles Corridor Rapid Transit Project and is used as the basis of comparison for the direct energy consumption associated with the proposed Build Alternatives. The direct energy estimate for the No Build Alternative in 2025 is 509,748,175 million BTUs (87,887,616 Bbls). An estimated 3,503,180,706 gallons of fuel would be consumed annually.

4.10.2.2 Wiehle Avenue Extension

The direct energy estimate for the Wiehle Avenue Extension is 440,044,091 million BTUs (75,869,671 Bbls) in the opening year 2011 and 509,960,203 million BTUs (87,924,173 Bbls) in 2025, slightly higher than the No Build Alternative. The variation between predicted direct energy estimates for the No Build Alternative and the Wiehle Avenue Extension is -0.27 percent in opening year 2011 and +0.04 percent in 2025. In 2025, an estimated 3,500,280,688 gallons of roadway fuel would be consumed annually.

4.10.2.3 Full LPA

The direct energy estimate for the full LPA is 507,248,423 million BTUs (87,456,625 Bbls) in 2025, slightly lower than the No Build Alternative. The variation in predicted direct energy estimates for the No Build Alternative and the full LPA is -0.49 percent for 2025. In 2025, an estimated 3,478,614,047 gallons of roadway fuel would be consumed annually.

4.10.3 CONSTRUCTION EFFECTS

Energy consumption associated with construction (indirect energy) was calculated for the full LPA and reflects the one-time, non-recoverable energy costs associated with the construction of Metrorail facilities and modifications to existing roadways. The indirect energy analysis was based on the number of lane-miles and track-miles proposed. This includes construction of surface, tunnel, and elevated roadway and track segments. These figures were then multiplied by construction energy factors which estimate the amount of energy necessary to extract raw materials, manufacture and fabricate construction materials,

transport materials to the work site and complete construction activities. Results of the indirect energy analysis are discussed below by alternative.

The indirect energy consumption associated with the Wiehle Avenue Extension would be approximately 879,874 million BTUs (151,687 Bbls), as shown in Table 4.10-2. The indirect energy consumption associated with the full LPA would be approximately 1,820,028 million BTUs (313,797 Bbls), as shown in Table 4.10-2.

Table 4.10-2: Indirect Construction Energy Consumption for the Full LPA

Annual Indirect Energy	No Build Alternative	Locally Preferred Alternative		
		Wiehle Avenue Extension (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
BTUs Consumed (millions)	n.a.	879,874	879,874	1,820,028
Bbl Consumed	n.a.	151,687	151,687	313,797

4.10.4 MITIGATION

No significant long-term increases in energy consumption are anticipated from the construction and operation of the project. Therefore, no mitigation measures are proposed.

5 ECONOMIC EFFECTS

This chapter describes the economic effects of the Wiehle Avenue Extension and full Locally Preferred Alternative (LPA) of the Dulles Corridor Rapid Transit Project on the local economies of Fairfax and Loudoun counties and on the broader Commonwealth of Virginia economy. The chapter also describes he potential effects on station area development under the planning and design guidelines for Fairfax and Loudoun counties. The sections of this analysis discuss the following topics:

Section 5.1 discusses the economic effects that project expenditures would have on Fairfax and Loudoun counties and the Commonwealth of Virginia in terms of increased employment and related economic effects relative to the No Build Alternative.

Section 5.2 presents the planning context for each station area. Information on the development character and any potential changes are presented.

Section 5.3 describes the station area development projected for the No Build Alternative, Wiehle Avenue Extension, and the Full LPA including projections of office, retail, hotel, industrial, institutional, and residential development. Opportunities for joint development at station locations are also discussed.

The alternative formerly known as "LPA Phase 1" in the October 2003 *Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation* has been renamed the Wiehle Avenue Extension in this Final EIS and is expected to begin operations in 2011. This change reflects the federal approach to the project's funding under the Federal Transit Administration's New Starts program. It will assure consistency among the environmental, engineering and financial documents during the project's development.

In the October 2003 *Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation* as well as this Final EIS, the term "full LPA" represents the Wiehle Avenue Extension and the second phase of the Dulles Corridor Rapid Transit Project. This second phase would extend west from Wiehle Avenue to Washington Dulles International Airport and Route 772 and is expected to begin operations in 2015.

The term "LPA", "proposed action", or "selected LPA" refers to both the Wiehle Avenue Extension and the full LPA collectively.

5.1 ECONOMIC CONDITIONS

As documented in Chapter 3 of this Final EIS, both Fairfax and Loudoun counties are experiencing population and employment growth that exceeds the national average. Growth in these counties is expected to continue through 2025. The project would provide increased accessibility to both residents and businesses within the Dulles Corridor and is expected to contribute to this growth. New transportation capacity could create competitive advantages for businesses located in the corridor. The LPA would also provide a critical intermodal connection in the region's transportation system by providing a transit link to

Washington Dulles International Airport (Dulles Airport). This connection would help support the airport's expansion plan and help it retain its status as an engine of economic activity in Northern Virginia.

The construction, operation, and subsequent market response to the availability of this improved level of transit service would influence economic activity in Fairfax and Loudoun counties, as well as the broader Commonwealth of Virginia. Building the requisite transit facilities would expand payrolls for the duration of the project's construction cycle. Operating the new transit service would also expand payrolls, but, unlike the one-time construction impacts, the new jobs required to operate and maintain the new line would be long-term recurring impacts. The construction and transit hiring associated with the project represent the direct effects of investment in the Dulles Corridor. The earnings of these newly-hired construction and transit workers would translate into a proportional increase in consumer demand as these workers purchase goods and services in the region. A further increase of new employment across a variety of industrial sectors and occupational categories is expected as employers hire to meet this increase in local consumer demand. This latter hiring represents the project's indirect impact.

The LPA is also expected to have positive effects on commercial and residential properties located near transit stations. As described in greater detail in Section 5.3, the LPA would contribute to greater economic development by encouraging or supporting higher-density residential and commercial land uses around transit stations. Past experience with the Metrorail system has demonstrated that transit investment has had positive effects on the residential and commercial development near the stations. It is expected that new development around station areas in the Dulles Corridor would also attract businesses from outside Fairfax and Loudoun counties, providing net economic benefits. New development activity has already been observed at several of the proposed station areas in the study area.

This section describes the anticipated employment, earnings and fiscal effects of the project. This analysis focuses on the net effects generated by new investment in the local economy resulting from two alternatives: (1) implementation of the Wiehle Avenue Extension, and (2) implementation of the full LPA. The two areas considered in this analysis include (1) the combined counties of Fairfax and Loudoun, and (2) the Commonwealth of Virginia. Impacts are reported for both regions; however, since Fairfax and Loudoun counties are located within the Commonwealth, the impacts for the two regions are not additive. The economic effects are estimated in terms of net output, employment, earnings, and the resulting fiscal impacts.

The economic impacts associated with construction, operation and maintenance expenditures for the Wiehle Avenue Extension and the full LPA are measured using regional multipliers from the U.S. Department of Commerce Bureau of Economic Analysis (BEA). Derived from the Regional Input-Output Modeling System, the so-called RIMS II multipliers measure the total change (direct + indirect effects) in output, employment, and earnings that results from an incremental change to a particular industry. Two sets of multipliers are used. The first set was constructed by BEA to reflect the combined Fairfax and Loudoun county economies. The Fairfax County portion of the multiplier includes the City of West Falls Church and City of Fairfax; BEA does not provide a Fairfax County only multiplier as the raw data does not permit this disaggretation. The second set of multipliers corresponds to the Commonwealth of Virginia's economy. The multipliers are based on the 1997 Benchmark Input-Output Table for the nation and 2001 regional accounts data; they represent the most updated version available at the time this analysis was prepared (prepared by BEA, August 2004).

Fiscal impacts are quantified by applying tax rate information obtained directly from the counties and the Commonwealth to the estimated changes in economic activity.

This analysis assumes that transportation network improvements included in the No Build Alternative are also included in the Wiehle Avenue Extension and full LPA (i.e., the Build Alternatives). Therefore, this section focuses only on the additional incremental economic impacts attributable to the Build Alternatives, i.e., the marginal differences between the future conditions under the No Build Alternative and the future conditions under implementation of the Build Alternative.

5.1.1 OUTPUT, EARNINGS, AND EMPLOYMENT EFFECTS FROM CAPITAL EXPENDITURES

Construction of the Wiehle Avenue Extension and the full LPA represents significant capital investment in the local economies of Fairfax and Loudoun counties. This spending would increase the employment, earnings and output for the duration of the construction process. Capital cost estimates/construction values for this analysis are presented in 2004 dollars, providing a common value for expenditures that are distributed over a number of years. The following section describes the project expenditures and anticipated economic impacts.

5.1.1.1 Capital Expenditures

The capital expenditures for construction of the Wiehle Avenue Extension is estimated to cost $1.3 billion (in 2004 dollars); construction of the full LPA would cost approximately $2.8 billion (2004 dollars). These cost figures are the gross capital expenditures for the two alternatives relative to the No Build Alternative.

Total capital expenditures are divided into four major categories. These include:

- General Construction: guideway elements, stations, yards and shops, sitework, systems, and contingencies;
- Vehicles: vehicle manufacturing and assembly;
- Right-of-Way (ROW): all rights-of-way, land and existing improvements; and
- Soft Costs: engineering and related services.

Table 5.1-1 summarizes the capital costs by expenditure activity for the Wiehle Avenue Extension and the full LPA.

Table 5.1-1: Summary of Capital Costs (in thousands, 2004 dollars)

Alternative	General Construction Cost [1]	Vehicles	Right-of-Way	Soft Costs	Total [2]
Wiehle Avenue Extension	$ 847,074	$167,266	$ 82,613	$234,399	$1,331,352
Full LPA	$ 1,877,464	$334,532	$106,061	$521,892	$2,839,948

[1] Includes Contingency Costs

[2] This table lists only the net capital expenditures for each alternative relative to the No Build Alternative.

Note: Values in this Table and hereafter are expressed in 2004 $ in order to provide a common reference for impacts that occur in different years. Source: WMATA.

The economic impact of these expenditures will vary significantly by activity and depends on the amount of locally produced goods and services embodied in the purchase. Construction goods and services will be purchased in the local economy. Although every building material required for the project is not produced locally, the RIMS II multipliers reflect the supplier linkages for the industry, and thus account for

this leakage from the local economy. Leakage represents purchases made by local suppliers from sources outside the region.

Vehicle purchases, by contrast, will not be purchased from the local economy. Fairfax and Loudoun counties do not produce transit vehicles, limiting the potential impact this purchase can have. Thus, as no local labor is used to produce the vehicles, no local impact generated by their purchase is realized. Although there is likely to be some assembly required upon delivery of the vehicles and it is possible that a component of the vehicle might be made by a Virginia supplier, these possibilities represent a negligible share of the vehicles' cost and are excluded from this analysis.

Right-of-Way expenditures shown above are for real property only; the transaction costs associated with these expenditures are included in the Soft Cost category. As there is no labor associated with the ROW expenditures, there is no economic impact to the pure land costs.

Soft Costs are purchased in the local economy and have an impact in the local economy.

In sum, there are two types of capital expenditures that are expected to impact the economy: General Construction and Soft Costs. The total expenditure on these two categories is anticipated to be $1.1 billion (2004 dollars) for the Wiehle Avenue Extension and $2.3 billion (2004 dollars) for the full LPA.

5.1.1.2 Funding Sources

In order to isolate the potential economic effects of the project to the local economy and the Commonwealth of Virginia, it is necessary to distinguish those resources that are new to the economy and that would not be invested in Fairfax and Loudoun counties but for the project, from those that would still be spent in the region with similar economic effects (for example, funds that would be allocated to other transportation construction projects in the region).

Tables 5.1-2a and 5.1-2b summarize the funding sources and amounts that are planned for the Wiehle Avenue Extension and the full LPA. They also indicate whether these funds represent new resources that are being invested in the region because of the project or whether instead they are existing funds that would have been spent on a transportation project somewhere in the region regardless of project implementation.

Table 5.1-2a: Summary of Funding Sources for the Wiehle Avenue Extension (in thousands, 2004 dollars)

Wiehle Avenue Extension			New or Existing Funding Source by Region	
Source	Amount (Thousands)	Funding Share	Fairfax and Loudoun Counties	Virginia
Federal 5309 New Starts	$ 665,676	50%	New	New
Virginia Transportation Act of 2000	$ 66,568	5%	New	Existing
Dulles Toll Road Revenues	$ 266,270	20%	Existing	Existing
Fairfax County Dulles Rail Transportation Improvement District	$ 332,838	25%	Existing	Existing
Total Funding	$1,331,352	100%	-----	-----

Source: DRPT

Table 5.1-2b: Summary of Funding Sources for the full LPA (in thousands, 2004 dollars)

Full LPA			New or Existing Funding Source by Region	
Source	Amount (Thousands)	Funding Share	Fairfax and Loudoun Counties	Virginia
Federal 5309 New Starts	$ 1,419,974	50.0%	New	New
Virginia Transportation Act of 2000	$ 62,479	2.2%	New	Existing
Dulles Toll Road Revenues	$ 647,508	22.8%	Existing	Existing
Fairfax County Dulles Rail Transportation Improvement District	$ 457,232	16.1%	Existing	Existing
Loudoun County Public Transportation Fund	$ 2,840	0.1%	Existing	Existing
Loudoun County Business Professional and Occupancy License Revenue Bonds	$ 133,478	4.7%	Existing	Existing
MWAA Passenger Facility Charges	$ 116,438	4.1%	Existing	Existing
Total Funding	$ 2,839,948	100.0%	------	------

Source: DRPT

In the tables above, Federal funds originate from outside the Commonwealth of Virginia; thus, they represent new resources. Since the Virginia Transportation Act of 2000 funds could be spent anywhere within the Commonwealth of Virginia, their commitment to the Dulles Corridor Rapid Transit project makes them a new source from the perspective of Fairfax and Loudoun counties, but an existing source from the Commonwealth as a whole. The remaining funding sources originate within the combined county region and Commonwealth and are considered existing revenue sources. Those sources are labeled "Existing" in the tables above and do not represent new resources.

There are two considerations in determining the capital cost impacts:

- Are the expenditures of the type likely to yield impacts in the local economy?
- Are the funds used to make those expenditures new resources for the region?

The capital costs representing expenditures that accrue to the region, (General Construction and Soft Costs), are adjusted to account only for new resources flowing into the region and expected to generate impacts within the region. Only funding levels that represent new resources flowing into the region generate impacts with implementation of the Build Alternatives. Table 5.1-3 shows the level of funding for the capital cost elements that would generate economic impacts within Fairfax and Loudon counties and the Commonwealth of Virginia. The expenditures with significant local labor content that would yield impacts on the local economy are derived from the data in Table 5.1-1 and represent the sum of expenditures on General Construction and Soft Costs for each alternative. The amount of funding that represents new resources for the region under each alternative is derived from Tables 5.1-2a and Table 5.1-2b and represents the sum of those sources designated as "new".

Table 5.1-3: Capital Costs Representing New Resources (in thousands, 2004 dollars)

Alternative	Expenditures That Impact Local Economy	New Resources for Fairfax and Loudoun Counties	New Resources for Virginia
Wiehle Avenue Extension	$1,081,473	$ 732,244	$ 665,676
Full LPA	$2,399,356	$1,482,453	$1,419,974

Source: WMATA and DRPT

For both the Wiehle Avenue Extension and the full LPA, the amount of funding that represents new resources for the region is less than the total of all capital expenditures expected to impact the local economy. Thus, every single dollar of new resources is expected to yield an impact.

As the amount of funding that represents "new funding" is less than the total amount required for General Construction, this analysis assumes that the New Funds are spent on general construction expenditures. This assumption does not bias the analysis as the multipliers for "construction" and for "professional, scientific, and technical services" (the multiplier that would be applied to the soft cost category) are similar, particularly for Fairfax and Loudoun counties, as shown in Table 5.1-4.

Table 5.1-4: Comparison of RIMS II Multipliers by Region

		Multiplier				
		Final Demand			Direct Effect	
Region	Industry	Output (dollars)	Earnings (dollars)	Employment (jobs)	Earnings (dollars)	Employment (jobs)
Virginia	Construction	2.2554	0.6750	20.9623	1.9795	2.1221
	Professional, scientific and technical services	1.9999	0.6875	17.0331	1.6648	2.2641
Fairfax and Loudoun Counties	Construction	1.5612	0.3352	10.1004	1.5542	1.6167
	Professional, scientific and technical services	1.5799	0.4560	10.3048	1.3701	1.6995

Source: Bureau of Economic Analysis, U.S. Department of Commerce

The interpretation of the multipliers shown in Table 5.1-4 is as follows. The construction industry is used as an example.

The Final Demand Output Multiplier represents the total dollar change in output that occurs in all industries for each additional dollar of output delivered to final demand by the construction industry.

The Final Demand Earnings Multiplier represents the total dollar change in earnings of households employed by all industries for each additional dollar of output delivered to final demand by the construction industry.

The Final Demand Employment Multiplier represents the total change in number of jobs that occurs in all industries for each $1 million of output delivered to final demand by the construction industry.

The Direct Effect Earnings Multiplier represents the total dollar change in earnings of households employed by all industries for each additional dollar of earnings paid directly to households employed by the construction industry.

The Direct Effect Employment Multiplier represents the total change in number of jobs in all industries for each additional job in the construction industry.

Applying the Final Demand Multipliers for the construction industry to the amount of new funding/resources that will be used for capital expenditures provides estimates of the net output, earnings and employment impacts generated by each alternative by region for the year 2025. The results are summarized in Table 5.1-5a and 5.1-5b. Note that these are one-time impacts that last for the duration of construction. One job is defined as a job for one person of one year's duration. As an example, a job for one person that had a duration of three years would be defined as three person-year jobs.

Table 5.1-5a: Net Effects of Construction Activity Upon Fairfax and Loudoun Counties

Alternative	No Build Alternative (2025)	Locally Preferred Alternative	
		Wiehle Avenue Extension (2025)	Full LPA (2025)
New Capital Expenditure (Thousands)	NA	$732,244	$1,482,453
Output[1]		1.5612	1.5612
Earnings[1]		0.3352	0.3352
Employment[1]		10.1004	10.1004
Output (Thousands)	NA	$1,143,179	$2,314,406
Earnings (Thousands)	NA	$245,448	$496,918
Employment (jobs)	NA	6,621	13,404

[1] The Final Demand Employment Multiplier is based on 2001 data; output has been adjusted according the BEA guidelines.

Table 5.1-5b: Net Effects of Construction Activity Upon the Commonwealth of Virginia

Alternative	No Build Alternative (2025)	Locally Preferred Alternative	
		Wiehle Avenue Extension (2025)	Full LPA (2025)
New Capital Expenditure (Thousands)	NA	$665,676	$1,419974
Output[1]		2.2554	2.2554
Earnings[1]		0.675	0.675
Employment[1]		20.9623	20.9623
Output (Thousands)	NA	$1,501,366	$3,202,609
Earnings (Thousands)	NA	$449,331	$958,482
Employment (jobs)	NA	12,492	26,646

[1] The Final Demand Employment Multiplier is based on 2001 data; output has been adjusted according the BEA guidelines.

5.1.1.3 Long-Term Effects

There are no long-term effects associated with the economic impacts generated by capital expenditures as construction-related impacts solely last for the duration of the project's construction cycle.

A. No Build Alternative

The No Build conditions consist of the future economic conditions (employment, output and earnings) that would exist under the No Build Alternative. The economic analysis focused on the incremental differences between the No Build condition and implementation of the Wiehle Avenue Extension and full LPA.

B. Wiehle Avenue Extension

For Fairfax and Loudoun counties, the effect of construction spending for the Wiehle Avenue Extension would result in just over $1.14 billion in output (2004 dollars), over $245 million in earnings, and approximately 6,600 person-year jobs in Fairfax and Loudoun counties. Within the Commonwealth of Virginia, construction spending would result in $1.5 billion in output (2004 dollars), $449 million in earnings, and approximately 12,400 new person-year jobs.

C. Full LPA

For Fairfax and Loudoun counties, the effect of construction spending for the full LPA would result in $2.3 billion in output (2004 dollars), nearly $500 million in earnings, and approximately 13,400 new person-year jobs. Within the broader Commonwealth of Virginia, construction spending would result in $3.2 billion in output (2004 dollars), nearly $960 million in earnings, and approximately 26,600 person-year jobs.

5.1.2 OUTPUT, EARNINGS, AND EMPLOYMENT EFFECTS FROM OPERATIONS AND MAINTENANCE EXPENDITURES

Implementation of the project would create jobs and earnings as a result of ongoing operations and maintenance (O&M) expenditures. The projected O&M expenditures for the Wiehle Avenue Extension and full LPA are calculated for Metrorail service. This analysis assumes that funding for O&M would be procured from local government funds and project-generated funds, including:

- Local Government Funds: Washington Metropolitan Area Transit Authority (WMATA) Compact, benefit assessment districts, and/or Metropolitan Washington Airports Authority (MWAA) participation; and
- Project-Generated Funds: passenger fare revenue, joint development, parking revenues, and advertising and concessions income.

Although these expenses would originate from local sources, they represent spending that would not take place but for the implementation of service along the Wiehle Avenue Extension and full LPA. The expansion of transit service associated with the Build Alternatives represents an expansion of economic activity in the counties and Commonwealth, and thus generates recurring net economic impacts (long-term).

One potential source of federal funding for maintenance of the Build Alternatives is the Section 5307 Urbanized Area Formula Funds. These grants are applied to preventative maintenance, and could be used after the seventh year of operations. At this time, no Section 5307 funds have been allocated for maintenance for this project, and they are not assumed to be part of the operating funding plan, which is described in more detail in Chapter 8. If federal funds are applied to maintenance activities for the Build Alternatives, they could generate some additional net economic effects to the local and state economies through increased employment and earnings.

The estimate of full-time employees (FTE) and associated earnings required for the No Build Alternative, the Wiehle Avenue Extension and full LPA alternatives are shown in Tables 5.1-6a and Table 5.1-6b. The increased transit employment would result in positive economic impacts to Fairfax and Loudoun counties and the Commonwealth of Virginia, both through direct hiring to fill transit jobs and indirectly as these transit workers spend their earnings, thus creating additional consumer demand and jobs to meet that demand.

Because output measures are less reliable in the context of transit service where market prices are not available, this analysis uses the Direct Effect Multipliers as described above to generate estimates of the employment and earnings impacts attributable to O&M activities. The multipliers applied in this section of the analysis are for the industry labeled “transit and ground passenger transportation.” The wages shown in Table 5.1-6b are in 2004 dollars and represent total wages and salaries.

Table 5.1-6a: Net Employment Impacts from Operations and Maintenance Activities

Alternative	No Build Alternative (2025)	Locally Preferred Alternative	
		Wiehle Avenue Extension (2025)	Full LPA (2025)
Total Transit Employment (FTE)	6,942	7,424	7,489
Net Change in Direct Employment Over No Build	NA	482	546
Fairfax and Loudoun Employment Multiplier[1]	1.2233	1.2233	1.2233
Total Net Change in Employment in Fairfax and Loudoun	NA	590	668
Virginia Employment Multiplier[2]	1.3726	1.3726	1.3726
Total Net Change in Employment in Virginia	NA	661	750

[1] The multipliers shown are the RIMS II Direct Effect Multiplier for transit and ground passenger transportation industry. Assumes Fairfax and Loudoun residents are hired for these jobs.

[2] The multipliers shown are the RIMS II Direct Effect Multiplier for transit and ground passenger transportation industry. Assumes Virginia residents are hired for these jobs.

Table 5.1-6b: Net Earnings Impacts from Operations and Maintenance Activities (in thousands, 2004 dollars)

Alternative	No Build Alternative (2025)	Locally Preferred Alternative	
		Wiehle Avenue Extension (2025)	Full LPA (2025)
Total Transit Earnings	$583,804,910	$621,287,737	$637,923,374
Net Change in Direct Earnings Over No Build	NA	$37,482,827	$54,118,464
Fairfax and Loudoun Employment Multiplier[1]	1.5701	1.5701	1.5701
Total Net Change in Earnings in Fairfax and Loudoun	NA	$58,851,786	$84,971,400
Virginia Earnings Multiplier[2]	1.9136	1.9136	1.9136
Total Net Change in Earnings in Virginia	NA	$71,727,137	$103,561,092

[1] The multipliers shown are the RIMS II Direct Effect Multiplier for transit and ground passenger transportation industry. Assumes Fairfax and Loudoun residents are hired for these jobs.

[2] The multipliers shown are the RIMS II Direct Effect Multiplier for transit and ground passenger transportation industry. Assumes Virginia residents are hired for these jobs.

Source: WMATA Operating & Maintenance Cost Model

5.1.2.1 Long-Term Effects

The employment and earnings impacts generated by O&M expenditures are long-term recurring benefits. They are summarized below.

A. No Build Alternative

The No Build conditions consist of the future economic conditions (employment, output and earnings) that would exist under the No Build Alternative. The economic analysis focused on the incremental differences between the No Build condition and implementation of the Wiehle Avenue Extension and the full LPA.

B. Wiehle Avenue Extension

For Fairfax and Loudoun counties, the effect of O&M spending for the Wiehle Avenue Extension would result in just over over $58.9 million in earnings, and 590 person-year jobs in Fairfax and Loudoun counties. Within the Commonwealth of Virginia, O&M spending would result in $71.7 million in earnings, and approximately 660 new person-year jobs.

C. Full LPA

For Fairfax and Loudoun counties, the effect of O&M spending for the full LPA would result in nearly $85 million in earnings and approximately 670 new person-year jobs. Within the broader Commonwealth of Virginia, O&M spending would result in nearly $103.5 million in earnings, and nearly 750 person-year jobs.

5.1.3 TAX REVENUE EFFECTS

Construction of both the Wiehle Avenue Extension and the full LPA would require the purchase of some private land and/or structures for easements, ROW, parking, and station facilities. This purchase would remove these properties from the existing local tax base. The annual tax revenue associated with the loss of properties due to ROW purchase, displacement and relocation was determined by first identifying the actual properties required for the Wiehle Avenue Extension and for the full LPA. The estimated assessed value (2001 base adjusted to 2003 tax year value) of the required acquisition was then multiplied by the current 2004 real estate tax rates for Fairfax and Loudoun counties. Real estate in Virginia is assessed at 100 percent of its fair market value.

Table 5.1-7 summarizes the assessed value of the properties to be acquired and shows the expected annual tax revenue lost from removing properties from the Fairfax and Loudoun county tax base for the No Build Alternative, Wiehle Avenue Extension, and full LPA. The expected annual special district tax revenue loss associated with removing properties from the tax base is summarized in Table 5.1-8.

In comparing the assessed property values shown in Table 5.1-7 with the ROW acquisition costs reported in Table 5.1-1, several caveats are in order as these two figures differ. The assessed value of property required for ROW acquisition is based on identifying those land parcels required for the alignment, determining the share of the parcel that will need to be purchased, and applying this share to the parcel's current assessment value according to the Tax Assessors' records in Fairfax and Loudoun counties. This value represents an estimate of the assessed value of the land to be purchased.

The ROW acquisition costs, by contrast, assume that the property sells for a price above the assessed value as speculation and market forces increase the parcels' sales price. There is a small and fixed amount of land along the Dulles corridor alignment that would need to be purchased making this a scarce resource. It is reasonable and prudent in estimating project cost to assume prices would rise accordingly. There is significant uncertainty about how much land values would appreciate in anticipation of the ROW acquisition; thus, the ROW capital cost used in this analysis assumes a 100 percent markup of the Assessed Value. For example, the $82,613,000 ROW costs estimated for the Wiehle Avenue Extension that are reported in Table 5.1-1 imply an assessed value of $41,306,500.

There are several property taxes that apply in the area where the ROW would be acquired. Both Fairfax and Loudoun counties levy a property tax on all properties. This is referenced as the Base Rate in the discussion below. In Fairfax County, the Base Rate is $1.13 per $100 of assessed property value. In Loudoun County, the Base Rate is $1.1075 per $100 of assessed property value (rates as of August 2004). In addition, several properties slated for ROW acquisition fall within two special taxing districts in Fairfax County. These are the Dulles Rail Transportation Improvement District, which levies an additional $0.22 per $100 assessed value above the county's Base Rate on commercial and industrial zoned property, and a tax imposed for the Control of Gypsy Moth/Canker Worm Infestations. This special tax levies $0.001 per $100 of the valuation of real estate within Fairfax County, including property in the incorporated towns within the county, but exclusive of the Lake Barcroft Water Improvement District. The calculation of the lost property tax revenue associated with transferring land from the private sector to public use is provided in Tables 5.1-7 and 5.1-8 below. Table 5.1-7 describes the Base Rate tax calculation. Table 5.1-8 describes the calculation of the special taxes.

Table 5.1-7: Assessed Value of Properties Required for ROW and Associated Loss of Base Tax Revenues (in thousands, 2004 dollars)

Alternative	No Build Alternative (2025)	Locally Preferred Alternative	
		Wiehle Avenue Extension (2025)	Full LPA (2025)
Assessed Value of Fairfax County Properties	$0	$41,306	$45,696
Base Tax Rate[1]	$1.13	$1.13	$1.13
Lost Revenue Fairfax County	$0	$467	$516
Assessed Value of Loudoun County Properties	$0	$0	$7,334
Base Tax Rate[1]	$1.1075	$1.1075	$1.1075
Lost Revenue Loudoun County	$0	NA	$81
Total Base Tax Revenue Lost	$0	$467	$598

Per $100 of assessed value.

Note: Allocation of assessed value between Fairfax and Loudoun counties is based on an estimate of partial acquisitions proportioned between counties

Source: DRPT and Counties of Fairfax and Loudoun

Table 5.1-8: Assessed Value of Properties Required for ROW and Associated Loss of Special District Tax Revenues (in thousands, 2004 dollars)

Alternative	No Build Alternative (2025)	Locally Preferred Alternative	
		Wiehle Avenue Extension (2025)	Full LPA (2025)
Assessed Value of Fairfax County Properties	$0	$41,306	$45,696
Assessed Value of TID Properties in Fairfax County	NA	$30,400	$30,400
Dulles TID Tax Rate	$0.22	$0.22	$0.22
Lost Revenue in TID	NA	$67	$67
Gypsy Moth Tax Rate	0.001	0.001	0.001
Lost Revenue from Special Gypsy Moth Tax	NA	0.413	0.457
Total Special Tax Revenue Lost	NA	$67.29	$67.34

Source: DRPT and Fairfax County

Combining the lost revenues from the Base and Special Purpose taxes shown in the tables above, the lost property tax revenue associated with the full LPA is $665,000. Lost property tax revenue associated with the Wiehle Avenue Extension is $534,000. In both cases, loss of the tax base is a fraction of the total tax base in the two counties. According the *Annual Report (Fiscal Year 2003)* of the Virginia Department of Taxation, the total taxable fair market value in Fairfax County was $114.9 billion and in Loudoun County it was approximately $24.9 billion. The report provides the most recent data available; it reports values for tax year 2002. Thus, the $45.6 million in assessed value lost in Fairfax County represents 0.04 percent of the 2002 tax year tax base for the full LPA, since it has the highest purchase requirements. In the case of Loudoun County, the estimated loss for the full LPA represents 0.03 percent of the 2002 tax base. As the total value of the tax base in both counties rose between tax year 2002 and 2003, the shares calculated above have likely fallen slightly.

The lost tax revenues associated with this fractional reduction in the tax base would be a recurring loss on an annual basis. Partially offsetting these losses, however, is an increase in other tax revenues. For example, the creation of new jobs and earnings associated with the recurring O&M spending would foster greater retail spending. The Commonwealth of Virginia taxes retail sales at a 3.5 percent rate. Fairfax County taxes retail sales at a 1 percent rate. Loudoun County does not have a retail sales tax. The additional revenues from this spending are recurring gains.

The construction of the LPA is also expected to have positive effects on the value of residential and commercial properties within walking distance to the station areas. The increase in value translates into greater tax revenues and would be expected to accrue to the counties. These effects could be amplified by increased density allowances in the station areas. The development effects that are anticipated from the Wiehle Avenue Extension and the full LPA are described in greater detail in Section 5.2 Station Area Development.

5.2 STATION AREA DEVELOPMENT

For analysis of development impacts of the proposed improvements, assessment zones were defined around each proposed station. The sizes of these zones vary by location and are based on the areas in which direct development impacts are possible. Direct impacts were based on the comprehensive plans for each jurisdiction, and are defined as the area in which density bonuses are available upon implementation of the LPA.

For proposed stations within the Tysons Corner area, the impact assessment zone is defined, generally, as the traffic analysis subzones that fall within 1,600 feet of the stations. For the proposed stations in Fairfax County west of Tysons Corner, the impact assessment zones are defined by land units, as developed by the Dulles Corridor Land Use Task Force, that fall within one-half mile of the proposed station. Finally, for the proposed stations in Loudoun County, the assessment zones are defined as all land within one-half mile of the proposed stations. Analysis of the Dulles Airport Station was limited to the main terminal area.

5.2.1 STATION AREA PLANNING AND DESIGN GUIDELINES

The Fairfax County Comprehensive Plan, *2003 Edition* (Comprehensive Plan) and the *Loudoun County Revised General Plan, Amended January 2003* (General Plan) include design guidelines for areas surrounding the proposed stations. The Build Alternatives is also expected to have positive effects on commercial and residential properties located near transit stations. The Build Alternatives would contribute to greater economic development by encouraging or supporting higher-density residential and commercial land uses around transit stations. Past experience with the Metrorail system has demonstrated that transit investment has had positive effects on the residential and commercial development near the stations. It is expected that new development around station areas in the Dulles Corridor would also attract businesses from outside Fairfax and Loudoun counties, providing net economic benefits. Both plans define policy guidelines designed to coordinate and facilitate increases in development. The following sections discuss the guidelines as they would apply to the station areas. Please see Figure 5.2-1 for station locations.

Tysons Corner has been designated as an urban center in the Comprehensive Plan. Although the land area is split between the McLean and Vienna Planning Districts, the Comprehensive Plan dedicates a separate section to the Tysons Corner Urban Center and describes detailed plans for development. These plans include use, density floor and area ratio (FAR), height, and urban design guidelines.



LEGEND

- Major Arterials
- Limited Access Highway
- U.S. Highways

Proposed Metrorail Alignment

- At-grade/Retained Fill
- Aerial
- Underground
- Aerial Yard Lead

- Existing Metrorail Orange Line and Stations
- Proposed Station
- Proposed Underground Station
- Future Station
- Rail Yard
- Dulles Corridor Limits

0 1 2 3 MILES

Note: Short bridge crossings for highway and culvert overpasses/underpasses not shown.

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

Figure 5.2-1

Station Locations

Dulles Corridor Rapid Transit Project

The Comprehensive Plan divides the Tysons Corner Urban Center into three generalized areas: core, non-core, and edges. The core, generally bounded by Westpark Drive on the north, the Capital Beltway on the east, and Route 7 on the south and west, is divided into three activity centers. These activity centers are designated Tysons I, Tysons II, and Greensboro Drive and encompass about 20 percent of the land area in Tysons Corner. Surrounding the core, the non-core areas are divided into six sub-areas: West*Park; West Gate; East Route 7; West Route 7; a high-density residential area; and Tyco Road. Beyond the non-core areas, the plan designates an "edge" that defines the limits of Tysons Corner and serves as a buffer to adjacent single-family neighborhoods. The outer limits of this edge are roughly the Dulles International Airport Access Highway (DIAAH) and Dulles Toll Road to the north, Magarity Road to the east, Old Courthouse Road to the south, and the Courthouse Spring Branch Environmental Quality Corridor to the west.

In the core areas, a greater emphasis is placed on the development of mixed-use centers. However, given the development in place, the Greensboro Drive activity center is envisioned to remain a predominantly office employment center, and the Tysons I activity center would be primarily characterized as a retail center. The Tysons II area has the greatest potential for a balanced mix of uses due to the large amount of undeveloped land.

The non-core areas, despite some infill redevelopment and design improvements, are planned to have a predominantly suburban character. Today, these areas include a range of uses generally clustered by office parks, strip retail, and auto dealerships. These areas are envisioned to maintain their general uses with some conversion of strip retail into office development with integrated retail. Beyond these areas, the edges are designed to buffer the single-family neighborhoods surrounding Tysons Corner, which are expected to remain primarily residential in nature and not absorb much additional development.

One of the primary objectives of the Plan for Tysons Corner will be to provide alternative modes of transportation, including an emphasis on pedestrian- and transit-oriented design. The Plan calls for mixed-use developments, connected to transit and accessible by foot. The plan further calls for these physical connections to be attractive and appealing to pedestrians with the inclusion of trees, signage, and street furniture.

The primary planning objective for the Dulles Corridor Rapid Transit Project stations at Wiehle Avenue, Reston Parkway, Herndon Monroe Station, and Route 28 is to create mixed-use developments with a more urban character in areas closest to the stations. The recently adopted amendments to the Comprehensive Plan include a set of design guidelines with two primary goals: first, to create a pedestrian-friendly environment that would complement the plan recommendations; and second, to protect the existing high-quality built and natural environment.

The urban design guidelines established in the Comprehensive Plan cover a range of features including building heights, gateways, pedestrian and transit-oriented design, and streetscaping. The design guidelines cover a range of issues from building design, height, and arrangement to transit access and pedestrian and bicycle connections. These guidelines place the densest development immediately adjacent to the transit stations with densities tapering off toward the existing neighborhoods. They also require physical connections for pedestrians and bicycles to the stations and within the station areas. Other requirements include underground parking or parking structures when possible, the prohibition of freestanding retail establishments, provision of plazas or courtyards, and coordinated lighting and signage.

The design of the Dulles Airport station would be coordinated with MWAA and would be accommodated in plans for the airport. The design of areas outside of the station, including pedestrian access, parking, and circulation, is managed by MWAA.

The General Plan includes guidelines for development around the Route 606 and Route 772 stations. The General Plan identifies the Route 606 station area as a Transit Related Employment Center (TREC) and the Route 772 Station area as Transit Oriented Development (TOD). Although the TOD would include a significant amount of residential development and the TREC would not, the general design guidelines apply to both areas.

The General Plan calls for the areas around the two stations to be developed in a transit- and pedestrian-friendly manner with short blocks and a rectilinear grid street pattern. Guidelines include pedestrian-oriented building facades with ground-floor retail and distinctive public spaces.

At Route 772, the General Plan calls for a commercial core defined by a one-quarter mile radius around the station and an outer core between the one-quarter and one-half mile radii. If the station is to be located within the median of the Dulles Greenway, the plan encourages the creation of an urban deck over the roadway.

5.2.2 STATION AREA CHARACTERISTICS AND DEVELOPMENT POTENTIAL

The Comprehensive Plan and the General Plan provide for existing development characteristics and density bonuses at the proposed new Metrorail station locations. The following section describes the potential changes in the level of development at each of the station areas due to the implementation of the Build Alternatives. The potential changes in development for the Wiehle Avenue Extension and the full LPA that could occur if Metrorail is implemented in the corridor are compared to projections for the No Build Alternative for 2025.

Tysons East Station Area

The Tysons East Station would be located on Route 123 east of the Capital Beltway near the intersection of Colshire Drive. Large office buildings with large parking facilities define the character of this area while some low-rise apartment and townhouse communities with on-street parking are also located in the station area. Most of the land is developed. Because of the presence of low-density and somewhat older structures, there is great potential for this station area to change in character from a suburban pattern to more of a transit-supportive land use mix, if redeveloped. Several of the parcels would be eligible for density bonuses if Metrorail were constructed, resulting in a mixed-use area with direct access to regional transit.

The Comprehensive Plan provides for increased densities in the areas surrounding the proposed Tysons East Station. To the north of Route 123, the plan recommends densities of 0.5 to 1.0 FAR without rail service. With rail service, the plan allows non-residential development up to 1.5 FAR within 1,000 feet of the station, and up to 1.0 FAR between 1,000 and 1,600 feet of the station. If the Comprehensive Plan was amended to include residential uses, these rail-related densities could increase significantly. South of Route 123, the plan allows all of the areas along Old Meadow Road and Colshire Drive to increase to a maximum of 1.0 FAR; however, the density increases allowed north of Route 123 also apply in this area.

Tysons Central 123 Station Area

The Tysons Central 123 Station would be located north of Tysons Corner Center on Route 123 outside the Capital Beltway. The primary features of this area are the undeveloped parcels located north of the proposed station location. Development proposals have been approved for 6.8 million square feet of office and possible mixed-use development oriented toward a future station. Approximately 2.4 million square feet has already been constructed. As approved in June 2003, the remaining development may move forward when the project receives a Full Funding Grant Agreement (FFGA) from FTA. Farther to the north within this area is the Tysons Galleria, while a landscaped area and parking for Tysons Corner Center is located south of the station. The area is auto-oriented with buildings set back from major arterial roadways and the Capital Beltway. Most of the development is separate from surrounding uses and there is little pedestrian activity due to the large surface parking lots and scale of the roadways in the area. However, the large tracts of surface parking within the station area could be redeveloped at greater densities.

The currently undeveloped land north of the proposed station is projected to be developed as part of the No Build Alternative. The presence of a station in this location would provide pedestrian linkages to Tysons Corner Center and Tysons Galleria and would allow more intense development under the density bonuses allowed in the Comprehensive Plan. The ability of this transit station area to change in character is limited somewhat by the large amount of acreage dedicated to major roadways and the existing shopping malls.

The Comprehensive Plan provides for increased densities in the areas surrounding the proposed Tysons Central 123 Station. To the north of Route 123, the plan allows the currently planned 1.0 FAR maximum to increase to 2.0 FAR within 1,000 feet of the station and to 1.65 FAR between 1,000 and 1,600 feet of the station. South of Route 123, the plan allows the existing 0.8 FAR to increase to 2.0 FAR within 1,000 feet of the station and to 1.65 FAR between 1,000 and 1,600 feet of the station. If plans were amended to include the provision of housing, these rail-related densities could increase significantly. Potential levels of development for the Wiehle Avenue Extension would be the same as those of the full LPA.

Tysons Central 7 Station Area

The Tysons Central 7 Station area would be located along Route 7 just west of the Route 7/Route 123 interchange. The development in this station area includes strip retail with parking lots immediately adjacent to the proposed station platform and major office development located along Greensboro Drive and Westpark Drive. The scale of the office development is larger than in other areas of Tysons Corner and pedestrian activity is limited. Some townhouses are located within the station area on Gosnell Road, but would be separated from the station platform by the Pike 7 Plaza.

The Tysons Central 7 Station area has significant potential for increased densities, as allowed by the Comprehensive Plan, in the vicinity of rail stations. Much of the land within this area is used as parking for strip-mall developments. While the area is completely developed, there is potential for redevelopment which could introduce a more transit-oriented development pattern.

The Comprehensive Plan provides for increased densities in the areas surrounding the Tysons Central 7 Station. For core areas (in this case the area east of Route 7) the plan allows densities up to 2.0 FAR within 1,000 feet of the station and 1.65 FAR between 1,000 and 1,600 feet of the station. For non-core areas the allowable densities are lower: 1.5 FAR within 1,000 feet and 1.0 between 1,000 and 1,600 feet. If the Comprehensive Plan was to be amended to include housing, these rail-related densities could increase significantly.

Tysons West Station Area

The Tysons West Station area would be located on Route 7 at the intersections with Tyco Road and Spring Hill Road. A variety of uses exist in the station area, including strip-development retail, industrial, commercial, as well as some residential development that would be separate from the station location. Two features dominate the development character of this area: 1) Route 7, a heavily traveled major arterial with few pedestrian crossings; and 2) several large auto dealerships. The combination of these two features results in a large amount of space in the station area that is currently used for surface parking lots and roadways. In addition, the industrial component located along Tyco Road limits pedestrian activity. The Comprehensive Plan supports redevelopment for this area.

Under the Build Alternatives, the potential exists for a change in character in the Tysons West station area. The area is auto-oriented and could become more transit-oriented in the future as more density is allowed should the transit station be constructed. However, there would be some constraints to this redevelopment due to the lack of pedestrian connections across Route 7 and the presence of successful auto dealerships. Nonetheless, the construction of the station would encourage a more transit-supportive character in the area.

Currently, the Comprehensive Plan does not provide for increased densities in all areas surrounding the proposed Tysons West Station. South of Westwood Center Drive/Tyco Road, on both sides of Route 123 the plan allows the planned densities to increase to 1.5 FAR within 1,000 feet of the station and to 1.0 FAR between 1,000 and 1,600 feet of the station. If the Comprehensive Plan was amended to include housing, these rail-related densities could increase by 50 percent. North of this area, the plan does not include density bonuses associated with the station and limits development to a maximum of 1.0 FAR.

Wiehle Avenue Station Area

The Wiehle Avenue Station would be located within the median of the DIAAH just west of the Wiehle Avenue overpass. Current development within the station area is suburban in character, consisting of individual office buildings and office parks immediately adjacent to the station location. Many of the office buildings were recently constructed and include large surface parking lots and some parking garages. On the north side of the station area, there are limited industrial uses and two large surface park-and-ride lots. The Washington & Old Dominion (W&OD) Railroad Regional Park bisects the north side of the transit station area.

The Wiehle Avenue Station would provide pedestrian connections across the DIAAH and Dulles Toll Road to businesses in Reston. In addition, the Comprehensive Plan allows for mixed-use, transit-oriented development up to a 2.5 FAR to occur on the north side of the transit station area and up to 1.25 FAR on the south side of the station area upon approval of the FFGA for implementation of the Build Alternatives. This new development, in conjunction with the transit station, could create a more transit-supportive environment at the Wiehle Avenue Station. For redevelopment to occur, parcel consolidation, particularly on the north side, would need to occur. Fairfax County is working to solicit joint development commitments for this site that would include mixed-uses, parking, and station facilities.

With the implementation of the Build Alternatives at the Wiehle Avenue Station, plan options in the modified Comprehensive Plan (amended January 27, 2003) allow for density bonuses dependent on achieving a certain mix of uses. At the Wiehle Avenue Station, the Comprehensive Plan allows for mixed-use development within one-half mile of the station. The plan calls for 40 to 75 percent of development to be residential with remaining development split between office, retail and hotel uses, and office uses limited to 40 percent. The land units between one-quarter and one-half mile of the station are

allowed the following bonus densities: a mix of 35 to 50 percent residential, up to 50 percent office, and up to 15 percent retail, with the option for hotel uses. The levels of development for the Wiehle Avenue Extension would be the same as that of the full LPA.

Reston Parkway Station Area

The development character of the Reston Parkway Station area is similar to that of the Wiehle Avenue Station area. Some of the land within the station area consists of the DIAAH and Dulles Toll Road and cannot be developed. Most of the development in the station area consists of large office buildings surrounded by landscaped grounds with both surface and structure parking. The Reston Town Center, located north of the DIAAH, is more urban in character and includes a mix of retail, residential, and office uses in a single development. Several large parking structures surround and provide parking for the Town Center. In addition, a large-scale residential development located on Reston Parkway has been completed, and another has begun. On the south, there is some low-rise retail development along Sunrise Valley Drive, a major high-rise office development, and a hotel. There are still some undeveloped parcels, including those just to the west of the Reston Town Center, within the station area.

The Comprehensive Plan allows for mixed-use transit-oriented development, with up to a 2.0 FAR, within one-quarter mile of the transit station area upon approval of the FFGA for implementation of the full LPA. For areas south of the DIAAH (e.g., Carr America site), the plan calls for 40 to 50 percent of development to be residential with remaining development split between office, retail, and hotel uses, and office uses limited to 40 percent. For areas north of the DIAAH and Dulles Toll Road (e.g., TRW site), the plan calls for 50 to 60 percent of development to be residential. The land units between one-quarter and one-half mile of the station are allowed the following bonus densities: a mix of 35 to 50 percent residential, up to 50 percent office, and up to 15 percent retail, with the option for hotel uses. This new development, in conjunction with the transit station, could create a more transit-supportive environment at the Reston Parkway Station. In addition, the Reston Parkway station would provide direct access across the DIAAH and Dulles Toll Road to the TRW building between the Nextel development and proposed uses on Town Center Parkway. A new station would also provide pedestrian connections directly to several large developments on Sunset Hills Drive, the residential area of West Market, and the Reston Town Center. The future level of development for this station under the Wiehle Avenue Extension would be the same as the No Build Alternative.

Herndon-Monroe Station Area

The Herndon-Monroe Station area would include portions of the Town of Herndon and Fairfax County. Some of the land within the station area consists of the DIAAH and Dulles Toll Road and cannot be developed. Other development in the station area can be classified as suburban, with residential uses separated from the office development. Because most of the land in this station area is developed, any new development would have to be in the form of redevelopment. One exception is an undeveloped parcel located south of Herndon Parkway in the eastern portion of the station area.

The Herndon-Monroe station area does not have much new growth potential with implementation of the full LPA. The Town of Herndon is re-evaluating their plans for the area in the hopes of encouraging more transit-supportive development and joint development in the future. Although density bonuses are permitted in the area south of the station, a change in development character is limited due to presence of the existing park-and-ride facility, single-family homes, and wetlands. The Herndon-Monroe Station would provide an additional pedestrian connection between the Town of Herndon and Fairfax County, and would provide access to pedestrian facilities, businesses, and homes located in the station area.

With the implementation of the full LPA, the Comprehensive Plan would allow for mixed-use development immediately east of the park-and-ride facility and to the west of Monroe Street. The plan calls for 55 to 65 percent of development to be residential with remaining development split between office, retail, and hotel uses. The land units between one-quarter and one-half mile of the station are allowed the following bonus densities: a mix of 35 to 50 percent residential, up to 50 percent office, and up to 15 percent retail, with the option for hotel uses. Those parcels that include the Herndon-Monroe park-and-ride facility and the Sunrise Valley Park Wildlife Habitat and Nature Preserve would not change with the implementation of the full LPA. Land uses north of the proposed station within the Town of Herndon are not anticipated to change with implementation of the LPA based on current plans. The future level of development at this station for the Wiehle Avenue Extension would be the same as the No Build Alternative.

Route 28 Station Area

The Route 28 Station would be located to the east of the Dulles Toll Road and Route 28 interchange within Fairfax County. Most of the station area is undeveloped. Development that does exist is located primarily to the north of the Dulles Toll Road and includes townhouses, a school, the Center for Innovative Technology (CIT), and some open space. Development plans for the north side include additional residential units. The south side is largely undeveloped, although mixed-use development projects have been approved. Some major suburban office developments and a hotel are located within the area.

The change in character at Route 28 could include new transit-oriented development (particularly south of the Dulles Toll Road), transit facilities such as Kiss & Ride lots, and pedestrian connections throughout the area. Many of these improvements are proposed as elements of the Dulles Station development project, which would be located south of the Route 28 Station.

With the implementation of the full LPA, the Comprehensive Plan allows for most of the land units north of the station within one-half mile to be developed in a mixed-use fashion with a significant amount of residential use. The plan calls for 35 to 50 percent of the development to be residential, up to 50 percent office, and up to 15 percent retail, with the option for hotel uses. South of the proposed station, the plan recommends a mix of uses including office and high-density residential, but does not quantify that mix. The future level of development at this station for the Wiehle Avenue Extension would be the same as the No Build Alternative.

Dulles Airport Station Area

The only developments near the station at Dulles Airport are airport-related facilities. The development character would not change at the Dulles Airport Station.

Route 606 Station Area

The area around the Route 606 Station in Loudoun County is undeveloped or is part of the Dulles North Transit Center. South of the Dulles Greenway, most of the land is within the confines of the Dulles Airport, limiting the development potential.

The recently adopted General Plan established a TREC at the Route 606 station area. This designation provides for the creation of a mixed-use transit node with office, light industrial and supporting uses. With the implementation of the full LPA, the maximum allowable density increases from 0.6 FAR to 2.0 FAR. The development potential of this area is limited by height restrictions due to its proximity to the airport. Airport noise restrictions prohibit the construction of residential development in this area. Under the

Wiehle Avenue Extension, the future level of development at this station area would be the same as under the No Build Alternative.

Route 772 Station Area

The area around the Route 772 Station is also largely undeveloped. Within a half-mile of the stop are some single-family homes and townhouses. Two major planned developments have been approved for the station area: Moorefield Station and Loudoun Station. South of the station, the Moorefield Station development will include more than 9 million square feet of commercial development and 6,000 dwelling units on 600 acres. Moorefield Station will be developed in phases and will be closely coordinated with the extension of Metrorail service to the site. North of the station, the Loudoun Station development will include up to 1,514 multi-family dwellings, as well as up to 1.8 million square feet of office, hotel, theater, and retail uses.

The presence of a transit stop would allow for transit-oriented development under the General Plan, including a mix of uses, pedestrian connections, dense development at the station, and limitations on auto-oriented development. With the implementation of the full LPA, the plan allows for an increase from 0.6 FAR and 16 dwelling units per acre to 2.0 FAR and 50 dwelling units per acre, with the highest densities closest to the station. The future level of development at this station under the Wiehle Avenue Extension would be the same as that of the No Build Alternative.

5.2.3 MITIGATION

No mitigation measures are proposed. Station area developments would enhance the transit-supportive character of the area surrounding the proposed stations. The land use plans developed by local governments within the Dulles Corridor all contain guidelines to support transit, higher densities, mixed-use development, and walkable bike-friendly development patterns in close proximity to transit stations.

5.3 DEVELOPMENT EFFECTS

This section assesses the level of development projected in the corridor as a result of the Wiehle Avenue Extension and the full LPA in comparison with the No Build Alternative. The data presented is based on a real estate assessment of the parcels within the corridor that would be located within walking distance of the station areas (defined as one-half mile). Obstacles that would hinder development, such as the presence of recently constructed buildings, residential properties, or small parcel sizes were considered as part of the analysis. These projections are based on the continuation of the positive market conditions within the corridor and predict that much of the development potential allowed in local comprehensive plans would be achieved. For many of the parcels evaluated, it is also projected that full density bonuses due to proximity to transit stations and the inclusion of housing would be allowed. For this analysis, scenario requirements assume a level of development that is projected close to build-out in some sections of the corridor. The local jurisdictions will ultimately determine the level of growth actually allowed in the future.

5.3.1 CORRIDOR DEVELOPMENT PROJECTIONS

The Dulles Corridor is one of the region's fastest growing areas and is expected to continue growing over the next 25 years. The intensity of development in the station areas could increase with the implementation of the Build Alternatives. The Build Alternatives are not, however, expected to have a significant impact on development outside the station areas where market forces would continue to be

primary factors that control the timing and quantity of development. The influence of the project on development outside of station areas is discussed in Chapter 9.

The development projections were determined based on a real estate evaluation of the study area and were developed in conjunction with Fairfax and Loudoun counties. The method for developing the projections included a parcel-by-parcel evaluation of development in the corridor. A variety of criteria were used to determine the level of development. These criteria included the size of the parcel under consideration, ownership, visibility, access to the site for vehicular and transit patronage, environmental constraints, location, and overall development characteristics of the area. Parcels containing recently constructed buildings or containing residential development were not considered as primary locations for development.

With the exception of Tysons West, parcels located within the transit station areas, as defined in the comprehensive plans for the localities, are eligible for density bonuses. Information on existing development within the transit station areas was gathered from the localities, and field verified. This data was used to verify the regional projections from the Metropolitan Washington Council of Governments (MWCOG) Round 6.3 forecasts, which include projections for growth within the corridor for four categories—retail (including hotel and institutional development), industrial, office, and residential development. No Build Alternative projections were developed using the MWCOG data and adjusted for growth that has already occurred.

The potential level of growth within the corridor was determined for the Build Alternatives by calculating the potential development associated with the proposed transit station areas. These development totals were estimated by reviewing a variety of factors that could affect development within the station areas, including the availability of vacant land for development, the need for parcel consolidation, development constraints, and the market attractiveness of the station area. The totals are possible outcomes that may or may not occur.

Table 5.3-1 shows the potential increase in corridor development by 2025 for the Wiehle Avenue Extension and the full LPA in comparison to the No Build Alternative that could occur based on the guidelines provided in the local planning documents and projected market conditions. Development is expected to increase substantially within the corridor under the No Build Alternative, but could further increase with implementation of the Build Alternatives. The Wiehle Avenue Extension would generate less development than the full LPA because it would include fewer stations.

Table 5.3-1: Potential Increase in Corridor Development by 2025 Compared to the No Build Alternative

Development Type	No Build Alternative (2025) (square feet)	Locally Preferred Alternative (percent increase)	
		Wiehle Avenue Extension (2025)[1]	Full LPA (2025)[1]
Office	75,293,100	8%	17%
Retail	27,861,300	4%	18%
Industrial	26,746,300	-1%	1%
Residential	155,397,500	5%	10%
Total	285,118,200	5%	12%

[1] Projections are based on information for 2025 only. Opening year 2011 and 2015 forecasts were not prepared due to the longer period of time required for development to take effect following the opening of the Wiehle Avenue Extension and the full LPA.
Data for the Hotel and Institutional uses are included in the Retail category. LPA estimates are based on No Build estimate plus increased development projected at station areas.
Source: MWCOG Round 6.3 Forecasts (No Build only).

The most significant increases in potential development are expected in the residential and commercial (office and retail) categories. These development projections reflect the density bonuses available in the *Fairfax County Comprehensive Plan* and the *Loudoun County Revised General Plan* based on the implementation of the Build Alternatives.

5.3.2 JOINT DEVELOPMENT OPPORTUNITIES

Joint development opportunities provide benefits to the transit patrons, transit agencies, and/or the local jurisdictions. The transit patron is benefited by additional conveniences tied to the station platform or adjacent land and improved access to surrounding land uses. The transit agency or unit of government would control joint uses on land adjacent to the station. Joint uses potentially benefit the transit agency through increased funds and ridership resulting from the increased convenience for patrons.

Within the Dulles Corridor, both Fairfax and Loudoun counties have detailed policies that direct transit-oriented development into the station areas for the corridor. In addition, WMATA has a long-standing, proven joint development program whereby higher density development is accomplished near station areas.

WMATA has been a national leader in joint development, being one of the first transit systems in the country to establish a Joint Development Program. The historical benefits of WMATA's joint development program have included increased ridership; creation of 25,000 primary jobs; generation of over $20 million in annual property tax revenue to local jurisdictions; development of 5.6 million square feet of office space, 2.5 million square feet of retail space, almost 1,300 hotel rooms and 6,000 residential units; and a long-term revenue flow to WMATA through long-term land leases with developers.

WMATA is a partner in more than 50 public/private ventures utilizing air space over and land adjacent to Metrorail stations. The joint development sites contribute approximately $11 million annually to Metrorail funding. WMATA's joint development projects are supported by the local jurisdictions through zoning and comprehensive planning procedures.

For the Dulles Corridor, many of the station areas already have facilities that have been proffered by private developers that would support the transit facility. These include such items as Kiss & Ride or bus drop-off facilities.

The Tysons West, Wiehle Avenue, Herndon-Monroe, and Route 772 station areas have the greatest potential for joint development. Joint development is being considered for the park-and-ride lot that would be part of the Wiehle Avenue Station that would incorporate mixed-use development, parking, and direct pedestrian access to the station. This joint development would be on county-owned land.

Additional transit facilities, including a bus drop-off and Kiss & Ride lot, could be provided on the north side of the Herndon-Monroe Station through a joint development program. This joint development would occur on what is now privately owned land that would need to be converted to town land in the future.

The Route 772 Station area has been configured to accommodate planned transit-oriented developments, Loudoun Station on the north side and Moorefield Station on the south side.

With respect to air rights development, there has been discussion, but no formal initiative or agreement to date to set policy, for the Wiehle Avenue Extension or full LPA. As developable land becomes more scarce, the value of air rights might increase, especially within areas of high density. Higher densities at

some of the station areas that may be triggered by the Build Alternatives might open up opportunities for joint development (as discussed in Section 5.3.3) including air rights development above transit stations and their facilities. As designed, the proposed stations, guideways, and other facilities do not preclude future air rights development by others. Moreover, all local land use decisions are under the control of the local government, and at this time no specific provisions are planned to address such development.

6 TRANSPORTATION EFFECTS

This chapter describes the long-term and construction effects of the No Build Alternative, the Wiehle Avenue Extension, and the full LPA on the local and regional transportation network. The analysis includes the following sections:

Section 6.1 discusses the existing and planned transit system in the Dulles Corridor and the potential effects of implementing the No Build Alternative, the Wiehle Avenue Extension, and the full LPA.

Section 6.2 presents the existing and planned roadway system in the Dulles Corridor, as well as the potential effects of the No Build Alternative, the Wiehle Avenue Extension, and the full LPA on the planned system. Measures proposed to mitigate traffic impacts are also described.

Section 6.3 presents the anticipated long-term effects associated with the No Build Alternative, the Wiehle Avenue Extension, and the full LPA on other transportation facilities in the corridor. The section also presents the proposed mitigation measures for any anticipated adverse effects.

The alternative formerly known as "LPA Phase 1" in the October 2003 Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation has been renamed the Wiehle Avenue Extension in this Final EIS and is expected to begin operations in 2011. This change reflects the federal approach to the project's funding under the Federal Transit Administration's New Starts program. It will assure consistency among the environmental, engineering and financial documents during the project's development.

In the October 2003 Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation as well as this Final EIS, the term "full LPA" represents the Wiehle Avenue Extension and the second phase of the Dulles Corridor Rapid Transit Project. This second phase would extend west from Wiehle Avenue to Washington Dulles International Airport and Route 772 and is expected to begin operations in 2015.

The term "LPA", "proposed action", or "selected LPA" refers to both the Wiehle Avenue Extension and the full LPA collectively.

6.1 TRANSIT EFFECTS

The Dulles Corridor Rapid Transit Project would add rapid transit service, in the form of Metrorail and express bus service, to the Dulles Corridor. The corridor is currently served by express and local bus services, but implementation of the Wiehle Avenue Extension and full LPA would result in a substantial increase in high-quality transit capacity.

This section discusses the existing and planned transit system in the Dulles Corridor, as well as the potential effects of implementing the Wiehle Avenue Extension and the full LPA on the planned transit system. In Section 6.1.1, the methodology for evaluating transit effects is discussed. Section 6.1.2

summarizes the existing transit system in the Dulles Corridor and the planned transit system without the Dulles Corridor Rapid Transit Project which represents the No Build Alternative. Section 6.1.3 presents the anticipated long-term effects associated with the No Build Alternative, the Wiehle Avenue Extension and the full LPA, in terms of transit ridership, transit travel times, transit capacity, operations and maintenance costs, and other measures of transit service. Section 6.1.4 provides an overview of the expected effects on transit service during construction of the Wiehle Avenue Extension and the full LPA, and Section 6.1.5 presents proposed mitigation measures for any anticipated adverse effects.

6.1.1 METHODOLOGY

The anticipated effects of the No Build Alternative, the Wiehle Avenue Extension and full LPA on transit ridership and other transit operating characteristics were evaluated using the Northern Virginia Major Investment Study Model (NVMISM). This model was developed for the original Dulles Corridor MIS and was last used, prior to this project, for the I-66 MIS. The model used regionally adopted population and land use data (Metropolitan Washington Council of Governments [MWCOG] Round 6.3 Cooperative Land Use Forecasts), future highway and transit networks, transit operating plans developed for the project, assumptions regarding tolls on the Dulles Toll Road, and other specific model inputs described in the following paragraphs.

Travel demand forecast results are based on the MWCOG Round 6.3 Cooperative Land Use Forecasts. These forecasts represent the regionally adopted population and employment forecasts, through 2025, for the metropolitan Washington area, including Fairfax and Loudoun counties. By federal regulation, such regionally approved land use forecasts must be used in the travel demand analysis of each alternative studied in an EIS. More specifically, model assumptions regarding socioeconomic variables and land use must be consistent among alternatives so as to not bias the results of the travel demand forecasting process.

The transportation analysis zones (TAZs) used for the travel demand forecasts were based on the TAZ structure used for MWCOG's regional travel demand forecasting model set. By federal regulation, this TAZ structure must be used to ensure an accurate comparison of transportation projects. Since the TAZs in Tysons Corner, Reston, and Loudoun County were quite large, the project team worked with Fairfax and Loudoun counties to split these zones to more accurately distribute population and employment data, as well as land use densities within the smaller zones. No adjustments were made to the original TAZ boundaries or total TAZ population and employment data.

Operating plans for the No Build Alternative, the Wiehle Avenue Extension and full LPA were developed based on a common set of assumptions relative to fares, service frequencies, vehicle load factors, vehicle dwell times, corridor parking capacities, and other service variables. Each alternative was then modeled for its opening year (2011 for the Wiehle Avenue Extension, 2015 for the full LPA) and forecast year (2025) based on a preliminary service plan. Following initial model runs, these preliminary service plans were adjusted to provide adequate capacity for ridership demand at maximum load points (through equilibration). The operating plans for the full LPA reflect line-haul services operating within the corridor formed by the Dulles Connector Road, the Dulles International Airport Access Highway (DIAAH), and the Dulles Toll Road, as well as complementary local and feeder bus service operating in activity centers along the corridor.

6.1.2 EXISTING AND PLANNED TRANSIT SYSTEM

As described in Chapters 1 and 2, the existing transit system in the Dulles Corridor consists primarily of express and local bus services provided by Fairfax County, Loudoun County, and the Washington Metropolitan Area Transit Authority (WMATA). Transit services for the three providers are integrated with transit centers and park-and-ride lots located throughout the corridor.

6.1.2.1 Primary Transit Services

Existing and planned services and facilities in the Dulles Corridor are described in Chapters 1 and 2, and the anticipated No Build transit network in 2025 is depicted in Figure 2.4-1. Table 6.1-1 provides a summary of the primary transit services currently operating in the corridor.

Table 6.1-1: Summary of Primary Transit Services

	WMATA		Fairfax County	Loudoun County
Name of Service	Metrorail	Metrobus	Fairfax Connector	Loudoun County Transit
Type of Service	Regional Rail	Regional service with some local circulation	Express, feeder, and local circulator bus	Express, reverse commute, and local circulator bus
Total Number of Routes	5 lines	322 routes	54 routes	3 commuter route families, 4 circulator routes
Number of Routes in Corridor	1 line	14 routes	28 routes	3 commuter route families, 2 circulator routes
Peak Service Frequencies in Corridor	6 minutes	15-30 minutes	5 – 30 minutes	~ 15 minutes

Information on transit travel times and other service characteristics for the transit network in the No Build Alternative is provided in Section 6.2.3. More detailed information on transit centers and other transit services in the Dulles Corridor is provided in the following sections.

6.1.2.2 Transit Centers

An important element of existing and near-term planned transit service in the Dulles Corridor is its network of bus transit centers and park-and-ride lots. Figure 6.1-1 presents the location of the park-and-ride facilities and bus transit centers within the corridor. Each of these facilities is identified and described in Table 6.1-2. Facilities that also provide parking are described in further detail in Section 6.3. The Tysons-West*Park Transit Station is the primary bus transfer facility for Tysons Corner, particularly for express bus service and other travel to and from the north, west, and east. In addition, an on-street facility on the ring road of the Tysons Corner Center shopping mall currently serves as a transfer point for internal trips and trips oriented south and east of Tysons Corner, as well as some local Fairfax Connector routes from the west.

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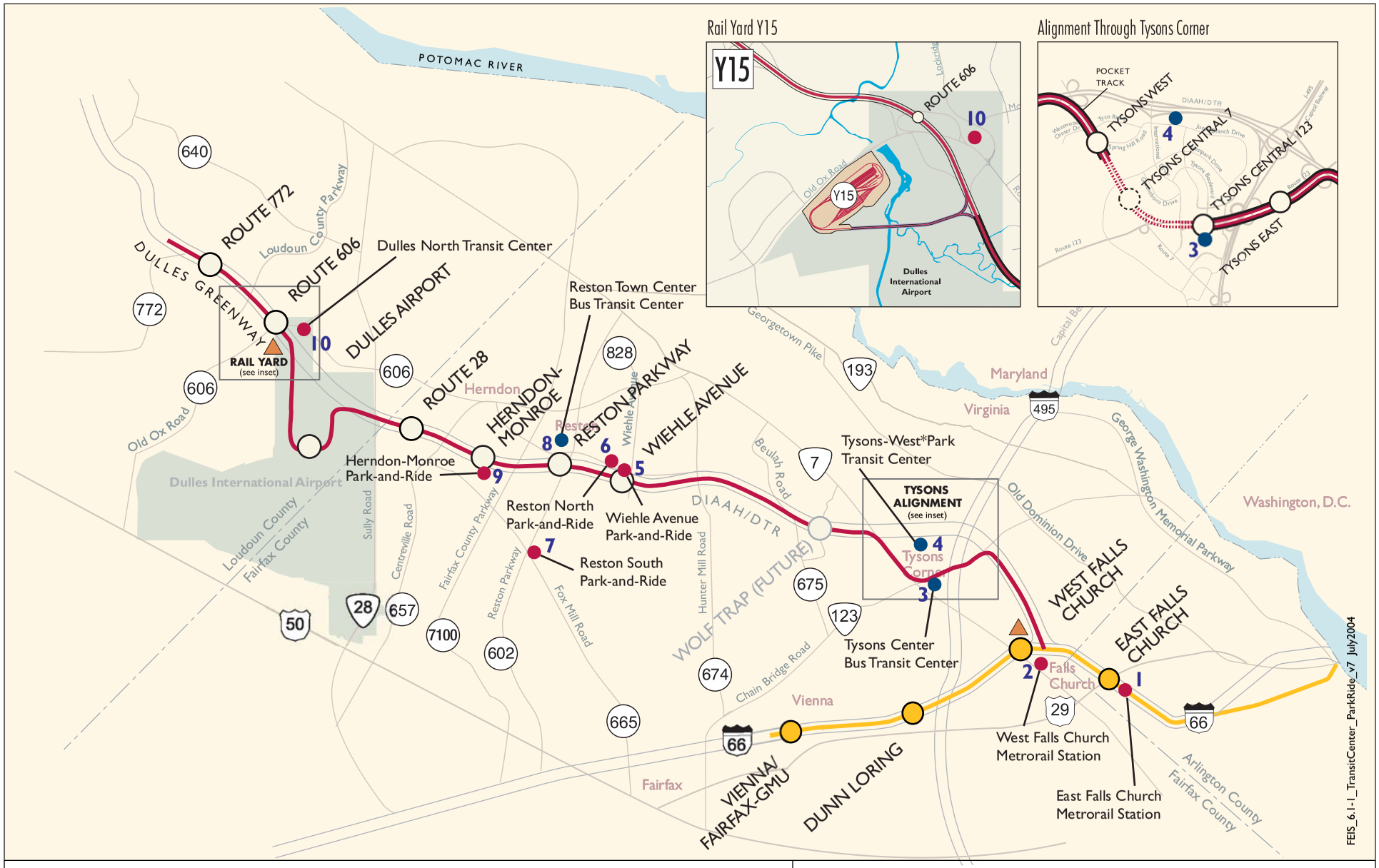


Figure 6.1-1

Transit Centers and Park-and-Ride Lots

Dulles Corridor
Rapid Transit Project

Table 6.1-2: Bus Transit Facilities in the Dulles Corridor

Bus Transit Centers	Location	Owner/ Operator	No. of Bays	Kiss & Ride	Parking	Connecting Services
East Falls Church Metrorail Station	I-66 at Sycamore Drive, Arlington	WMATA	8	Yes	Yes	Metrobus
West Falls Church Metrorail Station (south side)	I-66 at Route 7, Falls Church	WMATA	8	Yes	Yes	Metrobus, Private Shuttles
West Falls Church Metrorail Station (north side)	I-66 at Route 7, Falls Church	WMATA	9	No	Yes	Metrobus, Fairfax Connector, Washington Flyer
Tysons Corner Center Bus Stop	Tysons Center Ring Road, south side of mall	Tysons Corner I	4	No	No	Metrobus, Fairfax Connector
Tysons-West*Park Transit Station	8300 Jones Branch Road, McLean	Fairfax County	10	Yes	No	Metrobus, Fairfax Connector
Reston East	1860 Wiehle Avenue, Reston	Fairfax County	8	Yes	Yes	Fairfax Connector, RIBS, Private Shuttles
Reston North (overflow parking for Reston East)	Sunset Hills Road at Wiehle Avenue, Reston	VDOT	2	No	Yes	Fairfax Connector, RIBS
Reston South	Reston Parkway at Fox Mill Road, Reston	Fairfax County	3	Yes	Yes	Fairfax Connector, RIBS
Reston Town Center	Explorer Street between Market Street and Bluemont Way, Reston	Fairfax County	2	No	No	Fairfax Connector, RIBS
Herndon-Monroe	1230 Sunrise Valley Drive, Herndon	Fairfax County	8	Yes	Yes	Fairfax Connector, RIBS
Dulles North Transit Center	Route 606 at Route 789, Loudoun County	VDOT	6	Yes	Yes	Loudoun County Express Bus

6.1.2.3 Other Transit Services

Aside from fixed route service provided by WMATA and each of the counties, a few other transit services operate in the corridor. The Potomac and Rappahannock Transportation Commission (PRTC)—which operates the Virginia Railway Express (VRE) commuter rail service between Northern Virginia and Washington, D.C.—also provides weekday commuter bus service between Manassas and Washington, D.C., with an hourly stop at the West Falls Church Metrorail Station. The City of Falls Church initiated its own bus service in late 2000 with two circulator routes linking the East and West Falls Church Metrorail stations with Seven Corners and several Falls Church locations. The City of Fairfax's City-University-Energysave (CUE) bus system provides fixed-route service between the Vienna/Fairfax- George Mason University (GMU) Metrorail Station, George Mason University, and other locations in the City of Fairfax.

In addition to Metrobus and Metrorail services, WMATA provides demand-response MetroAccess paratransit service throughout the Washington metropolitan region. MetroAccess provides curb-to-curb service to persons with disabilities who cannot access public transportation and have been certified as eligible to use paratransit service. MetroAccess service is provided through contract with local operators.

Loudoun Transit is a private not-for-profit operator providing limited fixed route bus service in Leesburg and advance registration on-demand transportation in Leesburg and the Sterling areas.

Washington Flyer coach service is operated by the Metropolitan Washington Airports Authority (MWAA) and provides scheduled shuttle service between Dulles Airport and the West Falls Church Metrorail Station every half-hour.

6.1.3 LONG-TERM EFFECTS

Two of the major goals of the Dulles Corridor Rapid Transit Project, as outlined in Chapter 1 of this document, are to increase transit ridership and improve transportation service in the corridor. This section presents the anticipated long-term effects of the No Build Alternative, the Wiehle Avenue Extension, and the full LPA on the Dulles Corridor transit system and highlights the effectiveness in meeting these goals.

Both the Wiehle Avenue Extension and full LPA meet these goals more effectively than the No Build Alternative. The full LPA is the most effective in meeting these goals.

6.1.3.1 Transit Ridership

The change in ridership resulting from implementation of the rapid transit service in the Dulles Corridor is a measure of fundamental importance in assessing the transit effects of the Wiehle Avenue Extension and full LPA. The potential influences of the Wiehle Avenue Extension and full LPA on regional transit ridership, ridership at proposed stations in the corridor, and the transit mode share in the corridor, in relation to the No Build Alternative, are discussed below.

While the Wiehle Avenue Extension and the full LPA would both increase ridership and mode share compared to the No Build Alternative, the full LPA would result in the greatest increases. The full LPA is projected to attract 41,600 new average weekday trips to the regional transit system in its opening year (2015) while the Wiehle Avenue Extension would attract 29,100 in its opening year (2011). In 2025, the full LPA would attract nearly 47,800 new average weekday trips to the regional transit system while the Wiehle Avenue Extension would attract 34,300 new trips (38 percent fewer new trips). The full LPA is projected to increase the transit mode share at various activity centers in the corridor by 3 to 5 percent. The Wiehle Avenue Extension would result in a mode share increase that is 1 to 2 percent lower.

6.1.3.2 Regional Transit Ridership

Table 6.1-3 presents the average weekday ridership estimates associated with the Wiehle Avenue Extension and full LPA in relation to the No Build Alternative. The first two rows of the table present ridership related specifically to the Dulles Corridor, while the remaining four rows present forecast activity for the entire Washington metropolitan region.

Table 6.1-3: Average Weekday Transit Patronage Forecasts

		Locally Preferred Alternative							
		Wiehle Avenue Extension (2011)				Wiehle Avenue Extension (2025)			
	No Build Alternative (2025)	No Build Alternative	Metro-rail	Corridor Express Bus	Total	Metro-rail	Corridor Express Bus	Total	Full LPA (2025)
Project-Related Corridor Ridership Activity									
Total Corridor Trips	n.a.	n.a.	59,000	3,800[1]	62,800	68,500	4,800[1]	73,300	91,200
Total Corridor Boardings	n.a.	n.a.	24,600	13,200	37,800	27,300	16,800	44,100	57,500
Project-Related Regional Ridership Activity									
Regional HBW Rail/ Corridor Express Bus	541,100	471,400		490,600	n.a.		563,500	n.a.	575,300
Regional Total Rail/ Corridor Express Bus	914,500	788,400		826,500	n.a.		960,600	n.a.	977,300
Regional Total Transit Trips	1,331,200	1,159,500		1,188,600	n.a.		1,365,600	n.a.	1,379,000
Regional New Trips	n.a.	n.a.		29,100	n.a.		34,400	n.a.	47,800

HBW – home-based work

[1] This figure represents ridership activity that occurs on express bus only with no transfer to rail. Trips that start with express bus but also involve utilization of Metrorail are included in the Metrorail column.

The "Total Corridor Trips" row reflects all corridor-related boardings and alightings for the Metrorail system and/or corridor express bus service, including passengers entering the system outside of the corridor but exiting at a corridor station or stop. "Total Corridor Boardings" represent all trips that board the system at a station within the Dulles Corridor.

The "Regional Home Base Work Trips (HBW) Rail/Corridor Express Bus Trips" row represents total daily regional rail or corridor express bus trips that begin at the trip maker's home and end at their place of work. Home-based work trips are an important set of trips to consider in ridership analysis because trips between home and work comprise the largest segment of public transportation use. The "Regional Total Rail/Corridor Express Bus Trips" row represents all daily Metrorail and/or corridor express bus trips, not just those used for the commute between home and work. "Regional Total Transit Trips" reflects forecast ridership on the assumed regional transit network, and includes Metrorail trips, corridor express bus trips, commuter rail trips, and trips made by local bus. The "Regional New Trips" column presents the number of new transit trips attracted to the regional transit network as a result of the implementation of each alternative. The number of new trips for an alternative is calculated by subtracting the No Build Alternative "Regional Total Transit Trips" from the alternative's "Regional Total Transit Trips" for the same year of analysis.

The No Build Alternative would not provide additional rapid transit service in the Dulles Corridor; therefore, there would be no project-related effects from this alternative.

The Wiehle Avenue Extension and the full LPA are expected to increase the number of regional transit trips, and substantially increase the number of new trips on the system. Overall, in 2025, the full LPA would result in approximately 47,800 new average weekday trips on the system. Considered alone, the Wiehle Avenue Extension would attract approximately 34,400 new average weekday trips in 2025.

The Wiehle Avenue Extension would generate fewer corridor boardings than the full LPA due to the required transfer at Wiehle Avenue for many trips and the reduced attractiveness of corridor express bus service to many riders (relative to rail). Considered alone, the Wiehle Avenue Extension is projected to generate approximately 81 percent of the total 2025 daily corridor boardings as compared to the full LPA (including corridor express bus riders). Approximately 13,400 fewer regional new trips would be attracted to the regional transit system in 2025 for the Wiehle Avenue Extension. The Wiehle Avenue Extension has fewer regional total transit trips in its opening year than the No Build Alternative in 2025. This difference occurs because regional growth in population and employment by 2025 would significantly increase regional transit ridership with or without the Dulles Corridor improvements.

A. Daily Station Boardings

Corridor-specific transit ridership is an important measure of the impact of the Wiehle Avenue Extension and full LPA within each station area in the corridor. The estimated number of daily boardings at proposed corridor stations is shown in Table 6.1-4.

Table 6.1-4: Forecast Daily Station Boardings in Dulles Corridor

		Locally Preferred Alternative				
		Wiehle Avenue Extension (2011)		Wiehle Avenue Extension (2025)		Full LPA (2025)
	No Build Alternative	Metrorail	Corridor Express Bus	Metrorail	Corridor Express Bus	Metrorail
Tysons East	n.a.	3,803	n.a.	3,920	n.a.	4,092
Tysons Central 123	n.a.	5,209	n.a.	5,726	n.a.	6,067
Tysons Central 7	n.a.	3,306	n.a.	3,595	n.a.	3,838
Tysons West	n.a.	4,002	n.a.	4,391	n.a.	4,627
Wiehle Avenue	n.a.	8,244	n.a.	9,697	n.a.	6,498
Reston Parkway	n.a.	n.a.	n.a.	n.a.	n.a.	4,708
Reston Town Center	n.a.	n.a.	1,546	n.a.	1,534	n.a.
Herndon-Monroe	n.a.	n.a.	4,746	n.a.	5,531	8,775
Route 28	n.a.	n.a.	n.a.	n.a.	n.a.	1,226
Dulles Airport	n.a.	n.a.	3,466	n.a.	4,986	6,200
Route 606	n.a.	n.a.	1,485	n.a.	1,661	4,485
Route 772	n.a.	n.a.	1,973	n.a.	3,110	6,961

n.a. = not applicable – no stations exist at those locations for the alternative.

As the data in the table show, a higher number of boardings occur in the full LPA in 2025 versus the Wiehle Avenue Extension in 2025, especially for the outer stations being served by corridor express service in the Wiehle Avenue Extension. Heavy boardings in the Wiehle Avenue Extension at Wiehle Avenue reflect the fact that it will be the interim terminal station prior to the completion of the full LPA. These high numbers decline under the full LPA, with higher boardings occurring at Herndon-Monroe in the full LPA. With direct service to Herndon-Monroe, Herndon-Monroe is a more logical station for riders coming from Reston and Herndon, and therefore results in an increase in boardings. A very significant increase in boardings at Route 606 and 772 under the full LPA reflect the increased attractiveness of rail versus corridor express bus service. Heavy boardings in Tysons, especially at Tyson Central 123 reflect

high employment densities in the area as well as the fact that this station is the nexus for Tysons shuttle services.

B. Corridor Transit Mode Share

Changes in transit mode share identify whether overall corridor travel choices are changing because people have switched to transit from their automobiles due to the presence of the new corridor rapid transit service. Transit mode share analysis distinguishes between absolute transit volumes and the overall effectiveness of transit service in meeting regional travel needs. If transit ridership goes up while its mode share declines, then transit is not succeeding in contributing to the performance of the overall regional transportation system.

The effects of the Wiehle Avenue Extension and full LPA on corridor transit mode share, in relation to the No Build Alternative, are summarized below in Tables 6.1-5 and 6.1-6.

Table 6.1-5: Transit Mode Share for Home-Based Work Trips (Trips Attracted to the Dulles Corridor)

		Locally Preferred Alternative		
	No Build Alternative (2025)	Wiehle Avenue Extension (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
Tysons Corner	8.4%	11.9%	11.6%	12.6%
Reston	6.4%	7.9%	7.6%	9.6%
Herndon/Dulles	4.4%	5.8%	6.2%	7.9%
Loudoun East	1.0%	2.0%	2.1%	2.7%

Table 6.1-6: Transit Mode Share for Home-Based Work Trips (Trips Produced in the Dulles Corridor)

		Locally Preferred Alternative		
	No Build Alternative (2025)	Wiehle Avenue Extension (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
Tysons Corner	25.9%	33.5%	34.3%	34.4%
Reston	11.7%	15.1%	15.4%	17.4%
Herndon/Dulles	10.8%	13.9%	14.8%	16.2%
Loudoun East	2.9%	6.9%	6.8%	10.8%

Relative to the No Build Alternative, home-based work transit mode share for the full LPA would increase in each of the corridor sub areas due to the implementation of a much more attractive transit service than the bus only service provided in the No Build Alternative.

The Wiehle Avenue Extension would result in less improvement in home-based work transit mode share at activity centers than the full LPA, especially in the western end of the corridor, due to a lower overall ridership. However, in the eastern end of the corridor the increase in mode share for the Wiehle Avenue Extension would result in a significant improvement over No Build Alternative mode shares.

C. Transit Travel Times

The level of convenience for passengers using transit is directly related to the amount of time that is required to make a trip by bus or rail versus alternative modes such as the automobile. Transit travel time includes time spent accessing the station or stop, time spent waiting for the bus or train, time spent riding

the bus or train, and the time spent transferring between transit services. The longer each of these transit trip components take, the less attractive transit becomes relative to other modes for travelers who have a choice of mode. For passengers who do not have access to other modes and thus rely on transit to meet their basic mobility needs, excessive travel times result in less time available to spend on other priorities. Table 6.1-7 shows transit travel times for the No Build Alternative, the Wiehle Avenue Extension, and the full LPA in 2025 for select origin/destination (O/D) pairs within the region.

Table 6.1-7: Transit Travel Times for Select O/D Pairs in Minutes

		No Build Alternative		Locally Preferred Alternative		
Origin	**Destination**	**Highway (2025)**	**Transit (2025)**	**Wiehle Avenue Extension (2011)**	**Wiehle Avenue Extension (2025)**	**Full LPA (2025)**
Tysons West – West*Park Area	Metro Center	35	37	38	38	38
Wiehle Avenue	Union Station	59	57	57	57	51
Rosslyn	Dulles Airport	36	64	54	54	43
Wiehle Avenue	Pentagon	57	50	57	57	55
Herndon-Monroe	Tysons Central 123	26	42	28	28	26
Tysons West – Tysons West Station Area	Dulles Airport	21	72	30	30	19
Wiehle Avenue	Tysons East – Tysons East Station Area	25	46	26	26	19
Route 606	Metro Center	52	60	65	65	60

For all but three origin-destination (O/D) pairs, the full LPA would improve transit travel times over those for the No Build Alternative, especially for reverse commute trips and trips with one end in Tysons Corner. For many trips, transit travel times would improve by 20 to 30 minutes. The transit travel times for the full LPA would generally be time-competitive with highway travel (travel by private vehicle).

In general, the Wiehle Avenue Extension would offer less travel time savings than the full LPA, but it would still offer an improvement in transit travel times over the No Build Alternative for most O/D pairs. For trips traveling between Wiehle Avenue and points east, the Wiehle Avenue Extension would provide travel times similar to the full LPA, because the Metrorail service would be similar in this portion of corridor. For trips with at least one end west of Wiehle Avenue, the Wiehle Avenue Extension would have greater travel times than the full LPA due to transfer requirements and decreased service frequency in the reverse peak direction. For these trips, the Wiehle Avenue Extension would generally have travel times that are 10 to 15 minutes longer than the full LPA.

6.1.3.3 Effects on Travel Patterns

The data presented in this section complements the mode share data presented above in Tables 6.1-5 and 6.1-6. The purpose of this data is to show the changes in trips being generated and attracted to different parts of the corridor due to the implementation of the full LPA or the Wiehle Avenue Extension. Specifically, the data show the impacts on mode choice of a greater range of transit options for people

starting trips in the corridor as well as for people making trips into the corridor. Tables 6.1-8 and 6.1-9 show the number of daily transit trips attracted to and produced in the Dulles Corridor.

Table 6.1-8: Number of Daily Transit Trips Attracted to Corridor Geographic Areas

		Locally Preferred Alternative		
	No Build Alternative (2025)	Wiehle Avenue Extension (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
Tysons Corner	13,870	19,335	20,514	21,981
Reston	7,942	9,382	9,168	10,888
Herndon/Dulles	5,449	5,722	6,808	8,282
Loudoun East	3,133	8,742	12,758	15,389

Table 6.1-9: Number of Daily Transit Trips Produced in Corridor Geographic Areas

		Locally Preferred Alternative		
	No Build Alternative (2025)	Wiehle Avenue Extension (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
Tysons Corner	6,034	8,908	9,732	9,787
Reston	11,980	13,333	14,786	16,068
Herndon/Dulles	7,793	8,104	9,556	10,602
Loudoun East	6,505	9,450	13,359	17,955

With implementation of the Wiehle Avenue Extension and the full LPA, trip productions and attractions for all parts of the corridor show increases with the most dramatic increases in trips in the westernmost part of the corridor. While this increase is especially notable in the full LPA, increases in the Wiehle Avenue Extension are also significant. These increases are directly related to providing greater transit choices in the corridor, especially for reverse commute and off-peak trips.

6.1.3.4 Transit Capacity

Transit capacity in the corridor represents the amount of physical capacity available to carry passengers and provides an understanding of the number of riders that can be comfortably accommodated in the corridor during peak travel times. This measure also provides an understanding of the level of service provided and how well the Wiehle Avenue Extension and full LPA support the corridor's mobility needs. Total capacity will vary according to the number of vehicles in service and the capacity of each of those vehicles. Vehicle capacity, in turn, will vary based on vehicle size, policies regarding the level of acceptable vehicle loading, and the allowable number of standing passengers.

Table 6.1-10 summarizes the transit capacity provided at each of the corridor stations or stops (or station areas in the No Build Alternative) for service in the a.m. peak hour in the peak direction. The figures in the table represent the number of peak-hour spaces available to carry passengers at each station or station area under each alternative.

Table 6.1-10: Transit Capacity by Alternative in the a.m. Peak Hour

Station/Stop	No Build Alternative (2025)	Locally Preferred Alternative		
		Wiehle Avenue Extension (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
East Falls Church	21,120	18,240	21,120	21,120
West Falls Church	21,120	10,560	12,480	12,480
Tysons East	90	7,680	8,640	8,640
Tysons Central 7	n.a.	7,680	8,640	8,640
Tysons Central 123	400	7,680	8,640	8,640
Tysons West	n.a.	7,680	8,640	8,640
Wiehle Avenue	720	7,860	8,820	8,820
Reston Parkway	n.a.	n.a.	n.a.	8,640
Herndon-Monroe	1,012	1,665	2,430	8,640
Route 28	n.a.	n.a.	n.a.	8,640
Dulles Airport	n.a.	180	180	8,640
Route 606	495	2,295	2,565	8,955
Route 772	n.a.	1,980	2,250	8,640

NOTE: Vehicle Capacity Assumptions: Metrorail – 120 passengers per vehicle; Fairfax Connector and Loudoun County – 45 passengers per vehicle (assumes some standees).
n.a. = transit services not provided to this station area under the alternative.

In the full LPA, transit capacity at all stations in the corridor between Route 772 and Tysons East would increase relative to the No Build Alternative because the multiple car trains in the full LPA would provide significantly higher capacity than the single buses providing corridor service under the No Build Alternative (furthermore, a single rail car also has a higher capacity than a single bus).

In the Wiehle Avenue Extension, similar improvements in transit capacity would occur relative to the No Build Alternative for the corridor stations from Wiehle Avenue east (in the Wiehle Avenue Extension, Wiehle Avenue will be the western terminal station for the Wiehle Avenue Extension rail service). This improvement in capacity would occur both in the short term as well as in the long term, if the full LPA is not implemented in its entirety. In the Wiehle Avenue Extension, west of Wiehle Avenue, transit capacity would be much less than the full LPA because transit service would be provided by buses (i.e., single vehicles) rather than by multiple car trains. In 2025, the Wiehle Avenue Extension would provide approximately 30 percent of the capacity of the full LPA west of Wiehle Avenue.

6.1.3.5 Hours of Operation and Frequency of Service

Hours of operation and service frequency, especially in the off-peak, are important determinants of the quality and convenience of transit service that would be provided in the Dulles Corridor, including how well transit supports everyday activities and travel needs other than peak hour commutes.

For the Wiehle Avenue Extension, hours of operation for both Metrorail and corridor express bus services would correspond to the existing Metrorail system's operating hours: 5:00 a.m. to 12 p.m. on weekdays (3 a.m. on Friday), 7 a.m. to 3 a.m. on Saturdays, and 7 a.m. to 12 p.m. on Sundays. In addition, overall span of service for local/feeder bus services would correspond to these operating hours. Limited "night

owl" bus service operates beyond these hours throughout the region. For the full LPA, the Dulles Corridor line would have the same hours of operation as described for the Wiehle Avenue Extension.

While the hours of operation are comparable between the No Build Alternative, the Wiehle Avenue Extension, and the full LPA, service frequencies—particularly in the off-peak periods (midday and evening)—would be much better for the full LPA than for the No Build Alternative. Table 6.1-11 summarizes the range of service frequencies planned for each alternative in both the peak and off-peak periods.

The service frequencies for the full LPA were designed to be consistent with planned Metrorail operations. Accordingly, the full LPA would operate with 7-minute headways in the peak period and 12-minute headways at most other times. In the peak period, this level of service is better than what would be provided under the No Build Alternative, and in the off-peak period—where headways for most travel markets in the corridor improve from 30 minutes to 12 minutes—the level of service would be far better than that provided by the No Build Alternative.

Table 6.1-11: Peak and Off-Peak Headways in the Dulles Corridor (in minutes)

			Locally Preferred Alternative		
		No Build Alternative (2025)	Wiehle Avenue Extension (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
Peak Period	Fairfax County Connector Service	5-30	15-30	15-30	15-30
	Loudoun County Commuter Service	15	15	15	No Service
	Metrorail	No Service	7	7	7
	Metrobus	15-30	15-30	15-30	15-30
	Corridor Express Bus Service	No Service	7-30	7-30	No Service
Off-Peak Period	Fairfax County Connector Service	30-60	30-60	30-60	30-60
	Loudoun County Commuter Service	No Service	No Service	No Service	No Service
	Metrorail	No Service	12	12	12
	Metrobus	30-60	30-60	30-60	30-60
	Corridor Express Bus Service	No Service	21-30	21-30	No Service

For the Wiehle Avenue Extension, the frequency of service east of and including Wiehle Avenue would be the same as that for the full LPA. The corridor express bus service proposed for points west of Wiehle Avenue is intended to operate in the peak direction with frequencies comparable to those provided by the rail segment. However, express bus services would operate in heavily congested conditions when accessing and exiting stations and stops, and could experience delays that affect service reliability. In the reverse-peak direction and during the off-peak period, express bus service would operate less frequently than the full LPA, but more frequently than No Build Alternative transit services.

6.1.3.6 Transfer Requirements

The number of transfers required to make a trip from an origin to a destination is one of the most important determinants of passenger convenience and comfort. Research shows that there are several reasons transfers decrease the attractiveness of a transit service. First, the added time associated with transfers increases a passenger's overall trip time. Second, transfers between different transit lines often take place at bus stops that are unprotected from the elements and not suited to long waits. Third, there

is a discomfort associated with uncertainty about the arrival of the vehicle being transferred to, specifically whether the vehicle will be early (and therefore missed by on-time arriving passengers), late, or will arrive at all.

For the No Build Alternative, the Wiehle Avenue Extension, and the full LPA, the minimum number of transfers necessary to travel between select O/D pairs (the same pairs analyzed for travel time effects) was determined. The results of this analysis show that for most of the O/D pairs analyzed, the full LPA would require fewer transfers than the No Build Alternative. The full LPA would often provide a one-seat ride between origin and destination. Where transfers are required, they would be within the regional rapid transit system; therefore, perceived transfer "penalties" are somewhat mitigated by completely sheltered environments and the ability to transfer between lines without paying an additional fare or showing a transfer pass.

The Wiehle Avenue Extension would require at least one more transfer than the full LPA for trips with one end in the western part of the corridor and one end east of Wiehle Avenue. For these trips, the Wiehle Avenue Extension would generally require the same number of transfers as transit services operating under the No Build Alternative, but in most cases would not require transfers between different service providers. For O/D pairs with both ends in the western end of the corridor, no transfers would be required.

6.1.3.7 Effects on Regional Rail Operations

The implementation of the Wiehle Avenue Extension and full LPA would affect the operations of other portions of the regional transit system, including Metrorail, Metrobus, and the local operating systems in the corridor. This section includes a summary of the effects of the full LPA on planned Metrorail system capacity and operations. Of particular concern is the ability of Metrorail vehicles to accommodate additional passenger loads resulting from the implementation of the Dulles Corridor Rapid Transit Project without significant crowding, especially in the peak hour of demand. The operations of the Wiehle Avenue Extension and full LPA are discussed in Section 2.4.2.

A. Passenger Volumes at Maximum Load Points

Table 6.1-12 presents forecasted Metrorail passenger loads at the maximum load point (the point at which Metrorail vehicles experience the highest passenger volumes and thus the most crowding), and the average loads per car during the peak hour of the a.m. peak period for the No Build Alternative, the Wiehle Avenue Extension, and the full LPA. The maximum load point for each alternative would occur between the Rosslyn and Foggy Bottom stations on the Metrorail Orange Line. The average load per car reflects the number of passengers carried on each car of a train during the peak hour, assuming that passenger loads are spread evenly among all cars in operation during that period.

WMATA's current primary passenger load guideline is 140 passengers per rail car (ppc) in the peak direction during the peak 30-minute period (i.e., the peak of the peak). In an effort to improve the quality of Metrorail service, WMATA has established an objective of reducing its passenger load standard to 120 ppc in the peak hour. This passenger load guideline was used in WMATA's Core Capacity Study (see Section 1.3) and in determining Metrorail fleet requirements for the Dulles Corridor Rapid Transit Project.

Table 6.1-12: A.M. Peak Hour Maximum Loads and Average Loads per Vehicle

	No Build Alternative (2025)		Locally Preferred Alternative					
			Wiehle Avenue Extension (2011)		Wiehle Avenue Extension (2025)		Full LPA (2025)	
	Passenger Load	Average Load/Car	Passenger Load	Average Load/Car	Passenger Load	Average Load/Car	Passenger Load	Average Load/Car
Orange Line, Vienna to Largo	3,726	109	3,185	124	3,383	99	3,358	98
Orange Line, Vienna to New Carrollton	7,483	110	6,398	107	6,791	99	6,738	98
Orange Line, West Falls Church to Stadium	5,194	76	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Wiehle Avenue Extension and full LPA	n.a.	n.a.	6,845	114	7,389	108	8,642	126
Total	**16,404**	**96**	**16,428**	**112**	**17,563**	**103**	**18,738**	**109**

n.a. = not applicable for this alternative

Passenger loads on the Orange Line Vienna service would decrease under the full LPA relative to the No Build Alternative because passengers from the Dulles Corridor riding the Vienna service under the No Build Alternative would instead board the service provided by the Wiehle Avenue Extension or full LPA, thus lessening the number of passengers on board Vienna Line trains. Under the Wiehle Avenue Extension, passenger loads and average loads per car on the Dulles Corridor line would decrease at the maximum load point relative to the full LPA. This decrease would be attributable to the decrease in ridership on the Dulles Line for the Wiehle Avenue Extension. Conversely, there would be a small increase in passenger loads and average loads per car on the Orange Line Vienna service for the Wiehle Avenue Extension in 2025. Since Metrorail service would not be available in the western portion of the corridor under the Wiehle Avenue Extension, some people from the west would choose to drive to the Vienna line to board rather than be forced to transfer at Wiehle Avenue on the Dulles Line. The decrease in passengers on board at the maximum load point and the average loads per car in the full LPA are even more pronounced relative to the Wiehle Avenue Extension opening year.

B. Other Effects on the Existing Metrorail System

Implementation of the full LPA would result in two additional effects on Metrorail service along the Orange Line. The Wiehle Avenue Extension and the full LPA would replace Orange Line service running between West Falls Church and Stadium Armory in the peak period only with new Metrorail service in the Dulles Corridor and along the Orange Line, with the first Orange Line stop for the new Dulles service at the East Falls Church Metrorail Station. Because the Dulles line service would operate all day, service frequencies along the Orange Line (east of East Falls Church) would improve during the off-peak period, as Dulles trains would merge with the Orange Line alignment at East Falls Church. This would result in a combined off-peak headway of 6 minutes from East Falls Church to Rosslyn and 4 minutes along the remainder of the shared Orange/Blue alignment through downtown Washington, D.C. By comparison, the No Build Alternative would provide a 12-minute off-peak headway on the Orange Line east to Rosslyn and a 6-minute combined Blue/Orange Line headway through downtown Washington, D.C.

While off-peak service frequencies east of (and including) East Falls Church Metrorail Station would improve, peak period service at the West Falls Church Metrorail Station would decline under the implementation of the Wiehle Avenue Extension and the full LPA. This is because the Wiehle Avenue

Extension and the full LPA would replace a service (the peak period only Orange Line service between West Falls Church and Stadium-Armory) with a Metrorail Line that would bypass West Falls Church and enter the Orange Line alignment at the East Falls Church Metrorail Station. This would result in peak period trains at West Falls Church being reduced from approximately 21 trains per hour in the No Build Alternative to approximately 13 trains per hour under the Wiehle Avenue Extension and full LPA.

6.1.3.8 Effects on Operations and Maintenance Costs

The ridership figures outlined at the beginning of Section 6.1.3 show the positive impacts of implementing a major transit capital investment in the Dulles Corridor. This section outlines the estimated changes in operations and maintenance (O&M) costs associated with the Wiehle Avenue Extension and full LPA. These figures, in conjunction with ridership changes, help to identify the cost-effectiveness of a given alternative. Table 6.1-13 presents the annual operations and maintenance costs estimated for 2025 (in 2004 dollars).

Table 6.1-13: Annual Operations and Maintenance Costs – 2025 (2004 dollars in millions)

		Locally Preferred Alternative		
Transit Service	**No Build Alternative (2025)**	**Wiehle Avenue Extension (2011)**	**Wiehle Avenue Extension (2025)**	**Full LPA (2025)**
Metrorail	$587.73	$581.98	$627.85	$657.64
WMATA Bus	$14.53	$11.74	$13.30	$13.30
Fairfax Connector	$19.19	$19.74	$23.42	$21.32
Loudoun County (includes corridor express service)	$4.38	$7.96	$9.71	$6.33
TOTAL	**$625.83**	**$621.42**	**$674.28**	**$698.59**

NOTE: See Chapter 8 for costs expressed in year-of-expenditure dollars.

Though revenue vehicle hours for all transit modes in the corridor are expected to decrease for the full LPA relative to the Wiehle Avenue Extension, the full LPA would have higher O&M costs due to the added cost of infrastructure maintenance for a rail line which extends to Loudoun County. This infrastructure includes stations, tracks, power distribution systems, structures, and right-of-way. The cost associated with maintaining more sophisticated rail vehicles is also higher than the cost of maintaining buses (the mode of service west of Wiehle Avenue in the Wiehle Avenue Extension).

6.1.3.9 Metrorail Fleet Requirements

Fleet requirements represent the number of Metrorail cars that would be required to meet peak loads under each of the alternatives, plus spare cars and gap trains. This measure is another means of describing the level of transit service and investment in resources. Table 6.1-14 presents the fleet requirements for each alternative in the opening years.

Table 6.1-14: Fleet Requirements – Opening Year

Transit Service	**No Build (2011)**	**Wiehle Avenue Extension (2011)**	**No Build (2015)**	**Full LPA (2015)**
Metrorail Cars	1,108	1,172	1,238	1,366

As shown in the table, the Wiehle Avenue Extension alternative requires an additional 64 Metrorail cars for year 2011 operations when compared to the No Build Alternative. The full LPA requires an additional

64 Metrorail cars. Independent of the LPA, WMATA will procure a gap train and also rail cars to accommodate growth in the system.

6.1.4 CONSTRUCTION EFFECTS

6.1.4.1 Wiehle Avenue Extension

The Wiehle Avenue Extension would merge with the Orange Line at a point between the East and West Falls Church Metrorail Stations. This connection would require new special track work, including turnouts and a double crossover on the existing Orange Line track. It would also require some re-alignment of the Orange Line. WMATA would be able to maintain Orange Line operations by single-tracking trains to implement such improvements. To the extent possible, overnight periods would be utilized for construction that would require closure of both tracks. If closure of both tracks is required during operating hours, buses would be used to connect stations affected by the closure.

A yard lead from the mainline in the median of the Dulles Connector Road would be required for access to the West Falls Church Yard. This lead would cross under the eastbound lanes of the Connector Road. If cut and cover tunneling is identified as the best method for constructing the tunnel it would require a detour on the eastbound lanes.

In Tysons Corner, the rail line would run in tunnel for 1.1 miles. If cut and cover is the selected construction method, lane closures that would have a considerable impact on traffic operations would be required.

Construction of the Wiehle Avenue station would require widening of the DIAAH. This widening would result in lane closures in the station area. The construction impacts of parking, Kiss & Ride and bus facilities associated with the station are expected to be minimal. The construction of pedestrian overpasses to the Wiehle Avenue median station may require limited off-peak lane closures on the DIAAH and the Dulles Toll Road.

West of the Wiehle Avenue Station, there would be construction of a pocket track for train storage that would result in lane closures for roadway widening.

6.1.4.2 Full LPA

Construction effects for the full LPA would be the same as the Wiehle Avenue Extension east of and including Wiehle Avenue.

West of Wiehle Avenue, the construction of the Reston Parkway, Herndon-Monroe, and Route 28 stations would require the same widening of the DIAAH as the Wiehle Avenue station construction, and therefore would also have the same impacts.

At Dulles Airport, the rail alignment would run through a 1.72 mile tunnel. Impacts from the use of a combination of cut and cover and conventional tunneling techniques would include vehicular, pedestrian, and potentially air traffic disruptions as the tunneling proceeds across roads leading to the main terminal, parking lots, and the northern portion of the service tarmac.

The northwestern-most section of the Dulles Airport alignment would be an aerial alignment providing a connection to the Dulles Greenway median. Impacts due to construction are expected to be minimal, with some off-peak lane closures across the eastbound lanes expected.

Relocation of lanes on the Dulles Greenway would be required at the Route 606 and Route 772 stations in Loudoun County. These relocations may result in some traffic disruptions as lanes are closed at each station location. Impacts from lane closures for construction of pedestrian bridges to the Greenway median are expected to be minimal.

6.1.5 MITIGATION

Maintenance of traffic plans would be developed for all construction activities that would affect roadways. The construction of all stations along the alignment of both the full LPA and the Wiehle Avenue Extension would be coordinated with the following agencies: VDOT regarding lane closures in Tysons Corner and on the Dulles Toll Road; MWAA regarding possible disruptions in airport service and construction on the DIAAH; and with TRIP II regarding construction events on the Dulles Greenway. To the extent possible, all construction requiring lane closures would be done at night, on weekends, or in the off-peak periods.

6.2 EFFECTS ON ROADWAYS

Because of the population and employment growth forecast for the metropolitan Washington, D.C. region, traffic is expected to consistently increase throughout the Dulles Corridor over the next ten to 20 years. Under the No Build Alternative, anticipated growth is expected to occur in a dispersed pattern of development, which would be highly auto-oriented, leaving people with few travel choices and resulting in widespread congestion. At many corridor intersections, travelers would experience substantial delays and very poor levels of service. The intent of the Dulles Corridor Rapid Transit Project is to provide travel choices for corridor residents and employees and to help focus anticipated growth in Fairfax and Loudoun counties into patterns that will increase the number of viable travel options available to corridor residents and employees, including transit, walking, and bicycling.

This section presents the existing and planned roadway system in the Dulles Corridor, as well as the potential effects of the Wiehle Avenue Extension and the full LPA on the planned system. In Section 6.2.1, the methodology for evaluating roadway effects is discussed, then in Section 6.2.2 the existing and planned roadway systems in the Dulles Corridor are described. Section 6.2.3 presents the anticipated long-term effects associated with the No Build Alternative, the Wiehle Avenue Extension, and the full LPA in terms of roadway volumes, levels of service, and anticipated delay at intersections, and Section 6.2.4 presents proposed mitigation measures for anticipated adverse traffic effects.

6.2.1 METHODOLOGY

Like transit effects, the anticipated effects of the No Build Alternative, the Wiehle Avenue Extension and the full LPA on the regional and corridor roadways were estimated using the Northern Virginia Major Investment Study Model (NVMISM). NVMISM was used to generate highway assignments that were, in turn, used to forecast traffic volumes on regional highway links and adjusted to develop detailed traffic forecasts for the local road network surrounding proposed stations and stops in the Dulles Corridor.

6.2.2 EXISTING AND PLANNED ROADWAY SYSTEM

The Dulles Corridor is served by a number of regional and local roadway facilities. This section provides an overview of these facilities, including a general assessment of current traffic operations. Additional information on existing transportation facilities and assumed highway and transit improvements is provided in Chapters 1 and 2.

6.2.2.1 Regional Roadways

The regional highway facilities, major arterials, and key regional roadway links in the Dulles Corridor are shown in Figure 2.4-2. These highways, their existing capacity, and the improvements included in the region's financially constrained long-range transportation plan (CLRP) are described in more detail in Chapter 2. The major regional highway facilities in the corridor include the following:

- Interstate 66 (I-66);
- Dulles Connector Road;
- Interstate 495 (I-495 or Capital Beltway);
- Dulles Toll Road;
- Dulles International Airport Access Highway; and,
- Dulles Greenway.

The other major arterials serving regional travel patterns in the corridor include:

- Route 7 (Leesburg Pike);
- Route 123 (Chain Bridge Road/Dolley Madison Boulevard);
- Route 193 (Georgetown Pike);
- Route 7100 (Fairfax County Parkway);
- Route 28 (Sully Road);
- Route 50 (Lee Jackson Memorial Highway); and,
- Route 607 (Loudoun County Parkway).

As indicated in Chapter 1, regional roadways and major arterials in the Dulles Corridor currently experience a substantial amount of congestion during peak travel periods. Typically, the level of congestion on a roadway or at an intersection is reflected by a qualitative measure called level of service (LOS). In general, LOS reflects the impacts of congestion on travel speeds or the average delay experienced by vehicles at an intersection. Six letter designations (A through F) are used to represent different levels of service, with LOS A reflecting free flow conditions and LOS E and F representing very congested or gridlock conditions. Many of the facilities in the Dulles Corridor are currently at LOS E and F, and increasing demand is only expected to worsen conditions. LOS is explained in more detail in Section 6.2.3 where anticipated highway volumes and LOS for the No Build Alternative are presented.

6.2.2.2 Local Roadways and Intersections

In addition to regional travel functions, the roadways described above, in combination with other roads, provide local circulation within the project corridor. For local travel, intersection operations are a key performance factor. Local transportation facilities in the corridor's activity centers are summarized in the following sections. Particular attention is given to roadways and intersections in the vicinity of proposed stations.

A. Falls Church

Falls Church is located at the eastern end of the Dulles Corridor. In addition to several of the regional roadways discussed earlier, the following major local roadways serve this activity center:

- **Sycamore Street** – Four-lane collector road adjacent to the East Falls Church Metrorail Station, connecting the residential areas of North Arlington with Falls Church;
- **Route 29 (Lee Highway)** – Four-lane east-west roadway serving this portion of the corridor serving as an alternative to I-66;

- **Haycock Road** – Four-lane minor arterial linking Route 29 and Westmoreland Street. The West Falls Church Metrorail Station entrance is off of Haycock Road; and
- **Great Falls Street** – Two-lane minor arterial that intersects Haycock Road and runs to the north and east of the West Falls Church Metrorail Station.

Key intersections in the area of the West Falls Church station currently operate at an acceptable range from LOS A and B with one LOS C in the p.m. peak period. Future traffic growth for the No Build Alternative will result in deteriorating traffic conditions in the area. In 2025, intersection a.m. peak LOS would range from A to E and p.m. peak LOS would range from A to F.

B. Tysons Corner

Tysons Corner is the primary activity center in the Dulles Corridor and the second largest employment center in the Washington metropolitan region. The internal roadway network in Tysons Corner is generally circuitous as opposed to a typical urban grid network. Vehicular access into and out of Tysons Corner is limited to six intersections and interchanges:

- Route 123 at the Dulles Connector Road;
- I-495 at Route 123;
- Route 123 at Route 7;
- Spring Hill Road at the DIAAH and Dulles Toll Road;
- Route 7 at the DIAAH and Dulles Toll Road; and
- Gallows Road at Old Courthouse Road.

The major local roadways within Tysons Corner are summarized below:

- **International Drive** – Six-lane north-south minor arterial linking central Tysons Corner (and two regional shopping malls) with the Dulles Toll Road;
- **Westpark Drive** – Semi-circumferential four-lane minor arterial linking Route 7 on the west with the northeast quadrant of the Tysons Corner area;
- **Tysons Boulevard** – Four to six-lane north-south local road linking the two shopping malls and providing a bypass to the International Drive/Route 123 intersection. The Tysons Boulevard/Route 123 intersection features Virginia's first three-lane left turn movement;
- **Spring Hill Road** – Two to four-lane minor arterial linking International Drive with Route 7, planned for expansion to four lanes along entire length of facility by 2005; and
- **Tyco Road** – Four-lane local roadway connecting Spring Hill Road with Route 7 to the northwest.

The majority of key intersections on the roadway network within the heart of Tysons Corner currently operate at generally poor LOS, with associated high delay. Generally, future growth in traffic in the area in the No Build Alternative resulting from increased development will lead to increases in delay and deteriorating LOS in 2025, even for intersections that operate fairly efficiently today. In instances where an intersection fails today, continued growth in traffic will typically result in significantly increased delays in 2025 compared to the delays that exist today.

C. Reston, Herndon, and Dulles Corner

In the mid-section of the Dulles Corridor, arterials and collectors generally run north-south and east-west, while the clustered residential development in the area results in circuitous local street networks. This section of the corridor includes the following major local roadways:

- **Wiehle Avenue** – Two to four-lane minor arterial currently connecting Sunrise Valley Road south of the Dulles Toll Road with Fairfax County Parkway near Route 7. Wiehle Avenue is being extended west to Dranesville Road;
- **Sunset Hills Road** – Four-lane minor arterial north of, and running parallel to, the Dulles Toll Road between Hunter Mill Road and Fairfax County Parkway;
- **Sunrise Valley Drive** – Four-lane minor arterial south of, and running parallel to, the Dulles Toll Road between Hunter Mill Road and Monroe Street, where it changes names and becomes Fox Mill Road. East of Route 28, the road becomes Horsepen Road;
- **Reston Parkway** – Four to six-lane minor arterial north-south roadway linking Reston communities with the Reston Town Center and other large developments;
- **Monroe Street/Van Buren Street** – Two- to four-lane collector connecting Herndon with western Fairfax County neighborhoods south of the Dulles Toll Road (and just west of the Herndon-Monroe park-and-ride lot). Monroe Street is assumed to be widened to six lanes between Sunrise Valley Drive/Fox Mill Road and Herndon Parkway by 2010; and
- **Centreville Road/Elden Street** – Four-lane minor arterial connecting western Fairfax County neighborhoods south of the Dulles Toll Road with Herndon (where it is named Elden Street). A one-half mile section between Worldgate and Herndon Parkway is assumed for expansion from four to six lanes by 2010.

Most of the major intersections in the Reston, Herndon, and Dulles Corner portion of the corridor currently operate at failing conditions, while some of the area intersections with lower volumes operate at reasonable Levels of Service (LOS B and C). In nearly every instance, future growth in the area under the No Build Alternative will result in deteriorating intersection operations in 2025. For those intersections that are currently failing, delay will increase in the future while those intersections that currently have reasonable operations will generally experience increased delay and in some instances poorer Levels of Service.

D. Dulles Airport

Dulles Airport is located southwest of the interchange for the DIAAH and Dulles Toll Road, the Dulles Greenway, and Route 28. These roadways converge at Dulles Airport, and access to the airport is provided through a diamond interchange with loop access to the eastbound and westbound Dulles Toll Road and DIAAH. Flyover access from northbound Route 28 is provided to Dulles Airport.

E. Eastern Loudoun County

Loudoun County, at the western end of the corridor, is currently rural in nature, with limited, but increasing, commercial and residential development and a somewhat limited local roadway network. Local roadways within the Loudoun County portion of the Dulles Corridor are identified below:

- **Route 606** – Four-lane arterial connecting southeastern Loudoun County with Herndon and northern Fairfax County;
- **Route 789** – Two-lane local road connecting Route 606 with Moran Road. Route 789 is planned for widening to four lanes and an extension north to Ashburn by 2010; and
- **Route 772** – Two-lane local road running south from the Dulles Greenway.

The key existing intersection of Route 606 and Route 789 in the vicinity of the Loudoun County stations currently operates at a LOS B. Future operations in the No Build Alternative deteriorate to Level of Service F due to significant traffic growth associated with increased development.

6.2.3 LONG-TERM EFFECTS

The implementation of the Wiehle Avenue Extension and the full LPA (and the provision or expansion of park-and-ride and Kiss & Ride facilities) would result in increased traffic on local roadways around stations. Park-and-ride and Kiss & Ride facilities are provided at these stations. Stations located in the central business district type environments would have substantially fewer passengers accessing the station via automobile resulting in minimal impacts to traffic in the areas adjacent to those types of stations. Although the full LPA is not expected to substantially affect the operation of regional highway facilities or roadways outside of station areas, it would provide travel options and help to increase overall mobility in the corridor, the counties, and the region.

This section presents the anticipated long-term effects of the No Build Alternative, the Wiehle Avenue Extension, and the full LPA on regional and corridor roadways. Forecast levels of service and delay are discussed for each roadway link and intersection.

6.2.3.1 Regional Highway Operations

LOS is typically used to describe the operation of roadway facilities. LOS is a qualitative measure that describes the flow of vehicles along freeways and arterials, and the apparent ease of movement through intersections. In general, LOS reflects the impacts of congestion experienced by vehicles traveling along a road or through an intersection. This delay reflects a combination of factors, such as speed, travel time, traffic interruptions, and driving comfort. In its *Highway Capacity Manual* (2000), the Transportation Research Board defines LOS characteristics and conditions for multilane highways and freeways. These characteristics are summarized in Table 6.2-1.

Six letter designations (A through F) are used to represent different levels of service. LOS A typically reflects free flow conditions, while LOS B and LOS C are generally considered declining, but acceptable, traffic conditions. LOS D represents moderate delays. LOS E represents traffic volumes approaching the capacity of the roadway, and LOS F reflects stop-and-go, near-gridlock traffic conditions.

Table 6.2-1: Multilane Highway and Freeway Level of Service Characteristics

LOS	Speed Characteristics	Multilane Highway Conditions	Freeway Conditions
A	Free-flow speeds	Uncongested or no delay	Uncongested or no delay
B	Free-flow speeds	Reasonably unimpeded flow Presence of other vehicles a noticeable influence on ability to maneuver	Reasonably unimpeded flow Maneuverability is slightly restricted
C	At or near free-flow speeds	Moderately congested Other vehicles a strong influence, ability to maneuver is noticeably restricted	Moderately congested Maneuverability is noticeably restricted, significant incidents could cause queues
D	Speeds are reduced moderately	Congested Ability to maneuver severely restricted	Congested Ability to maneuver more restricted, psychological comfort reduced, minor incidents expected to cause queues
E	Speeds highly variable and can be greatly reduced	Very congested Queues can form readily	Very congested Vehicles closely spaced, ability to maneuver severely restricted, poor psychological comfort, minor incidents will cause extensive queuing

LOS	Speed Characteristics	Multilane Highway Conditions	Freeway Conditions
F	Very low speeds, many vehicles stopped, flow likely to be stop-and-go	Severely congested, gridlock	Severely congested, gridlock

Source: Transportation Research Board, *Highway Capacity Manual* (2000).

For analysis of freeways and multilane highways, LOS reflects the density of vehicles on the facility as well as average travel speeds. Traffic operations on multilane and arterial highways are slightly different than those on freeways because freeway access is controlled and access is allowable only at interchanges, freeways have higher design standards, whereas multi-lane/arterial highways may have traffic signals. Vehicles entering or leaving the road at intersections and driveways will affect traffic flow on multi-lane and arterial highways.

The 2025 peak-hour volumes and levels of service (LOS) on selected highway links throughout the Dulles Corridor are shown in Table 6.2-2 for the No Build Alternative, the Wiehle Avenue Extension, and the full LPA.

Table 6.2-2: Peak-Hour Traffic Volumes and Levels of Service on Selected Highway Links

				Locally Preferred Alternative					
		No Build Alternative (2025)		Wiehle Avenue Extension (2011)		Wiehle Avenue Extension (2025)		Full LPA (2025)	
Highway Link	Location	LOS	Peak-Hour Volume	LOS	Peak-Hour Volume	LOS	Peak-Hour Volume	LOS	Peak-Hour Volume
I-66 Eastbound	Route 29 to Dulles Connector Road	F	6,900	F	5,900	F	6,900	F	6,900
Dulles Connector Road Westbound		F	6,200	F	4,600	F	5,800	F	5,700
I-495 Northbound	Route 7 to Route 123	E	7,800	E	6,900	E	7,700	E	7,700
	HOV lane	D	1,500	D	1,300	D	1,500	D	1,500
Dulles International Airport Access Highway Eastbound	At Route 7	D	4,100	B	2,400	C	3,900	C	3,800
Dulles Toll Road Eastbound	Hunter Mill Road to Reston Parkway	F	7,100	E	6,300	F	7,300	F	7,300
	HOV lane	C	1,200	C	1,200	C	1,200	C	1,200
Route 50*	Fairfax County Parkway and Route 28	F	8,300	D	7,100	F	8,200	F	8,200
Route 28*	Dulles Toll Road and Route 606	D	6,600	C	5,100	D	6,600	D	6,600
Dulles Greenway Eastbound	Route 772 to Route 659	F	8,100	D	6,800	F	8,100	F	8,100

NOTE: HOV – High Occupancy Vehicle lane(s)
*Direction not specified by VDOT.

In 2025, the full LPA would result in similar traffic volumes on regional routes to the No Build Alternative. Most of the routes shown in Table 6.2-3 would only experience slight decreases in traffic for the full LPA. Only the DIAAH would experience a decrease in traffic large enough to result in an improved level of service. Similarly, the Wiehle Avenue Extension is expected to have a negligible impact on regional highway volumes.

Given that the change in traffic volumes for the Wiehle Avenue Extension and the full LPA is small, it is expected that the increase in transit ridership associated with the Wiehle Avenue Extension and the full LPA would have very little effect on vehicle-trip reduction at the regional level. However, implementation of the full LPA would increase overall transportation capacity in the corridor, permitting the movement of more people without requiring for additional highway capacity.

6.2.3.2 Local Traffic Operations

Projected delays at key intersections in the corridor and the corresponding LOS were assessed for 2025, the forecast year for the full LPA and 2011, the opening year for the Wiehle Avenue Extension to determine the anticipated effects of the full LPA on local traffic operations. All intersection delay has been rounded to the nearest whole number. Due to the nature of intersections, travelers are bound to experience some delay at intersections; even during uncongested conditions.

For signalized intersections, the *Highway Capacity Manual* (2000) defines delay thresholds associated with each LOS. Intersection delay includes dwell (stop) time as well as the time associated with acceleration and deceleration at the signal. This measure is intended to reflect driver frustration, fuel consumption, and increased travel time. The delay time represented by each LOS and a qualitative assessment of conditions under each LOS is summarized in Table 6.2-3.

Table 6.2-3: Signalized Intersection Level of Service Characteristics

Level of Service	Intersection Conditions	Average Delay (seconds/vehicle)
A	Uncongested or no delay (Few vehicles stop)	0 – 10
B	Reasonably unimpeded flow (Some vehicles stop)	10 – 20
C	Moderately congested (Significant number of vehicles stop, possible that a few vehicles sit through cycle more than once)	20 – 35
D	Congested (Many vehicles stop, a noticeable number of vehicles sit through cycle more than once)	35 – 55
E	Very congested (Nearly all vehicles will stop, vehicles frequently have to sit through cycle more than once)	55 – 80
F	Severely congested (Gridlock)	> 80

Source: Transportation Research Board, Highway Capacity Manual (2000).

It is important to emphasize that LOS for signalized intersections represents average delay per vehicle. While individual vehicles may experience delays greater than the maximum indicated above for a given LOS, on average, the delay falls within these ranges.

Given the large number of key intersections in the Dulles Corridor, the results of the local traffic analysis are presented below by geographic corridor section. The intersections included in the traffic analyses were selected based on their proximity to the proposed Metrorail stations, and would have the potential to experience the greatest impacts, if any, from the project.

Intersections operating at LOS D or better were considered to perform at an acceptable level of service, which is consistent with Fairfax County and VDOT guidelines for signalized intersections. Intersections that performed at LOS E or LOS F under the Wiehle Avenue Extension and the full LPA were determined to warrant mitigation if the delay time for the intersection was more than the delay experienced under the No Build condition by the greater of either five (5) seconds (or more) or five (5) percent greater than the No Build Alternative delay. In other words, delay at an LOS E or F intersection has to increase at least five (5) seconds to warrant mitigation; however, mitigation might not be required at an intersection with a delay increase of 15 or 20 seconds if that intersection experiences high levels of delay in the No Build condition. For example, if intersection delay increased from 385 seconds to 400 seconds, no mitigation was recommended because this 15-second increase is not greater than 5 percent of the No Build Alternative delay.

A. West Falls Church Station

The West Falls Church Metrorail Station is an existing Orange Line station located in the median of I-66, between the I-66/Route 7 and I-66/Dulles Connector Road interchanges. Private vehicle access to the West Falls Church Station is provided at an entrance just off Haycock Road. This station can also be accessed by the I-66 eastbound ramp. Route 7 is a principal arterial that provides access to Haycock Road from the west, while Great Falls Road is a minor arterial connecting to Haycock Road from the east. Intersections of these roadways were selected for the traffic impact analysis in this station area. In addition, the park-and-ride structure currently under development at West Falls Church Station was considered in the analysis as part of the No Build Alternative.

Table 6.2-4 presents the projected LOS and delay for key intersections in the vicinity of the West Falls Church Metrorail Station.

Table 6.2-4: West Falls Church Station Peak Hour Intersection LOS and Delay in Seconds

			Locally Preferred Alternative					
	No Build Alternative (2025)		Wiehle Avenue Extension (2011)		Wiehle Avenue Extension (2025)		Full LPA (2025)	
Primary Ro-adway/Cross Street	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay
Route 7/ Haycock Road	C/33	D/35	C/25	D/35	D/30	D/37	C/34	D/36
Haycock Road/ West Falls Church Station Parking Entrance	A/6	A/6	A/6	A/7	A/7	A/6	A/7	A/7
Great Falls Street/Haycock Road	E/62	F/98	E/57	F/88	E/60	F/94	E/57	F/91

NOTE: Underlined items meet the threshold at which mitigation should be considered.

The data in Table 6.2-4 show that the construction of either the Wiehle Avenue Extension or the full LPA would have almost no impact on level of service or delay at intersections around the West Falls Church Metrorail station. This minimal impact is based on the fact that no additional parking capacity will be available at the station after implementation of rail in the Dulles Corridor and therefore changes in traffic volumes resulting from implementation, and which would impact LOS and delay, would be marginal.

B. Tysons East Station

The Tysons East Station is the easternmost station for the Wiehle Avenue Extension and the full LPA. The Tysons East Station platform would be located on the north side of Route 123, east of Old Springhouse Road/Scott's Crossing. Off-street Kiss & Ride parking and curbside feeder bus facilities would be located on the south side of Route 123 along Colshire Drive, with additional curbside bus facilities located on the north side of Route 123. A pedestrian bridge spanning Route 123 would connect the south station facilities with the station platform.

Table 6.2-5 presents the projected LOS and delay for key intersections in the vicinity of the Tysons East Station.

Table 6.2-5: Tysons East Station Peak Hour Intersection LOS and Delay in Seconds

			Locally Preferred Alternative					
	No Build Alternative (2025)		Wiehle Avenue Extension (2011)		Wiehle Avenue Extension (2025)		Full LPA (2025)	
Primary Roadway/Cross Street	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay
Route 123/ Old Meadow Road	F/139	F/88	n.a.	n.a.	F/154	E/77	F/154	E/77
Colshire Drive/ Station Entrance	n.a.	n.a.	n.a.	n.a.	B/10	B/12	B/10	B/12
Route 123/ Anderson Road	D/41	C/33	n.a.	n.a.	D/47	D/36	D/47	D/36

NOTE: n.a. = not applicable – opening year analysis not conducted for station because minimal auto related facilities are planned

Underlined items meet the threshold at which mitigation should be considered.

The data in Table 6.2-5 show that traffic conditions will substantially deteriorate at two of the intersections analyzed at the Tysons East Station, under both the Wiehle Avenue Extension and the full LPA; Route 123, Old Meadow Road, Route 123 and Colshire Drive. A description of the mitigation measures proposed to address these impacts at these two intersections is outlined in Section 6.2.4.

C. Tysons Central 123 Station

The Tysons Central 123 Station would be located just west of Tysons Boulevard on the north side of Route 123. This station would have an aerial platform spanning Tysons Boulevard, and would have a pedestrian bridge over Route 123 to provide access to the Tysons Corner Center Mall (Tysons I). No park-and-ride or Kiss & Ride facilities would be provided at this station.

Table 6.2-6 presents the projected LOS and delay for key intersections in the vicinity of the Tysons Central 123 Station.

Table 6.2-6: Tysons Central 123 Station Peak Hour Intersection LOS and Delay in Seconds

	No Build Alternative (2025)		Locally Preferred Alternative					
			Wiehle Avenue Extension (2011)		Wiehle Avenue Extension (2025)		Full LPA (2025)	
Primary Roadway/Cross Street	**a.m. LOS/ Delay**	**p.m. LOS/ Delay**	**a.m. LOS/ Delay**	**p.m. LOS/ Delay**	**a.m. LOS/ Delay**	**p.m. LOS/ Delay**	**a.m. LOS/ Delay**	**p.m. LOS/ Delay**
International Drive/ Galleria Drive	A/2	A/2	n.a.	n.a.	A/2	A/2	A/2	A/2
International Drive/ Route 123 EB Ramp/ Local Road	C/22	C/31	n.a.	n.a.	C/22	2/28	C/22	C/28
International Drive/ Route 123 WB Ramp/ Local Road	C/27	C/29	n.a.	n.a.	C/27	C/29	C/27	C/29
Route 123/ Tysons Boulevard	C/29	F/215	n.a.	n.a.	D/35	F/185	D/35	F/185
Tysons Boulevard/ Galleria Drive	C/33	F/87	n.a.	n.a.	C/34	F/82	C/34	F/82
International Drive/ Fletcher Street	D/40	B/20	n.a.	n.a.	D/41	C/20	D/41	C/20
International Drive/ Route 7 SB Local Road	C/33	C/32	n.a.	n.a.	C/33	C/31	C/33	C/31
International Drive/ Route 7 NB Local Road	E/60	E/56	n.a.	n.a.	E/59	D/55	E/59	D/55

NOTES: n.a. = not applicable – opening year analysis not conducted for station because minimal auto related facilities are planned

Underlined items meet the threshold at which mitigation should be considered.

The data in Table 6.2-6 show that there would be almost no change in the Level of Service or delay at the analyzed intersections after implementation of either the Wiehle Avenue Extension or the full LPA. This marginal change in intersection operations is based on the fact that the primary mode of access this station is not by automobile, thus no parking or Kiss & Ride facilities will be developed at the station, and volumes on roadways around the station will remain generally consistent with the No Build Alternative.

D. Tysons Central 7 Station

The Tysons Central 7 Station would be located underground on the south side of Route 7; north of the Route 7/123 interchange, between Tysons Square Center and Pike 7 Plaza. Entrance pavilions would be provided on both sides of Route 7 and would be connected by a pedestrian bridge that spans the roadway. Park-and-ride and Kiss & Ride facilities would not be provided, and feeder and/or circulator bus service is not planned to serve this station. Table 6.2-7 presents the projected LOS and delay for key intersections in the vicinity of the Tysons Central 7 Station.

Table 6.2-7: Tysons Central 7 Station Peak Hour Intersection LOS and Delay in Seconds

Primary Roadway/Cross Street	No Build Alternative (2025)		Locally Preferred Alternative					
			Wiehle Avenue Extension (2011)		Wiehle Avenue Extension (2025)		Full LPA (2025)	
	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay
Route 7 SB Ramp/ Local Road/ Route 123 EB Ramp/ Local Road	B/13	B/14	n.a.	n.a.	B/13	B/14	B/13	B/14
Route 7 NB Ramp/ Local Road/ Route 123 EB Ramp/Local Road	B/17	B/18	n.a.	n.a.	B/17	B/17	B/17	B/17
Route 7 SB Ramp/ Local Road/ Route 123 WB Ramp/Local Road	C/23	B/21	n.a.	n.a.	C/22	B/20	C/22	B/20
Route 7 NB Ramp/ Local Road/ Route 123 WB Ramp/Local Road	C/22	C/22	n.a.	n.a.	C/21	C/21	C/21	C/21
Route 7 SB Local Road/ West Park Drive	E/71	D/42	n.a.	n.a.	E/57	D/36	E/57	D/36
Route 7 NB Local Road/ West Park Drive	E/62	D/38	n.a.	n.a.	D/48	C/32	D/48	C/32

NOTE: n.a. = not applicable – opening year analysis not conducted for station because minimal auto related facilities are planned.
Underlined items meet the threshold at which mitigation should be considered.

The data in Table 6.2-7 show that there would be almost no change in LOS or delay at the analyzed intersections after implementation of either the Wiehle Avenue Extension or the full LPA. As with the Tysons Central 123 Station, this minimal change is based on the fact that no parking or Kiss & Ride facilities will be developed at the station.

E. Tysons West Station

The Tysons West Station will be located above ground on the west side of Route 7 between Tyco and Spring Hill Roads. Entrance pavilions would be provided on both sides of Route 7, with the east side of Route 7 connected to the station via a pedestrian bridge. A Kiss & Ride and bus bays would located on the east side of Route 7, between Tyco Road and Spring Hill Road. Access to the bus facility will be via Tyco Road.

Table 6.2-8 presents the projected LOS and delay for key intersections in the vicinity of the Tysons West Station.

Table 6.2-8: Tysons West Station Peak Hour Intersection LOS and Delay in Seconds

Primary Roadway/Cross Street	No Build Alternative (2025)		Locally Preferred Alternative					
			Wiehle Avenue Extension (2011)		Wiehle Avenue Extension (2025)		Full LPA (2025)	
	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay
Route 7/Dulles Toll Road EB Ramp	A/5	A/4	A/7	A/5	A/7	A/5	A/7	A/5
Route 7/ Dulles Toll Road WB Ramp	C/25	C/25	D/41	C/28	D/41	C/28	D/41	C/28
Route 7/Tyco Road	F/230	F/385	F/185	F/195	F/186	F/192	F/190	F/202

Primary Roadway/Cross Street	No Build Alternative (2025)		Locally Preferred Alternative					
			Wiehle Avenue Extension (2011)		Wiehle Avenue Extension (2025)		Full LPA (2025)	
	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay
Tyco Road/Station Entrance	n.a.	n.a.	A/7	A/6	A/7	A/6	A/7	A/6
Route 7/Spring Hill Road	F/314	F/467	E/77	E/146	E/84	F/135	E/84	F/135

Underlined items meet the threshold at which mitigation should be considered.

The data in Table 6.2-8 show that traffic conditions will remain the same or actually improve after implementation of either the Wiehle Avenue Extension or the full LPA. Level of Service will deteriorate marginally at the intersection of Route 7 and the westbound ramp to the toll road, but the marginal impacts do not warrant additional mitigation, especially given the very poor intersection operations conditions at adjoining intersections.

F. Wiehle Avenue Station

The Wiehle Avenue station in both the Wiehle Avenue Extension and the full LPA would be located in the median of the DIAAH, just west of the Wiehle Avenue overpass. Pedestrian bridges spanning the DIAHH would connect the north and south side station facilities with the station platform. A large park and ride facility would be located on the north side of the station. Also located on the north side will be a large bus facility and Kiss & Ride facilities. For Wiehle Avenue Extension, Wiehle Avenue will be the terminal station for rail and thus will be handling very large volumes of bus traffic coming from locations to the west of the station. This will require a bus intermodal facility on the north side of the station as well as a bus facility located adjacent to the eastbound exit ramp from the Dulles Toll Road to Wiehle Avenue. The north side bus facility will have a dedicated bus access lane from Wiehle Avenue to separate buses from general traffic. The north side bus facility will also have direct access to the westbound entrance ramp to the Dulles Toll Road. The LOS and delay figures outlined below in Table 6.2-9 reflect the Wiehle Avenue Extension bus operations.

Table 6.2-9: Wiehle Avenue Station Peak Hour Intersection LOS and Delay in Seconds

Primary Roadway/Cross Street	No Build Alternative (2025)		Locally Preferred Alternative					
			Wiehle Avenue Extension (2011)		Wiehle Avenue Extension (2025)		Full LPA (2025)	
	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay
Wiehle Avenue/Dulles Toll Road WB Ramp	C/25	C/22	C/23	C/22	D/39	C/32	D/45	C/25
Wiehle Avenue/ Dulles Toll Road EB Ramp	C/25	C/21	C/24	C/21	D/37	C/25	D/35	C/22
Wiehle Avenue/Station Entrance	C/21	D/50	D/43	E/59	D/47	E/58	D/36	E/80
Wiehle Avenue/Sunset Hills Road	E/62	F/148	E/68	F/144	E/67	F/152	E/79	F/153
Wiehle Avenue/Sunrise Valley Drive	E/75	D/50	F//104	E/62	F/86	E/66	F/85	E/64

NOTES: Underlined items meet the threshold at which mitigation should be considered.

Park-and-ride, Kiss & Ride, and express bus (for the Wiehle Avenue Extension only) demand at Wiehle would lead to increased traffic volumes, increased delay, and declining Levels of Service at intersections in the vicinity of the station in both the Wiehle Avenue Extension and the full LPA. For the Wiehle Avenue/Sunset Hills Road, the Wiehle Avenue/Sunrise Valley Drive, and station entrance, the impacts would be significant enough to warrant mitigation. Proposed mitigation strategies for Wiehle Avenue are included in Section 6.2.4.

G. Reston Parkway

The Reston Parkway station would be located in the median of the DIAAH, just west of the Reston Parkway overpass. Pedestrian bridges spanning the DIAAH would connect the north and south side station facilities with the station platform. Kiss & Ride and bus access would be provided on both sides of the DIAAH and Dulles Toll Road. On the north side, facilities would be located along eastbound Sunset Hills Road, east of Town Center Parkway. Access to the south side facility would be provided at the north end of Edmund Halley Drive. Table 6.2-10 presents the projected LOS and delay for key intersections in the vicinity of the Reston Parkway Station.

Table 6.2-10: Reston Parkway Avenue Station Peak Hour Intersection LOS and Delay in Seconds

			Locally Preferred Alternative					
	No Build Alternative (2025)		Wiehle Avenue Extension (2011)		Wiehle Avenue Extension (2025)		Full LPA (2025)	
Primary Roadway/Cross Street	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay
Reston Parkway/Dulles Toll Road WB Ramp	F/119	F/117	n.a.	n.a.	n.a.	n.a.	F/106	F/119
Reston Parkway/Dulles Toll Road EB Ramp	F/100	C/22	n.a.	n.a.	n.a.	n.a.	F/102	D/36
Reston Parkway/Sunset Hills Road	E/78	F/98	n.a.	n.a.	n.a.	n.a.	F/82	F/100
Reston Parkway/Sunrise Valley Drive	F/216	F/207	n.a.	n.a.	n.a.	n.a.	F/218	F/209
Reston Parkway/Town Center Parkway	C/24	F/98	n.a.	n.a.	n.a.	n.a.	C/26	F/99
Sunset Hills Road/Future North Station Entrance	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	B/16	A/6
Edmund Haley Drive/Future South Station Entrance	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	B/11	B/11

NOTES: n.a. = not applicable – station exists only in full LPA

Underlined items meet the threshold at which mitigation should be considered.

The majority of the intersections in the vicinity of the Reston Parkway Station that were analyzed for traffic impacts will be failing in the 2025 No Build Alternative, and the implementation of the full LPA will have minimal additional impact on all but two of these intersections. The two intersections where a deterioration in LOS and increased delay will occur after implementation of the full LPA are at the intersections of Reston Parkway and the Dulles Toll Road eastbound and westbound exit ramps. Proposed mitigation strategies for are discussed in 6.2.4.

H. Herndon-Monroe Station

The Herndon-Monroe station would be located at the site of the present Herndon-Monroe park-and-ride lot, off of Sunrise Valley Drive and just east of the Van Buren/Monroe Street overpass. The station would

be located in the median of the DIAAH, with entrance pavilions provided on both sides of the roadway. These would be connected to the station by pedestrian bridges over the Dulles Toll Road and the DIAAH. On the north side of the Dulles Toll Road, a sidewalk would be constructed to provide direct access to the north side entrance pavilion from Herndon Parkway. On-street bus bays are planned for this location but no Kiss & Ride facilities are planned. Table 6.2-11 presents the projected LOS and delay for key intersections in the vicinity of the Herndon-Monroe Station.

Table 6.2-11: Herndon-Monroe Station Peak Hour Intersection LOS and Delay in Seconds

			Locally Preferred Alternative					
	No Build Alternative (2025)		Wiehle Avenue Extension (2011)		Wiehle Avenue Extension (2025)		Full LPA (2025)	
Primary Roadway/Cross Street	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay
Fairfax County Parkway/Dulles Toll Road WB Ramp	C/31	D/46	n.a.	n.a.	n.a.	n.a.	C/34	E/67
Fairfax County Parkway/Dulles Toll Road EB Ramp	D/39	E/59	n.a.	n.a.	n.a.	n.a.	D/39	E/70
Fairfax County Parkway/Spring Street/Sunset Hills Road	B/11	C/21	n.a.	n.a.	n.a.	n.a.	B/11	C/21
Fairfax County Parkway/Sunrise Valley Drive	F/164	F/95	n.a.	n.a.	n.a.	n.a.	F/168	F/107
Herndon Parkway/Spring Street/Sunset Hills Road	C/33	F/114	n.a.	n.a.	n.a.	n.a.	D/41	F/116
Herndon Parkway/Monroe Street/Van Buren Street	D/58	E/76	n.a.	n.a.	n.a.	n.a.	E/61	F/93
Sunrise Valley Drive/Monroe Street	E/74	D/44	n.a.	n.a.	n.a.	n.a.	F/107	E/76
Sunrise Valley Drive/Roark Drive (H-M park-and-ride Entrance)	B/11	B/10	n.a.	n.a.	n.a.	n.a.	D/43	C/28
Worldgate Drive/Van Buren Street	B/15	C/22	n.a.	n.a.	n.a.	n.a.	B/18	C/26

NOTES: n.a. = not applicable – station exists only in full LPA

Underlined items meet the threshold at which mitigation should be considered.

Park-and-ride and Kiss & Ride demand at Herndon-Monroe will lead to increased traffic volumes, increased delay, and declining Levels of Service at a number of intersections in the vicinity of the station in the full LPA. Impacts at the following intersections would be significant enough to warrant mitigation:

- Fairfax County Parkway/Dulles Toll Road Westbound Ramp;
- Fairfax County Parkway/Dulles Toll Road Eastbound Ramp;
- Fairfax County Parkway/Sunrise Valley Drive;
- Herndon Parkway/Monroe Street/Van Buren Street; and
- Sunrise Valley Drive/Monroe Street.

Proposed mitigation strategies for these intersections are discussed in section 6.2.4.

I. Route 28 Station

The Route 28 Station would be located in the median of the DIAAH, midway between Centreville Road/Elden Street and Route 28. Station entrance pavilions would be located on the north and south sides of the DIAAH, with a pedestrian bridge connecting each to the station platform. On the north side, a small Kiss & Ride and bus transfer facility would be built to provide access to the station from Herndon

and Sterling. On the south side, a park-and-ride, and bus transfer facility would be constructed. Table 6.2-12 presents the projected LOS and delay for key intersections in the vicinity of the Route 28 Station.

Table 6.2-12: Route 28 Station Peak Hour Intersection LOS and Delay in Seconds

			Locally Preferred Alternative					
	No Build Alternative (2025)		Wiehle Avenue Extension (2011)		Wiehle Avenue Extension (2025)		Full LPA (2025)	
Primary Roadway/Cross Street	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay
Centreville Road/Worldgate Drive	D/41	E/64	n.a.	n.a.	n.a.	n.a.	D/42	E/64
Centreville Road/Dulles Toll Road – WB Ramp	F/130	F/142	n.a.	n.a.	n.a.	n.a.	F/125	F/154
Centreville Road/Dulles Toll Road – EB Ramp	F/102	C/27	n.a.	n.a.	n.a.	n.a.	F/116	C/23
Centreville Road/Sunrise Valley Drive	D/54	E/79	n.a.	n.a.	n.a.	n.a.	D/53	E/56
Sunrise Valley Drive/South Station Entrance	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	B/15	C/21
Herndon Parkway/Centreville Road	F/99	F/110	n.a.	n.a.	n.a.	n.a.	F/107	F/197

NOTES: n.a. = not applicable – station exists only in full LPA

Underlined items meet the threshold at which mitigation should be considered.

Park-and-ride and Kiss & Ride demand at Route 28 will lead to increased traffic volumes, increased delay, and declining Levels of Service at a number of intersections in the vicinity of the station in the full LPA. Impacts at the following intersections would be significant enough to warrant mitigation with the implementation of the full LPA.

- Centreville Road/Dulles Toll Road – Westbound Ramp;
- Centreville Road/Dulles Toll Road – Eastbound Ramp; and
- Herndon Parkway/Centreville Road.

Proposed mitigation strategies for these intersections are discussed in section 6.2.4.

J. Dulles Airport Station

A formal traffic analysis for the full LPA was not performed for the Dulles Airport station area because the proposed station at the airport would not have any project-related park-and-ride or Kiss & Ride activity.

K. Route 606 Station

The Route 606 Station will be located in the median of the Dulles Greenway, just to the west of the Route 606 overpass. A pedestrian bridge spanning the westbound lanes of the Dulles Greenway would connect the median mezzanine with feeder bus facilities Kiss & Ride, and park-and-ride facilities and parking. Table 6.2-13 presents the projected LOS and delay for key intersections in the vicinity of the Route 606 Station.

Table 6.2-13: Route 606 Station Peak Hour Intersection LOS and Delay in Seconds

Primary Roadway/Cross Street	No Build Alternative (2025)		Locally Preferred Alternative					
			Wiehle Avenue Extension (2011)		Wiehle Avenue Extension (2025)		Full LPA (2025)	
	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay
Route 606/Route 789	C/21	C/24	n.a.	n.a.	n.a.	n.a.	E/56	F/89
Route 789/North Station Entrance	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	B/19	B/12
South Station Entrance	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	B/11	B/17

NOTES: n.a. = not applicable – station exists only in full LPA

Underlined items meet the threshold at which mitigation should be considered.

Traffic operations at one intersection in the vicinity of the Route 606 Station will deteriorate under the full LPA. Proposed mitigation strategies for this intersection are discussed in section 6.2.4.

L. Route 772 Station

The Route 772 Station will be located in the median of the Dulles Greenway, east of the Route 772 overpass. Pedestrian bridges spanning the Dulles Greenway would connect the median platform with feeder bus, Kiss & Ride and park-and-ride facilities. Table 6.2-14 presents the projected LOS and delay for key intersections in the vicinity of the Route 772 Station.

Table 6.2-14: Route 772 Station Peak Hour Intersection LOS and Delay in Seconds

Primary Roadway/Cross Street	No Build Alternative (2025)		Locally Preferred Alternative					
			Wiehle Avenue Extension (2011)		Wiehle Avenue Extension (2025)		Full LPA (2025)	
	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay	a.m. LOS/ Delay	p.m. LOS/ Delay
North Side Facility: Station Access Road/Station Entrance	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	A/5	A/8
South Side Facility: Station Access Road/Station Entrance	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	C/24	B/15

NOTES: n.a. = not applicable – station exists only in full LPA

Underlined items meet the threshold at which mitigation should be considered.

Intersections in the vicinity of the station will operate at acceptable levels of service and therefore no mitigation is required.

6.2.4 MITIGATION

6.2.4.1 Station Access

To ensure adequate vehicular access to station areas, the following roadway improvements specified in the General Plans would be constructed under the Wiehle Avenue Extension and the full LPA.

A. Wiehle Avenue Extension

At the Tysons Central 123 station, a dedicated right turn lane for buses on Tysons Boulevard and acceleration lane on Route 123 would be added.

At the Wiehle Avenue station, a new left turn lane northbound on Wiehle Avenue, a new left turn lane to eastbound Dulles Toll Road exit ramp at Wiehle Avenue, and a new acceleration lane for bus egress from station facilities onto the westbound Dulles Toll Road would be added. Westbound Sunset Hills Road between Wiehle Avenue and Isaac Newton Square would be widened and a left turn lane would be provided. The private roadway south of Sunset Hills Road would be improved to VDOT standards.

B. Full LPA

In addition to the access improvements constructed as part of the Wiehle Avenue Extension, the full LPA would include additional left turn lanes to northbound Route 789 at both north and south station entrances at the Route 606 station. A right turn lane and left turn lanes on Route 606 for vehicular access to yard facilities would be added at S&I Yard Site 15.

6.2.4.2 Station Vicinity

To mitigate long-term effects on traffic in the vicinity of proposed Metrorail stations, these additional roadway improvements would be constructed before the opening of the Wiehle Avenue Extension and the full LPA.

A. Wiehle Avenue Extension

A second left turn lane from Old Meadow Drive to southbound Route 123 would be added at Tysons East. At Wiehle Avenue, the right turn lane (dual or free-flow) from eastbound Sunset Hills Road to southbound Wiehle Avenue, and the right turn lane (dual or free-flow) from westbound Sunrise Valley Drive to northbound Wiehle Avenue, would be improved.

B. Full LPA

For the Reston Parkway station, an additional northbound through lane on Reston Parkway at Sunrise Valley Drive intersection would be constructed, and the right turn lane (dual or free-flow) from southbound Reston Parkway to westbound Sunrise Valley Drive would be improved.

At the Herndon-Monroe station, a left turn lane from southbound Monroe Street to eastbound Sunrise Valley Drive would be added; and the right turn lane (dual or free-flow) from eastbound Sunrise Valley Drive to southbound Fairfax County Parkway would be improved. The lane configurations at the Van Buren (Monroe) Street and Herndon Parkway intersection would be modified.

An additional right turn lane from southbound Route 789 to westbound Route 606 would be constructed at the Route 606 station.

Additional intersection improvements in the vicinity of stations would be needed by 2025, as presented in the Traffic Analysis Technical Report.

6.2.4.3 Construction Activities

To mitigate the effects of construction related traffic management and detours, DRPT would prepare maintenance of traffic plans. In addition, DRPT will make all efforts to maintain access (pedestrian and vehicular) to existing businesses during construction. Existing access points would be used to the extent possible. If alternative access is required, signage and detours will be provided. DRPT would maintain communication with affected businesses and residents in order to minimize construction effects. The

development of mitigation measures for construction activities would be coordinated with VDOT for Commonwealth-owned roadways and MWAA for the Dulles Airport property, including the DIAAH.

6.3 EFFECTS ON OTHER TRANSPORTATION FACILITIES AND SERVICES

Other transportation facilities and services in the corridor include parking, bicycle and pedestrian facilities, and air transportation service. This section provides a brief description of these transportation facilities and services in the Dulles Corridor, and also documents the potential effects of the Wiehle Avenue Extension and the full LPA on these services and facilities. Section 6.3.1 describes the existing and planned parking, bicycle and pedestrian facilities, and air transportation facilities in the corridor. Section 6.3.2 presents the anticipated long-term effects associated with the No Build Alternative, the Wiehle Avenue Extension and the full LPA. Section 6.3.3 provides an overview of the expected effects on other transportation facilities and services during construction of the Wiehle Avenue Extension and the full LPA, and Section 6.3.4 presents proposed mitigation measures for any anticipated adverse effects.

6.3.1 EXISTING AND PLANNED FACILITIES AND SERVICES

6.3.1.1 Parking

Several public park-and-ride facilities are located within the Dulles Corridor. Table 6.3-1 identifies each of the public parking facilities designed to facilitate use of public transportation and/or ridesharing in the corridor.

Table 6.3-1: Park-and-Ride Facilities in the Dulles Corridor

	Park-and-Ride Facilities	Owner/ Operator	Daily Cost	Number of Spaces	Usage Rate (2000)	Connecting Services
1	East Falls Church Metrorail Station	WMATA	$3.75	385	100.0%	Metrobus
2	West Falls Church Metrorail Station	WMATA	$3.75	1,037	100.0%	Metrobus, Fairfax Connector, Washington Flyer
3	West Falls Church Metrorail Station (overflow parking)	Virginia Tech/ University of Virginia	$3.75	275	100.0%	Metrobus, Fairfax Connector, Washington Flyer
4	Reston East (Wiehle Avenue)	Fairfax County	Free	827 (2,300)*	100.0%	Fairfax Connector, RIBS
5	Reston North (Overflow parking for Reston East)	VDOT	Free	320	28.4%	Fairfax Connector, RIBS
6	Reston South	Fairfax County	Free	400	42.3%	Fairfax Connector, RIBS
7	Herndon-Monroe	Fairfax County	Free	1,745	47.2%	Fairfax Connector, RIBS
8	Dulles North	Loudoun County	Free	750	31.6%**	Loudoun County Community Bus Service
Total Capacity				**5,739** **(7,212)***		

NOTES: See Figure 6.1-1 for locations
* Planned total number of spaces by 2010. ** For Year 2002
Source: WMATA, Fairfax County, VDOT, and CTC.

Except for the two overflow facilities, each of the park-and-ride lots also provides Kiss & Ride areas. In the No Build Alternative, it is assumed that the Reston East Park-and-Ride at Wiehle Avenue will expand from 827 spaces to a total of 2,300 spaces by 2010, resulting in a baseline parking capacity of 7,212 spaces through 2025. A park-and-ride structure at West Falls Church Station is also being constructed by Fairfax County and WMATA. No other changes to the existing park-and-ride lots in the corridor are anticipated.

Non-transit-related parking systems in the Dulles Corridor are typical of other suburban environments. Off-street parking is provided at most major office complexes and retail facilities within the corridor. Surface parking is most typical. Structured parking is increasing, particularly in Tysons Corner. Reston Town Center also contains large multi-level parking garages. Parking is generally free at office and retail developments within the corridor. However, some businesses in Tysons Corner are beginning to charge employees for parking as the value of these spaces increases. It is expected that the amount of paid parking in Tysons Corner will continue to increase. Dulles Airport recently added 8,500 parking spaces as part of its six-year expansion plans.

6.3.1.2 Bicycle and Pedestrian Facilities

The pedestrian environment varies within the corridor. Most roads in Tysons Corner have sidewalks, although the character of existing development and topography discourage walking. Residential areas in Reston are typically served by a system of trails linking neighborhood clusters. Commercial areas are generally equipped with adequate pedestrian facilities to support internal circulation, although pedestrian linkages between developments are usually poor. Eastern Loudoun County is less developed, and there are currently no pedestrian facilities within proposed station areas. A detailed inventory of pedestrian facilities in the corridor is provided in the *Traffic Analysis and Station Access Study* (August 2004).

The Dulles Corridor includes approximately 25 miles of the 45-mile Washington & Old Dominion Railroad Regional Park (commonly known as the W&OD Trail). The park consists of a 100-foot wide right-of-way reserved for recreational use, and extends from just west of Interstate 395 in south Arlington to Purcellville in central Loudoun County. Within the corridor, the W&OD Trail runs along I-66 adjacent to the East Falls Church Metrorail Station and continues west through Falls Church, Vienna, and Reston. The trail crosses the DIAAH and Dulles Toll Road just east of Wiehle Avenue and runs parallel to Sunset Hills Road through the Reston Town Center area. The trail continues northwest through Herndon, Sterling, and Ashburn.

No new major pedestrian facilities are planned in the corridor through 2025.

6.3.1.3 Air Transportation

Dulles Airport is located in eastern Loudoun County and western Fairfax County, just west of Route 28 and south of the Dulles Greenway. Ground access to Dulles Airport is currently provided primarily via the DIAAH and Route 28. According to MWCOG's Washington-Baltimore Regional Air Passenger Survey (1998), access by private vehicle to Dulles Airport has been declining as a share of total passenger access to the airport for flight originations, but the total overall number of vehicle trips to the airport has increased. In addition, the use of taxis and airport shuttles and buses, provided through the privately contracted Washington Flyer service, has increased dramatically. Table 6.3-2 provides information on mode of access to Dulles Airport and to all three of the region's major airports (Dulles Airport, National Airport, and Baltimore-Washington International Airport (BWI) in Maryland) for the years 1987 and 1998.

Table 6.3-2: Mode of Access, Dulles Airport and All Major Airports in Region, 1987 to 1998 (thousands of originations)

Mode of Access	Dulles Airport				All Major Airports in Region			
	1987	%	1998	%	1987	%	1998	%
Private Car	2,127	61	2,549	47	6,127	47	8,081	44
Rental Car	616	18	839	15	1,747	14	2,734	15
Taxi	368	11	875	16	2,905	22	3,535	19
Metrorail (National Airport)	0	0	0	0	1,025	8	801	4
LRT/Commuter Rail (BWI)	0	0	0	0	10	0	138	1
Airport Bus/Limo	170	5	618	11	456	4	1,892	10
Hotel/Motel Courtesy Bus	57	2	516	10	377	3	1,250	7
Other	129	4	39	1	277	2	95	1
TOTAL	**3,467**	**100**	**5,444**	**100**	**12,924**	**100**	**18,526**	**100**

Source: MWCOG Survey (2001)
NOTE: Percentages may not sum to 100% due to rounding.

Dulles Airport is the region's largest air passenger facility, and one of the largest and fastest growing airports in the world. Dulles Airport served 20.1 million passengers (an average of 55,000 a day) on nearly 454,000 commercial, general aviation, and commuter flights in 2000. Passenger traffic has increased 56 percent since 1996. In addition, Dulles Airport is currently undergoing a six-year, $3.4 billion program of improvements to increase air and landside capacity (including the construction of 8,500 new parking spaces). MWAA plans to add a third lane in both directions of the DIAAH sometime before 2010. It is anticipated that air passenger service will eventually reach 55 million annually when all planned facilities are built by 2035. Employment at the airport is expected to reach 60,000 that same year.

6.3.2 LONG-TERM EFFECTS

6.3.2.1 Parking

Parking for each rail station was designed and sized based on projected demand for spaces, site constraints, cost, local land use plans, as well as consultations with local governments. As identified earlier, Fairfax County plans to expand the Reston East Park-and-Ride facility to 2,300 spaces by 2010. Implementation of the Dulles Corridor Rapid Transit Project would accelerate the expansion of this facility as part of the construction Wiehle Avenue Station. In addition to this expansion, the project would add between 1,500 and 9,550 other new parking spaces in the corridor by 2025. Table 6.3-3 summarizes the planned parking expansion program of the Dulles Corridor Rapid Transit Project.

Table 6.3-3: Existing and Planned Parking Capacity for the Dulles Corridor Rapid Transit Project

Park-and-Ride Stations	No Build Alternative (2025)	Locally Preferred Alternative		
		Wiehle Avenue Extension (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
Tysons West	0	500	500	500
Wiehle Avenue	2,300	2,300	2,300	2,300
Herndon-Monroe	1,750	1,750	2,450	3,500
Route 28	0	0	0	2,000
Route 606	750	750	750	2,750
Route 772	0	300	300	3,300
TOTAL	**4,800**	**5,600**	**6,300**	**14,350**

Parking totals for the full LPA in the table above reflect maximum planned capacities for the full LPA. The parking capacities for Route 606 assume the capacity at the Dulles North Transit Center, in addition to any parking built for the Dulles Corridor Rapid Transit Project. The Dulles North Transit Center would continue to operate through 2025 as an overflow parking facility.

For the Wiehle Avenue Extension and the full LPA, parking fees would be charged at corridor parking facilities. Parking costs at stations and stops throughout the corridor are assumed to be $3.75 per day (the current charge levied at Fairfax County Metrorail park-and-rides), and increase every three years at the 3-year average of the Consumer Price Index.

For the Wiehle Avenue Extension, parking levels would be far less than those for the full LPA. East of and including Wiehle Avenue Station, the park-and-ride capacity provided by the Wiehle Avenue Extension would be the same as that provided by the full LPA, but west of Wiehle Avenue Station substantially less capacity would be provided. Overall, the Wiehle Avenue Extension would provide 39 percent of the parking capacity for the full LPA. If the full LPA is not implemented in its entirety, park-and-ride capacity would be increased at Herndon-Monroe to 2,450 spaces to meet the increased demand for transit services in the corridor. By 2025, capacity would be approximately 44 percent of the capacity for the full LPA.

6.3.2.2 Bicycle and Pedestrian Facilities

The Dulles Corridor Rapid Transit Project is not expected to have a significant impact on existing and planned bicycle and pedestrian facilities in the corridor. Implementation of the Wiehle Avenue Extension or the full LPA would include the construction of pedestrian and vehicular access to/from public rights of way. Bicycle racks and lockers would be provided at all stations and express bus stops, adjacent to station/stop entrances. All other pedestrian and bicycle trails would fall under the jurisdiction of the local governments. All pedestrian facilities built for the Dulles Corridor Rapid Transit Project would be compliant with requirements of the Americans with Disabilities Act of 1991.

The full LPA would not affect the alignment and operation of the W&OD Trail. However, it would result in the provision of greater regional transit access to the western portion of the trail. The Metrorail system has a liberal “Bike-on-Rail” policy, which allows passengers, during designated hours, to bring bicycles on to the system. Both the Wiehle Avenue and Reston Parkway stations are located adjacent to the W&OD Trail, and, therefore, would serve as convenient bike/transit transfer points for passengers choosing to split their trip between bicycles and rail.

6.3.2.3 Air Transportation

The Dulles Corridor Rapid Transit Project would have no impact on air transportation at Dulles Airport. However, the project would provide improved transit access to and from Dulles Airport for most of the metropolitan area. Specifically, the full LPA will provide seamless transit access to and from anywhere on the existing Metrorail system, including downtown Washington, D.C.; regional employment and activity centers such as Reston, Tysons Corner, Ballston, Rosslyn, Crystal City, Pentagon City, Alexandria, Bethesda, Rockville, and Silver Spring; and National Airport. The project would also provide a connection to MARC Commuter Rail services at the Union Station and New Carrollton Metrorail stations. MARC provides a rail link from the Metrorail system to BWI Airport in Maryland.

6.3.3 CONSTRUCTION EFFECTS

No construction effects are anticipated for bicycle and pedestrian facilities or air transportation. Some impacts may occur during the expansion of park-and-ride lots at the different Metrorail stations. These impacts should be minor and of a short duration.

6.3.4 MITIGATION

Plans for operations during construction would be developed for each of the park-and-ride lots to be affected during lot expansion, in coordination with the lot owners, either Fairfax County or VDOT.

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7 SECTION 4(f) EVALUATION

This chapter discusses the effects of the Dulles Corridor Rapid Transit Project on parklands and historic properties to comply with the provisions of Section 4(f) of the U.S. Department of Transportation Act of 1966 (commonly referred to as Section 4(f)), and Section 6(f) of the Land and Water Conservation Fund Act of 1965 (commonly referred to as Section 6(f)).

The alternative formerly known as "LPA Phase 1" in the October 2003 *Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation* has been renamed the Wiehle Avenue Extension in this Final EIS and is expected to begin operations in 2011. This change reflects the federal approach to the project's funding under the Federal Transit Administration's New Starts program. It will assure consistency among the environmental, engineering and financial documents during the project's development.

In the October 2003 *Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation* as well as this Final EIS, the term "full LPA" represents the Wiehle Avenue Extension and the second phase of the Dulles Corridor Rapid Transit Project. This second phase would extend west from Wiehle Avenue to Washington Dulles International Airport and Route 772 and is expected to begin operations in 2015.

The term "LPA", "proposed action", or "selected LPA" refers to both the Wiehle Avenue Extension and the full LPA collectively.

7.1 LEGAL AND REGULATORY CONTEXT

7.1.1 SECTION 4(f) OF THE U.S. DEPARTMENT OF TRANSPORTATION ACT

Section 4(f), as amended, of the U.S. Department of Transportation Act of 1966, (codified at 49 USC § 303) protects public parks and recreational lands, wildlife refuges, and historic sites of national, state, or local significance from acquisition and conversion to transportation use. Federal regulations that implement Section 4(f) may be found at 23 CFR 771.135. Under Section 4(f), the use of such publicly owned lands for transportation purposes can occur only if there is no feasible and prudent alternative to such use, and if the project includes all possible planning to minimize harm to those resources.

7.1.1.1 "Use" under Section 4(f)

Section 4(f) applies to protected resources when a "use" occurs. "Use" can be permanent, temporary adverse, or constructive as defined below.

Permanent use is the incorporation of the resource into the transportation facility; it includes fee simple and permanent easement use.

Temporary adverse use occurs when a transportation project temporarily occupies any portion of the resource, and results in an adverse condition. In order for a temporary use of Section 4(f) land not to be

considered adverse, it must meet certain conditions. First, the duration of the occupancy must be less than the time needed for the construction of the project and there must not be a change in ownership. Second, there are no anticipated permanent adverse physical changes or interference with activities or purposes of the resource, on a temporary or permanent basis. Third, there is a documented agreement of the appropriate federal, state, or local officials having jurisdiction over the resource, regarding the above conditions. Finally, both the nature and magnitude of the changes to Section 4(f) resources are minimal and the land is restored to the same or better condition.

Constructive or indirect use occurs when the resource is not physically occupied but the proximity effects of the transportation project are so great that the activities, features or attributes that qualify the property for Section 4(f) protection are substantially impaired.

7.1.1.2 "Feasible and Prudent" Alternatives under Section 4(f)

The use of Section 4(f) lands for transportation purposes can only be permitted if there is no "feasible and prudent" alternative to such use and the project includes all possible planning to minimize harm to the resources from such use.

7.1.2 Section 6(f) of the Land and Water Conservation Fund Act

Section 6(f) of the Land and Water Conservation Fund Act (L&WCF) of 1965 (16 USC § 4601-4 et seq.) preserves, develops, and assures the quality and quantity of outdoor recreation resources through purchase and improvement of recreational lands, wildlife and waterfowl refuges, and similar resources. Section 6(f) contains provisions to protect and maintain the quality of federal, state, and local investments, such as parkland and/or recreational resources. The Act established a funding source for federal acquisition or park and recreation lands and matching grants to state and local governments for recreation planning, acquisition, and development. Once purchased using these funds, these lands are protected from conversion to land uses other than public outdoor recreational uses.

A conversion of use occurs when land purchased with or improved with L&WCF grants is changed from or developed for any other use than outdoor recreation. Any such conversion must be in accordance with an existing comprehensive statewide outdoor recreation plan and must be approved by the Secretary of the Interior. If a conversion occurs, the land must be replaced with other recreational properties of at least equal fair market value and with reasonably equivalent usefulness and location. Temporary uses for construction, etc., are not considered conversions if the property is restored to its original condition after construction.

7.2 PROPOSED ACTION

The Commonwealth of Virginia, through the Department of Rail and Public Transportation (DRPT) and in cooperation with the Washington Metropolitan Area Transit Authority (WMATA), is proposing to implement a 23-mile rapid transit service in the rapidly growing Dulles Corridor in Fairfax and Loudoun counties, Virginia. In addition to the No Build Alternative, a Locally Preferred Alternative (LPA) is being evaluated to serve portions of Fairfax and Loudoun counties and Dulles Airport. The LPA includes an extension of the regional Metrorail system through Tysons Corner, along the Dulles International Airport Access Highway (DIAAH) to Dulles Airport, and along the Dulles Greenway into eastern Loudoun County (see Figure 7.2-1). The LPA would be implemented in two phases. The Wiehle Avenue Extension would include the construction of the LPA to Wiehle Avenue, with Express Bus Service along the remainder of the project corridor. The Wiehle Avenue Extension would begin operations in 2011. The full LPA would



LEGEND

- Major Arterials
- Limited Access Highway
- U.S. Highways

Proposed Metrorail Alignment

- At-grade/Retained Fill
- Aerial
- Underground
- Aerial Yard Lead

- Existing Metrorail Orange Line and Stations
- Proposed Station
- Proposed Underground Station
- Rail Yard
- Dulles Corridor Limits

0 1 2 3 MILES

Note: Short bridge crossings for highway and culvert overpasses/underpasses not shown.

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

Figure 7.2-1

Locally Preferred Alternative

Dulles Corridor Rapid Transit Project

include the extension of Metrorail to Route 772 in Loudoun County. The full LPA is expected to begin operations in 2015.

The majority of the alignment is within the median of the Dulles Connector Road, DIAAH, and Dulles Greenway. In general, the study area consists of suburban development of medium density. However, the western portion of the study area nearing and within Loudoun County is less developed.

7.3 EXISTING SECTION 4(f)/6(f) RESOURCES

The study area for Section 4(f) and 6(f) resources varied depending upon the type of resource and potential for use during construction or operation of the LPA. For parklands, a 600-foot-wide corridor was established along the Dulles Connector Road, DIAAH and Dulles Toll Road, and Dulles Greenway. At station and other facility locations, the study area was expanded to widths of 800 to 2,000 feet, depending on the type of facility. For historic resources, coordination with the Virginia Department of Historic Resources (VDHR) determined the Area of Potential Effect (APE) to be 600 feet on each side of the alignment and project facilities. The APE for archaeological resources was determined to be 200 feet on each side of the alignment and project facilities.

Section 4(f) and/or Section 6(f) resources identified within the corridor include historic resources, archaeological sites, and publicly owned parks and recreation areas. Historic and archaeological sites must be listed on or eligible for listing on the National Register of Historic Places (NRHP) to qualify as a Section 4(f) resource, irrespective of ownership. Figure 7.3-1a and Figure 7.3-1b illustrate the locations of the parkland and historic resources potentially affected by the Dulles Corridor Rapid Transit Project. To preserve the location of known archaeological resources are not mapped but have been determined in consultation with the VDHR.

7.3.1 OFFICIALLY DESIGNATED PUBLIC PARKLANDS, RECREATION AREAS, WILDLIFE AND WATERFOWL REFUGES IDENTIFIED

The following describes all public park and recreational areas identified within the study area. There are no officially designated wildlife and/or waterfowl refuges within the study area. Figures 7.3-1a and 7.3-1b shows the locations of these park resources in relation to the LPA.

George Mason High School Athletic Fields are located on a 17-acre campus south of I-66 at 7124 Leesburg Pike. This school includes playing fields that are available for general public use. The school complex is owned by the City of Falls Church.

Mount Royal Park is located north of I-66 and west of the Dulles Connector Road. This small, undeveloped park (approximately 3 acres) is adjacent to the Lemon Road Elementary School in Falls Church and the existing Metrorail West Falls Church Service and Inspection (S&I) Yard. Planned improvements to this open recreational area include the addition of a picnic area; play area, tennis courts, and an exercise area. The Fairfax County Park Authority (FCPA) owns this park.

Pimmit Run Stream Valley Park is a linear park of approximately 68 acres that follows the course of Pimmit Run. The stream runs parallel to a concrete swale spanned by the Dulles Connector Road. The parkland lies north of Idylwood Road, with discontinuous portions on either side of the Dulles Connector Road, which divides it; an informal hiking trail going under the roadways connects the two sections of the park, but this trail is not owned by FCPA and is not considered to be public parkland. Pimmit Run is not

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LEGEND

- Historic Resources
- Historic District
- Publicly owned Parklands
- Section 6(f) also applies
- Existing Orange Line Metrorail and Stations
- Proposed Metrorail Alignment
- Proposed Station
- County Boundary

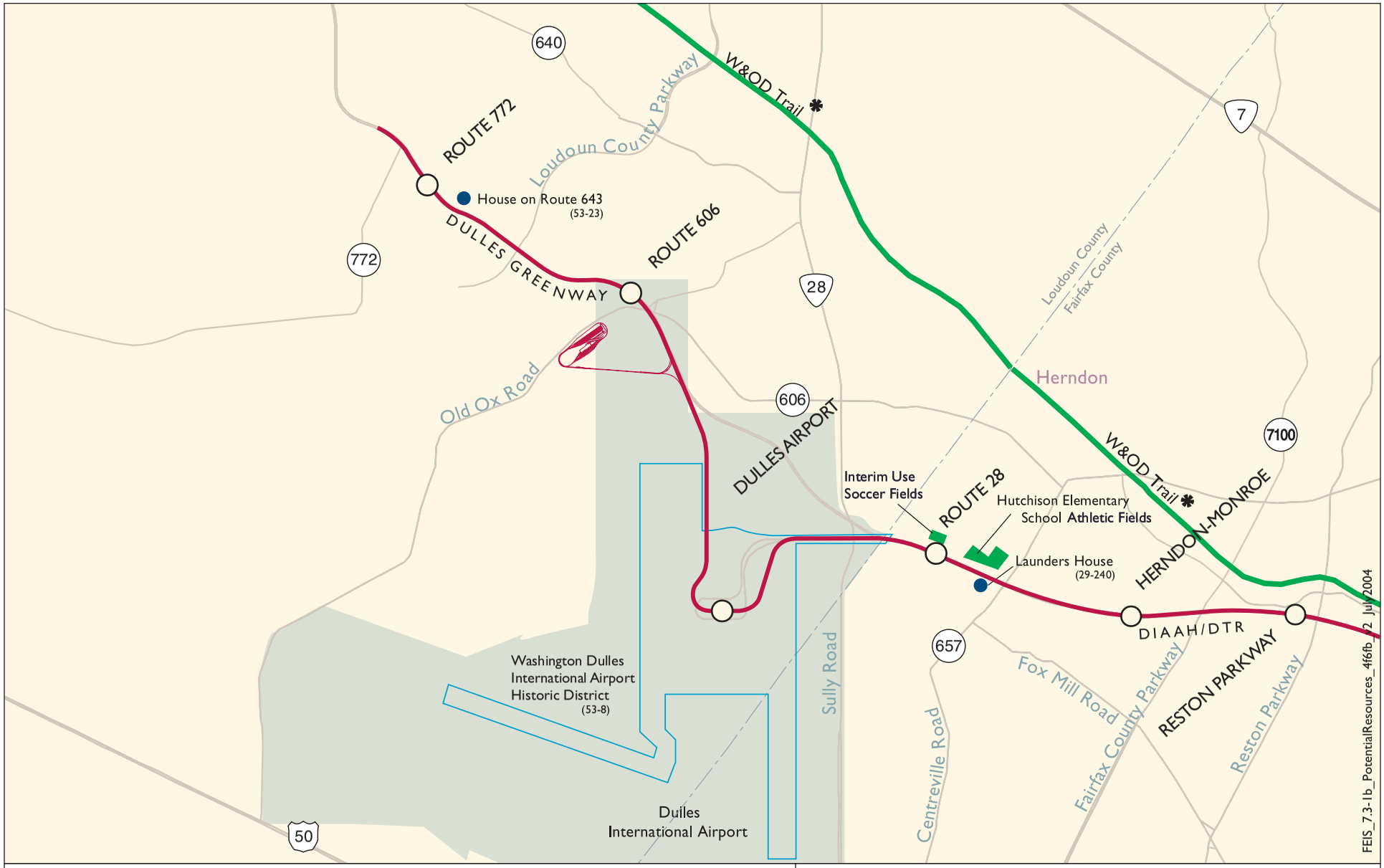
DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

0 3000 6000 FEET

Figure 7.3-1a

Potential 4(f)/6(f) Resources

Dulles Corridor Rapid Transit Project



LEGEND

- Historic Resources
- Historic District
- Publicly owned Parklands
- * Section 6(f) also applies
- Existing Orange Line Metrorail and Stations
- Proposed Metrorail Alignment
- Proposed Station
- County Boundary

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

0 3000 6000 FEET

Figure 7.3-1b

Potential 4(f)/6(f) Resources

Dulles Corridor Rapid Transit Project

navigable under low water conditions and clearly marked trails do not currently exist under the Dulles Connector Road. This undeveloped park is owned and maintained by the FCPA and is used as a hiking trail and natural area.

Olney Park is approximately 18 acres and is located to the west of the Dulles Connector Road, south of Olney Road, and immediately north of Pimmit Run Stream Valley Park. Olney Park is a neighborhood park with various amenities for recreation activities, including two baseball fields, a basketball court, tennis courts, hiking trail, natural area, open area, picnic area, playground, tot lot, restroom facilities, and a parking lot. A stand of mature trees currently blocks the view of the noise wall adjacent to the Dulles Connector Road. The park is owned and maintained by the FCPA.

Westgate Park is approximately 12 acres in size and is located adjacent to Scotts Run Stream Valley Park. It is situated south of Route 123 and Magarity Road, where a portion of the park intersects Scotts Run Stream Valley Park. This park has two baseball fields, two lighted tennis courts, a picnic area, and an open area. The park is owned and operated by the FCPA.

Scotts Run Stream Valley Park is a 23-acre linear park that consists of an open recreation area and a hiking trail that follows the course of Scotts Run. Approximately 12 acres of the park are within the Dulles Corridor primarily in the vicinity of Route 123 and Colshire Drive. In addition, the parkland is not continuous along Scotts Run. The trail starts north of the DIAAH/Dulles Toll Road, which divides it, then follows the stream as it flows to the south side of Route 123 and east of Old Meadow Road where most of the parkland is located. This park is owned and maintained by the FCPA.

Ash Grove Historic Site, approximately 12 acres in size, is located at the southwest intersection of Route 7 and the DIAAH/Dulles Toll Road. The developer of Tysons Village townhouses dedicated the Ash Grove Historic Site to the FCPA. This site currently includes a historic house, a detached brick kitchen, and a wood-framed smokehouse. A stand of mature trees and a wall currently buffer the view of the DIAAH/Dulles Toll Road.

Wolf Trap National Park for the Performing Arts, approximately 130 acres in size, is located north of the DIAAH/Dulles Toll Road at Trap Road. This park, which is owned by the National Park Service (NPS), includes an open-air performing pavilion, restaurant pavilion, and indoor theater.

Meadowlark Gardens Regional Park is approximately 95 acres in size and is located south of the DIAAH/Dulles Toll Road on Meadowlark Gardens Court. The park has both active and passive uses, gardens, meeting and reception rooms, a gift shop, gazebos, and nature trails. The park is buffered from the DIAAH/Dulles Toll Road by a wall and trees and a residential subdivision. It is owned by the Northern Virginia Regional Park Authority (NVRPA).

Difficult Run Stream Valley Park is a linear park consisting of approximately 863 acres. The park, owned and operated by the FCPA, is located on either side of the DIAAH/Dulles Toll Road, and comprises a hiking and equestrian trail that extends into the Wolf Trap Meadow Subdivision. The trail crosses under the DIAAH/Dulles Toll Road approximately a mile west of Route 674 (Beulah Road), but this trail segment is not parkland. The Park Authority does not own the land under the highway bridges. The view of the DIAAH and Dulles Toll Road in the park itself is buffered from the north by a wall and from the south by a partial wall.

Washington & Old Dominion (W&OD) Railroad Regional Park is a 45-mile-long and 100-foot-wide recreational trail that runs between Arlington County and Loudoun County. This paved trail is used for

walking, running, and bicycling. It also includes a 32-mile adjacent gravel trail for horseback riding from Vienna to Purcellville. The trail crosses the DIAAH/Dulles Toll Road approximately one-half mile east of Wiehle Avenue. This trail is owned and maintained by the NVRPA. The W&OD Railroad Regional Park is also protected under Section 6(f) of the Land and Water Conservation Fund Act which financed its acquisition and development. In the 1960s, the federal government acquired an easement across the W&OD Railroad (prior to its conversion to parkland) for the Dulles Toll Road overpass.

Hutchinson Elementary School Athletic Fields, located southwest of Parker Avenue in the Town of Herndon, border the DIAAH/Dulles Toll Road. Through an agreement with the Fairfax County Public School District, the FCPA uses the athletic fields—two baseball diamonds and six football fields—for organized activities after the normal hours of operation.

Interim Use Soccer Fields are located on a 3.76-acre parcel east of Route 28 (Sully Road), north of the DIAAH/Dulles Toll Road. The site was proffered to the Fairfax County Board of Supervisors and has been dedicated for transportation use in the future. The soccer fields that exist on this parcel are a temporary special use until project related station facilities are warranted. Additional information on the proffer terms is provided in Appendix I.

7.3.2 ARCHAEOLOGICAL RESOURCES

Of the seven archaeological sites identified within the APE, only two of these sites are potentially eligible for listing in the NRHP. For the purposes of this Section 4(f) Evaluation, resources that have been determined to be potentially eligible for the NRHP were treated as eligible. The locations of these archaeological resources are kept confidential to protect the sites from disturbance and looting and are not provided in this report. The two archaeological resources evaluated for potential Section 4(f) impacts include:

- **44LD0379 – Indian Creek Site**. Prehistoric, early/middle archaic occupation archaeological site. This site is potentially eligible for listing in the NRHP.
- **44LD0406.** Archaeological site of prehistoric and historic occupation with artifacts dating to the early archaic period. This site is potentially eligible for listing in the NRHP.

7.3.3 HISTORIC ARCHITECTURAL RESOURCES

A total of eight historic resources were evaluated under the provisions of Section 4(f). They are described in more detail below. Figures 7.3-1a and 7.3.1b show the locations of these resources in relation to the LPA.

The Lewinsville Post Office (29-338), 1554 Great Falls Road, McLean. The Lewinsville Post Office is a two-story, front-gabled, wood-frame building with a one-story front porch. Constructed in the 1850s, it served as the Lewinsville Post Office from 1857 to 1911. The resource was placed on the Fairfax County Historic Landmarks Inventory in 1981. A Preliminary Information Form (PIF) was submitted to the Virginia Division of Historic Landmarks in 1986 for preliminary consideration for the Virginia Landmarks Register and the NRHP. Based on the information submitted, the State Review Board found on October 14, 1986, that the building was not eligible for the NRHP or the Virginia Landmarks Register. The Board stated that the property could be reconsidered if the applicants could show that the Lewinsville Post Office best represented the Town of Lewinsville as the focus of nineteenth-century social life and was the best

surviving building from that century. Although no further information appears to have been submitted, this resource was considered eligible for this evaluation.

Ash Grove (29-2), 8900 Ash Grove Lane, Vienna. This property consists of a rebuilt eighteenth-century dwelling with two historic outbuildings. Its original core was reportedly built by the Fairfax family, as early as 1790. Within the past decade, a developer purchased the property for construction of the Tysons Village townhouse complex. As part of the development, the developer proffered the site to FCPA. FCPA acquired 12 acres of the site containing the house, the detached brick kitchen, and the wood-frame smokehouse. The Sherman and Fairfax family cemetery was relocated prior to construction of the townhouse development. The property is not listed on the Virginia Landmarks Register or in the NRHP, but is potentially eligible for the latter.

Wolf Trap National Park for the Performing Arts (29-159), 1551 and 1555 Trap Road, Vienna. Presently owned by the National Park Service (NPS), the Wolf Trap National Park for the Performing Arts is a 130-acre complex consisting of an historic farm developed in the twentieth century as the country's only national park for the performing arts. The resources on this property include the original Wolf Trap Farm, the Filene Center auditorium, and its associated outbuildings.

In 1972, the Wolf Trap Farm property was entered on the Fairfax County Historic Landmarks Inventory, and the Filene Center was added to this list in 1977. VDHR files include correspondence that records efforts to create a cultural district around the property to control adjacent development. NPS completed a NRHP Inventory Nomination Form for the historic farmhouse in 1974, but the property was not formally listed in the NRHP.

Plantation (29-188), 1624 Trap Road, Vienna. Plantation is a two-story brick and frame dwelling with extensive alterations and numerous outbuildings. It was built around 1895 as a vernacular cross-gabled dwelling. Part of the Wolf Trap Farm parcel (see above), Plantation was renovated in the 1960s by Catherine Filene Shouse, the donor of Wolf Trap National Park for the Performing Arts. This site was entered on the Fairfax County Historic Landmarks Inventory in 1971. It is not listed on the Virginia Landmarks Register or in the NRHP, but is potentially eligible for the latter.

Hunter Mill Road Proposed Historic District (29-5180), Reston. The proposed district, which stretches along Hunter Mill Road from Baron Cameron Road (Route 606) to Chain Bridge Road (Route 123), is representative of a key transportation resource that has served Northern Virginia for almost 200 years. Archaeological and architectural resources along Hunter Mill Road have been identified as contributing elements to the proposed historic district. The Hunter Mill Road Proposed Historic District is significant for a number of contributions to the history of Northern Virginia, including evidence of Native American sites, the milling and farming industries in Fairfax County, association with numerous Civil War activities and people, the development of public education in Fairfax County, and the original location of Cartersville, a community established by emancipated African-American slaves. It has been determined eligible for listing in the Virginia Landmarks Register and the NRHP.

Launders House (29-240), 2300 Centreville Road, Herndon. This two-story frame dwelling was built around 1910 near the community of Floris. It is clad in weatherboard siding and sits on a concrete foundation. It was surveyed as part of the Fairfax County Historic Resources Management Plan (HRMP) in 1985. The resource is not listed on the Virginia Landmarks Register or in the NRHP, though it is potentially eligible for the latter.

Dulles International Airport Historic District (53-8). Opened in 1962, Dulles Airport encompasses approximately 11,000 acres in Fairfax and Loudoun counties and was the first airport in the world designed exclusively for jet travel. Designed by renowned Finnish-born American architect Eero Saarinen, the concrete, steel, and glass Main Terminal, which dominates the property, exemplifies the architect's efforts to combine architecture and sculpture using new technologies and materials. Saarinen won the Gold Medal Award from the American Institute of Architects posthumously in 1962 for his groundbreaking design.

The construction of Dulles International Airport included precise planning and design of all aspects of the airport, including the terminal, runways, passenger movement devices, airport services and support systems, landscaping, land use, and roadways. One important aspect of the overall design was the construction of a dedicated access road—the DIAAH—to provide an efficient and direct route to the airport from Washington, D.C. The road's original design incorporated a "dual-dual" concept that allowed for the initial construction of dedicated lanes for airport traffic only and reserved the remaining right-of-way for a parallel local roadway to be constructed at a later date. (This outer roadway, the Dulles Toll Road, was constructed in the early 1980s and widened in the late 1990s). In addition, the original 1964 Master Plan for the airport envisioned eventual construction of mass transportation to the airport and reserved the median of the DIAAH for such use. A 1985 update to the Master Plan reaffirmed the continued reservation of the median for a future transit line to the airport and anticipated that this transit access would be provided by an extension of the Washington region's Metrorail system.

In the 1970s, the Advisory Council on Historic Preservation, the Virginia Historic Landmarks Commission, and the American Institute of Architects registered concerns about proposed alterations to the significant property. In 1977, the Keeper of the NRHP asked the US Department of Transportation (US DOT) to nominate the property to the NRHP. US DOT then requested a determination of eligibility from the Keeper of the NRHP, which was made in 1978. Although the property was determined eligible under Criteria A, B, and C, it was never formally listed on the NRHP due to owner objection.

A 1989 historic architectural survey of the property identified 13 of the approximate 62 buildings at the airport as contributing buildings to a historic district associated with the Main Terminal. The proposed district encompasses the integral parts of Saarinen's original intent. Contributing buildings include the Main Terminal and control tower, a group of four maintenance and support facility buildings to the west of the terminal, the group of four service buildings east of the terminal, and two apron buildings, specifically the Apron Tower and the Triturator Building. The 18 original mobile lounges were also identified as historic structures. Terminal area landscaping and the approach road were identified as contributing landscape elements associated with the Main Terminal.

Also identified as a contributing element to this district was the "peekaboo sequence," a series of viewsheds designed by Saarinen to allow arriving passengers to gradually view structures on the airport property. Saarinen intended that this peekaboo sequence heighten viewer interest by providing passengers approaching the airport along the DIAAH a variety of views of the Main Terminal and control tower from different points along the roadway, each revealing an increasingly greater glimpse of the structures and creating a sense of dramatic expectation. Although several of the peekaboo viewsheds have been compromised or eliminated since Saarinen implemented his original design in the 1960s—a result of commercial construction, changes to the Route 28 interchange, and growth of landscaping and vegetation at the perimeter of the airport property and within the Route 28 interchange—the views that exist today remain important visual elements of the Dulles Airport historic district.

Although the peekaboo sequence has been recognized as a contributing element to the historic district, the eastern boundary of the district was not formally defined until March 2004. In consultation with VDHR, Metropolitan Washington Airports Authority (MWAA) and DRPT recommended that the eastern boundary of the Dulles Airport historic district be located 300 feet east of the Fairfax/Loudoun county line. The county line is located just east of the present Route 28 interchange. The remaining portion of the DIAAH east of this boundary is not considered part of the historic district.

House, Route 643 (53-23), Ryan. This two-story, wood-frame farmhouse with a side-gable, standing-seam metal roof is an example of a typical I-house and probably dates to the late nineteenth century. It has been covered with stucco and has a shed-roofed front porch. The property also includes several small concrete block sheds, barns, and a silo. Surveyed in 1988 (Haynes 1988), the dwelling is presently abandoned and deteriorating. The house is not listed on the Virginia Landmarks Register or in the NRHP, but is potentially eligible for the latter.

7.4 USE OF SECTION 4(f)/6(f) RESOURCES

The potential use of lands and properties protected under Section 4(f) and Section 6(f) by the project are discussed below.

7.4.1 NO BUILD ALTERNATIVE

The No Build Alternative would continue current conditions for all resources identified and would not result in any use of officially designated, parklands, recreation areas, cultural resources, or wildlife and waterfowl refuges. However, under the No Build Alternative, the provision of mass transit improvements in the median of the DIAAH as called for in the master plan for the Washington Dulles International Airport would not be realized and the project's purpose and need would not be satisfied.

7.4.2 WIEHLE AVENUE EXTENSION

The Wiehle Avenue Extension would physically incorporate part of one resource (Hunter Mill Road Proposed Historic District) protected by Section 4(f). Proximity impacts to Section 4(f) resources from the Wiehle Avenue Extension, such as noise, vibration, air quality, or visual impacts, would be minimal and would not substantially impair the activities, features or attributes of any Section 4(f) resource. No impact to Section 6(f) resources would occur. None of the archaeological sites identified are within the limits of disturbance and therefore no further Section 4(f) analysis is warranted for these sites. Table 7.4-1 at the end of this section summarizes impacts to Section 4(f) resources within the study area.

Under the Wiehle Avenue Extension, the alignment would cross three Section 4(f) and one Section 4(f)/6(f) resources. The project's use of these resources is discussed below.

Pimmit Run Stream Valley Park and Difficult Run Stream Valley Park are adjacent to the Dulles Connector Road and DIAAH/Dulles Toll Road. These parks are associated with streams that run perpendicular to and beneath these highways. Presently, these highways span both Pimmit Run and Difficult Run Stream Valley Parks. The LPA alignment is within the median of Dulles Connector Road and DIAAH/Dulles Toll Road and would also span these resources. The bridge structure and piers for the Wiehle Avenue Extension crossing would be placed parallel to the existing bridge structures and piers, outside of park property. Due to the existing conditions, these resources would not experience long-term

noise, vibration, air quality or visual impacts. Non-adverse, temporary, construction related effects would be minimal and occur only during construction of these crossings.

Washington & Old Dominion Railroad Regional Park, also a Section 6(f) resource, runs perpendicular to and underneath the DIAAH/Dulles Toll Road. A new bridge structure would span this resource as a result of the Wiehle Avenue Extension. In a concurrence letter to NVRPA dated March 2004, DRPT confirmed that the design of the Metrorail bridge would meet NVRPA's design guidelines and therefore no visual impact or tunnel effect would result; and no Section 4(f) use of this resource from the Wiehle Avenue Extension would occur. The Virginia Department of Conservation and Recreation (VDCR) has determined, in a letter dated February 2004, that the proposed action would not result in a conversion of use under the L&WCF Act because the Metrorail overpass will be within an existing transportation easement that includes highway overpasses for the DIAAH/Dulles Toll Road.

Hunter Mill Road Proposed Historic District extends underneath the DIAAH/Dulles Toll Road. The proposed historic district is potentially eligible for listing on the NRHP, but has not been formally nominated for listing. The formal boundaries of this potential district have not been determined. Depending on the determination of boundaries, the Wiehle Avenue Extension could potentially result in a physical use of this Section 4(f) resource.

The Wiehle Avenue Extension would pass over the Hunter Mill Road Proposed Historic District within the median of the existing DIAAH/Dulles Toll Road. In addition to the new crossing, three stormwater management ponds, and two traction power substations could fall within the potential district, potentially resulting in a physical use under Section 4(f). However, contributing elements of the historic district would not be used, and the property would not alter the integrity of the historic district. Each of these facilities have been sited to lessen their visibility by being placed adjacent to the DIAAH/Dulles Toll Road (within or next to the existing public right-of-way) and are not near any significant contributing elements of the potential district.

Stormwater management ponds are required to offset an increase in impervious surface that would result from the Wiehle Avenue Extension. The primary purpose of stormwater management ponds is to prevent flooding during storm events. The location of stormwater management ponds is dependent upon the natural topography within an area. Two of the stormwater management ponds are located within Virginia Department of Transportation right-of-way. The other is located adjacent to a non-contributing commercial property. The proposed design for the ponds would integrate them into the landscape, and would not detract from the visual context of the area.

Traction power substations are facilities that supply direct current power for the rail system. A power analysis was conducted to determine the required number, size and optimal spacing of the substations. In accordance with system design and safety criteria, the traction power substations are generally small in scale and are spaced approximately every two miles. The standard traction power substation is 150 feet by 50 feet and approximately one-story high. These would be located next to the Dulles Toll Road in land zoned for commercial or industrial uses. Since the proposed district has not yet been formally nominated for the NRHP, it is possible that these facilities would fall outside the district's formal boundaries. In any case, no contributing elements of the historic district would be used.

Three other resources would experience minor proximity impacts from the Wiehle Avenue Extension. These impacts are discussed below.

Scotts Run Stream Valley Park is located adjacent to Route 123, a major thoroughfare within Fairfax County. The surrounding area consists of suburban development, with various multiple-floor commercial office buildings, apartments and transportation facilities currently within view of this resource. Route 123 has recently been widened from four to eight lanes and its crossing of the park was expanded. In addition, a new multiple-floor office building has been constructed along the eastern side of Scotts Run Stream Valley Park. The Tysons East Station would be located adjacent to the park, where the park abuts Route 123. The station would have a minimal effect on the visual character of the surrounding area and park. Due to the existing conditions of the area, the visual effects resulting from the Wiehle Avenue Extension would not result in a substantial impairment of the activities, features or attributes of this park that qualify it for Section 4(f) protection. Therefore, no use of this Section 4(f) resource would occur.

Ash Grove Historic Site is located adjacent to the DIAAH/Dulles Toll Road and a residential complex. Ash Grove would experience a one decibel (dBA) increase in noise as a result of the implementation of the Wiehle Avenue Extension. Based on the existing conditions at the site, the Wiehle Avenue Extension operations would not substantially impair the protected activities, features, or attributes of historic structures at this location. Therefore no use of this Section 4(f) resource would occur.

The **Plantation house** is located adjacent to the DIAAH/Dulles Toll Road. This historic resource would experience an increase in noise as a result of the implementation of the Wiehle Avenue Extension. Based on the existing conditions at the site, the Wiehle Avenue Extension operations would not substantially impair the protected activities, features, or attributes of historic structures at this location. Therefore no use of this Section 4(f) resource would occur.

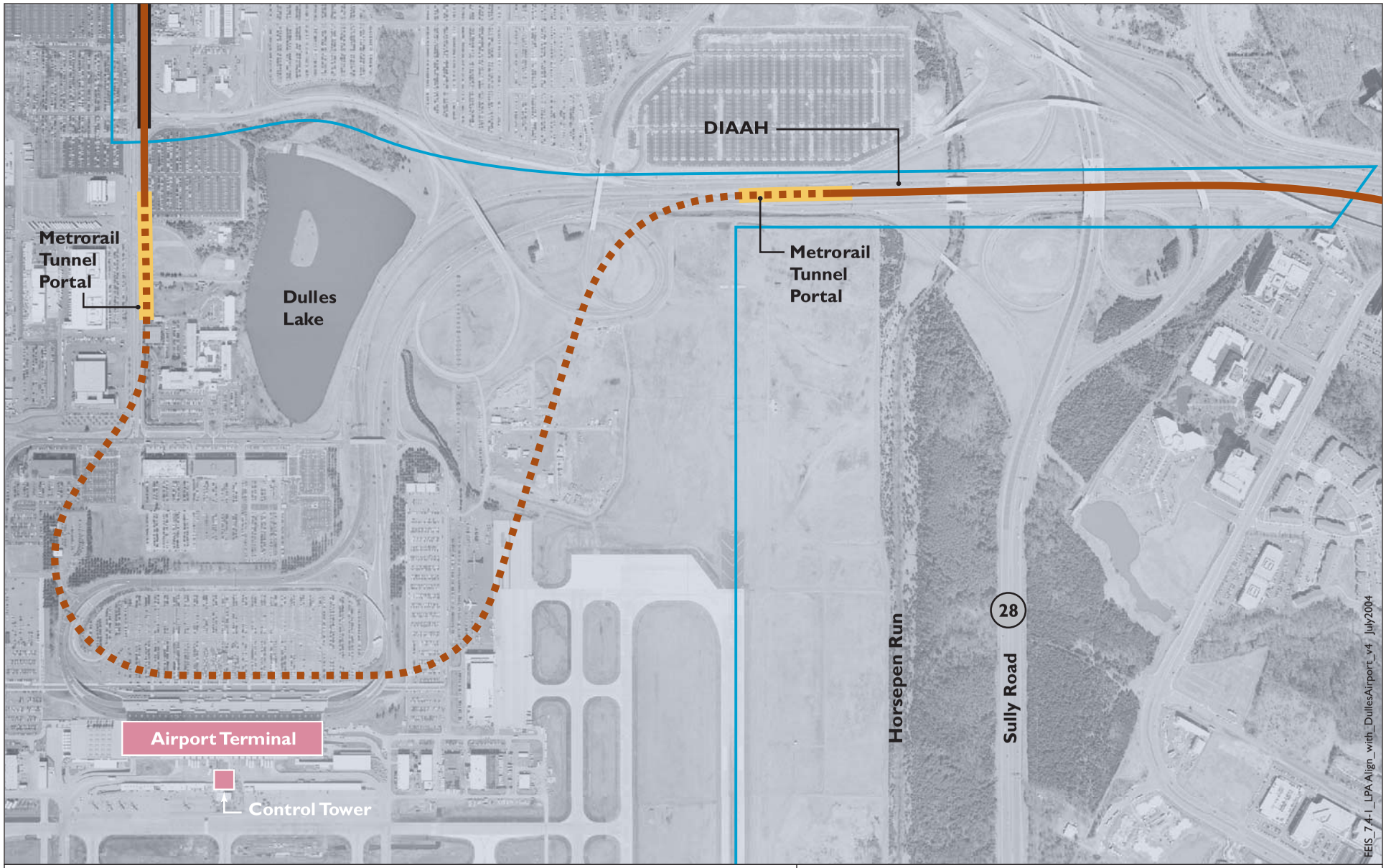
7.4.3 FULL LPA

In addition to those effects discussed with the Wiehle Avenue Extension, the full LPA would result in impacts to Section 4(f)/6(f) resources. Construction of the Route 28 station would require the use of the **interim use soccer fields** located on the north side of the DIAAH/Dulles Toll Road. Facilities planned for the site include a Kiss & Ride lot, bus bays, and an entrance pavilion with elevators and escalators.

The site, also known as Land Bay 5 of the Dulles Green Development, was proffered to the Fairfax County Board of Supervisors for use as a temporary athletic field and/or use as a public transportation destination station, Kiss-and-Ride lot, park-and-ride facility, rail/bus transit station of other public transportation facility in 1999. Because the athletic field is considered a temporary use for the site, conversion of the site to a transportation facility would not constitute a use under Section 4(f). Excerpts from the Dulles Green Proffer detailing the terms of the land dedication are provided in Appendix I.

Dulles International Airport Historic District is eligible for listing in the NRHP. Although this district has not been formally nominated for the NRHP, a consensus-level determination of the district's boundaries has been made with the concurrence of VDHR. Based on the results of consultation with VDHR, the project's impacts to the "peekaboo" views of the main terminal control tower from the DIAAH (a contributing element to the eligible historic district) would constitute a Section 4(f) use of the resource. At the eastern edge of the historic district, the full LPA alignment is located the median of the DIAAH at-grade before transitioning underground as shown in Figure 7.4-1. In this area, the peekaboo views may be altered by security fencing required to prevent trespassers from entering the Metrorail right-of-way and

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LEGEND

- Rail Alignment at Grade
- Metrorail Tunnel Portal
- Rail Alignment Underground
- Aerial
- Dulles Historic District

0 700 1400 FEET

Figure 7.4-1

LPA Alignment within Dulles Airport Historic District

Dulles Corridor Rapid Transit Project

interfering with railroad operations. Although the design of the project in this location has already been modified to minimize the visual interference to the extent possible given site constraints and design criteria, this visual interference would constitute a use under Section 4(f).

In addition, the inbound alignment and inbound portal would use a portion of land within the historic district as the alignment transitions from at-grade to underground and the outbound portal would use a portion of land within the historic district as the alignment transitions from underground to aerial structure. This will require the acquisition of an easement from the MWAA, which operates Dulles International Airport and leases the airport property from the United States government. These portal structures would constitute a physical use of a portion of the historic district, though it would not affect the district's historic significance or integrity. In fact, this use is consistent with Saarinen's overall vision for the airport and his intent that mass transit access be provided in the future.

This use is also consistent with current airport land uses within the district. The alignment is located in areas that are currently used for transportation purposes. The at-grade and aerial portions of the LPA alignment within the proposed historic district are either within the existing DIAAH median, in a parking lot, or along existing roadways. Each of these is an existing and long-standing transportation use. The portion of the alignment that includes the peekaboo sequence is near the eastern boundary of the eligible historic district, away from other contributing structures, and in the vicinity of an interchange for three freeways. The outbound portal would be located the edge of the historic district boundary, adjacent to non-contributing elements such as an airport service roadway, parking lot, hotel, and rental car facilities.

The house on Route 643 in Ryan is located north of the Dulles Greenway. The house is abandoned and deteriorating and has been compromised by new commercial development. This historic site would experience an increase in noise; however, based on existing conditions the operation of the full LPA would not substantially impair the protected activities, features, or attributes of historic structures at this location. Therefore no use of this Section 4(f) resource would occur.

Table 7.4-1: Summary of Section 4(f) Resource Impacts Associated with the Locally Preferred Alternative

Resource	Type of Resource	Relevant LPA Activity	Impacts of the LPA			"Use" Under 4(f) (type)
			Wiehle Avenue Extension (2011)	Wiehle Avenue Extension Opening Year (2025)	Full LPA (2025)	
George Mason High School	Parkland	Proximity to West Falls Church S&I Yard Expansion	No Effect	No Effect	No Effect	No
Mount Royal Park	Parkland	Proximity to West Falls Church S&I Yard Expansion	No Effect	No Effect	No Effect	No
Pimmit Run Stream Valley Park	Parkland	Proximity to a New Bridge Structure for LPA Alignment	No Effect	No Effect	No Effect	No
Olney Park	Parkland	Proximity to LPA Alignment	No Effect	No Effect	No Effect	No
Westgate Park	Parkland	Proximity to Tysons East Station	No Effect	No Effect	No Effect	No
Scotts Run Stream Valley Park	Parkland	Proximity to Tysons East Station	Minor Visual Effect	Minor Visual Effect	Minor Visual Effect	No

Resource	Type of Resource	Relevant LPA Activity	Impacts of the LPA			"Use" Under 4(f) (type)
			Wiehle Avenue Extension (2011)	Wiehle Avenue Extension Opening Year (2025)	Full LPA (2025)	
Ash Grove Historic Site (29-2)	Parkland/ Cultural Resource	Proximity to LPA Alignment	Minor Noise Effect	Minor Noise Effect	Minor Noise Effect	No
Wolf Trap National Park for the Performing Arts (29-159)	Parkland/ Cultural Resource	Proximity to LPA Alignment	No Effect	No Effect	No Effect	No
Meadowlark Gardens Regional Park	Parkland	Proximity to LPA Alignment	No Effect	No Effect	No Effect	No
Difficult Run Stream Valley Park	Parkland	Proximity to a New Bridge Structure for LPA Alignment	No Effect	No Effect	No Effect	No
Washington & Old Dominion Railroad Regional Park	Parkland	New Bridge Structure for LPA Alignment	No Effect	No Effect	No Effect	No
Hutchinson Elementary School	Public Use Recreational Fields	Proximity to LPA Alignment	No Effect	No Effect	No Effect	No
Interim Use Soccer Fields	Interim Public Recreational Fields	Route 28 Station	No Effect	No Effect	Converts to Transportation Use	No
Hunter Mill Road Proposed Historic District (29-5180)	Proposed Historic District	Proximity To LPA Alignment; Addition Of Stormwater Management Ponds and Traction Power Substations	Requires Land Acquisition or Easement	Requires Land Acquisition or Easement	Requires Land Acquisition or Easement	Yes Physical Use (Potential)
Site 44LD0379 (Indian Creek Site)	Archaeological Site	Proximity to LPA Alignment	No Effect	No Effect	No Effect	No
Site 44LD0406	Archaeological Site	Proximity to LPA Alignment	No Effect	No Effect	No Effect	No
Lewinsville Post Office (29-338), 1554 Great Falls Road, McLean	Architectural Resource	Proximity to LPA Alignment	No Effect	No Effect	No Effect	No
Plantation (29-5180) 1624 Trap Road, Vienna	Architectural Resource	Proximity to LPA Alignment	Minor Noise Effect	Minor Noise Effect	Minor Noise Effect	No
Launders House (29-240), 2300 Centreville Road, Herndon	Architectural Resource	Proximity to LPA Alignment	No Effect	No Effect	No Effect	No
Dulles International Airport Historic District (53-8)	Historic District	LPA Alignment in Portion of District	No Effect	No Effect	Visual Effect; Requires Easement	Yes Physical Use
House, Route 643 (53-23), Ryan	Architectural Resource	Proximity to LPA Alignment	Minor Noise Effect	Minor Noise Effect	Minor Noise Effect	No

7.5 AVOIDANCE ALTERNATIVES

The LPA would result in a potential permanent use of the Hunter Mill Road Proposed Historic District and the permanent use of the Washington International Airport Historic District. Avoidance alternatives considered are discussed below.

The Hunter Mill Road Proposed Historic District would be potentially affected by the alignment and addition of stormwater management ponds and traction power substations that may fall within the district boundaries. The LPA alignment is an avoidance alternative because it keeps the alignment within the existing transportation corridor. Locating the alignment outside of this transportation corridor would result in greater use of the historic district. Stormwater management ponds are located based on topography and drainage requirements. These factors necessitate the location of the ponds within the boundary of the proposed historic district, though no contributing elements will be affected. The locations of traction power substations are dictated by energy requirements of the system and cannot be moved without potentially affecting Metrorail operations. If the boundaries of the proposed district are formally defined in a NRHP nomination prior to construction, the ponds and substations may be redesigned and shifted to lessen impacts to the extent possible, or may fall outside the district boundaries.

The Dulles International Airport Historic District would be affected by the placement of the alignment within the median of the DIAAH and the addition of inbound and outbound portals within the district boundaries. This would result in a use of a contributing element to the district (the peekaboo sequence) and require a physical use of the property within the historic district boundaries. Avoidance alternatives were not considered feasible or prudent for various reasons:

A key objective of the project is to provide rapid transit access to Dulles International Airport. Transit access to the Dulles Airport was envisioned as part of the original Master Plan. The Federal Aviation Administration (FAA) has determined that the improved access provided by the project would benefit the airport. The addition of the Metrorail also offers an alternate route to the Dulles Airport as the area's population and airport use continue to grow. By locating the LPA outside of the Dulles International Airport Historic District, it would not serve the Dulles Airport in the same capacity and would be inconsistent with the historic Master Plan, which called for the provision of transit service in the median of the DIAAH.

A rail line serving the Dulles Airport has long been planned for this location. As part of the original concept for the airport in the early 1960s, the Master Plan envisioned the eventual construction of mass transportation to the airport and reserved the median of the DIAAH for such use. In 1985, when the Dulles Airport's Master Plan was updated, the FAA recommended that the median of DIAAH continue to be reserved for a future transit line to the airport and anticipated that the future transit line would likely be an expansion of the region's Metrorail system. By incorporating mass transit within the airport complex, it would fulfill part of Saarinen's original concept for the airport.

The placement of the LPA alignment underground approaching and in front of the main terminal building avoids a more serious physical and visual impact on the historic district. Placement of the alignment on either side of the DIAAH or on an aerial alignment approaching the terminal would be more disruptive and introduce new visual obstructions in the view shed. Shifting the inbound portal eastward would require the reconstruction or reconfiguration of bridges and ramps within the Route 28/Dulles Toll Road/Dulles Greenway interchange and further degrade or destroy the remaining peekaboo views of the main terminal and control tower. Extending the outbound portal northward to completely avoid the historic district would

disrupt access to essential airport business operations, including car rental operations facilities, air cargo terminals, and employee parking.

7.6 MEASURES TO MINIMIZE HARM

Several measures would be employed that would minimize harm to those Section 4(f) resources were identified. The project's design in the vicinity of the Dulles International Airport Historic District has already been modified to minimize the effects on the district. The vertical profile of the Metrorail tracks and the concrete safety barrier within the median of the DIAAH were lowered to minimize, to the extent possible given site conditions, any obstruction of these views of the main terminal and control tower. Further lowering of this profile is not feasible given the need to maintain clearance over the 100-year floodplain of Horsepen Run and feasible Metrorail track gradients. The location of the inbound portal was shifted westward to avoid interference with the peekaboo view sequence. The location of the outbound portal was shifted northward toward the edge of the historic district into a parking lot and farther away from other contributing structures.

Access to Pimmit Run Stream Valley Park, Scotts Run Stream Valley Park, Difficult Run Stream Valley Park, and the W&OD Trail will be maintained during construction activities that have the potential to affect access to these parks/trails. Site conditions will be returned to conditions prior to construction. The new bridge that spans the W&OD Railroad Regional Park would be built in compliance with NVRPA Guideline for the Development of W&OD Trail Bridge Crossings.

As design moves forward, the project team will continue to coordinate with affected localities to identify ways to incorporate context sensitive design for proposed facilities that may be affected by the LPA alignment.

The Section 106 Memorandum of Agreement (MOA) identifies measures that will address the project's Adverse Effect on the Dulles International Airport Historic District. The MOA provides for identification of treatment measures that allow users of the Metrorail station and airport travelers to understand and appreciate the airport's unique historic characteristics, highlighting key themes or features of Eero Saarinen's original concepts for the Dulles Airport complex. Potential measures under consideration include: interpretive exhibits or artwork within the station facilities, connecting walkways, or terminal facilities; photo or video documentation of the view sequence; and pruning or removal of non-historic vegetation (trees) on airport property to enhance the historic views. Context sensitive design will be used in the design of aerial structures, portals, and station facilities within the historic district. A treatment plan incorporating these measures will be developed in accordance with the Section 106 MOA (see Appendix F).

The Section 106 MOA also establishes procedures for dealing with unanticipated archaeological discoveries.

During construction activities, the duration of the occupancy would be less than the time needed to complete the project. Construction activities would not result in permanent impacts to the identified Section 4(f)/Section 6(f) resources. After construction activities, the sites would be restored to the same or better condition.

7.7 AGENCY COORDINATION

The U.S. Department of Interior (DOI), National Park Service (NPS), Virginia Department of Historic Resources (VDHR), Virginia Department of Conservation and Recreation (VDCR), the Fairfax County Department of Planning and Zoning, the Loudoun County Planning Department, the Fairfax County School District, Fairfax County Parks Authority (FCPA), and the Northern Virginia Regional Park Authority (NVRPA) were consulted during the preparation of this Section 4(f) Evaluation and throughout the NEPA process. Agency comments and concerns are summarized below. Correspondence related to agency coordination is included in Appendix I.

In response to issues raised at the agency pre-scoping meetings in July 2000, comment letters were received from NPS, NVRPA, and FCPA. Representatives of the project team met with NPS to discuss the status of the project and potential options for a Wolf Trap National Park Station. Representatives of the team also met with NVRPA to discuss parklands and recreational resources within or near the study area.

The FCPA provided comments on the Draft EIS, stating a preference for the Metrorail alternative because it would enhance public accessibility to parkland and provide long-term protection of park resources, among other things. FCPA also commented on the potential to incorporate park and recreation related amenities at station locations and crossings within stream valley parks.

The VDCR and the NVRPA provided input on the W&OD Railroad Regional Park. Concerns were expressed over the potential effects of the alignment in regards to light requirements for the proposed crossing of this resource and the potential to impact access during construction. In 2004, VDCR determined that there would no conversion of use of the W&OD trail and NVRPA determined that the LPA crossing would not have any Adverse Effect on the W&OD trail. At that time, the project team confirmed that the proposed design of the Metrorail overpass would meet NVRPA's design guidelines.

The VDHR was contacted to discuss historic and archaeological resources in February 2001 as part of the Section 106 consultation. Additional agency coordination took place in 2003 and 2004 with VDHR and MWAA to determine eligibility of resources identified within the APE and to delineate the eastern boundary of the eligible Dulles International Airport Historic District. In May 2004, the VDHR concurred with the findings of both the April 2004 *Identification and Evaluation Report-Historic Architecture*, with the exception of one resource, and the April 2004 *Identification and Evaluation Report-Archaeology*. At that time, VDHR confirmed the National Register eligibility of the Dulles International Airport Historic District and the historic characteristics of the remaining views in the Saarinen "peekaboo" sequence. It also concluded that the impacts of the full LPA on the peekaboo sequence constitutes an Adverse Effect on the resource under Section 106. A Memorandum of Agreement (MOA) among FTA, DRPT, and VDHR has been developed to comply with mitigation requirements under Section 106 of the National Historic Preservation Act (16 USC 470). A copy of the MOA is included in Appendix F.

The June 2002 Draft EIS and the October 2003 Supplemental Draft EIS, were circulated for comment to all agencies consulted with as part of the planning process to identify potential effects on properties protected under Section 4(f). Discussions of potential 4(f) impacts to Pimmit Run Stream Valley Park, Difficult Run Stream Valley Park, Scotts Run Stream Valley Park, the W&OD Railroad Regional Park, the Ash Grove Historic Site, and Dulles International Airport Historic District were included in the Draft EIS Section 4(f) Evaluation provided to DOI and other agencies for review. The Hunter Mill Road Proposed

Historic District, determined eligible for the NRHP after the preparation of the Draft EIS, was included in the Supplemental Draft EIS and provided to agencies for review.

This final Section 4(f) Evaluation was provided to DOI for review in July 2004.

7.8 CONCLUSION

Based on the evaluation conducted and coordination with the FTA, the LPA would result in a permanent use of the Dulles International Airport Historic District and a potential permanent use of the Hunter Mill Road Proposed Historic District depending on the district's final boundaries. Construction activities near or within Section 4(f) and Section 6(f) resources would not result in any adverse temporary use of these properties. Minor proximity impacts identified would not substantially impair the protected features of the properties identified. The LPA incorporates measures to minimize impacts identified. FTA has determined that there are no feasible and prudent alternatives to the use of Hunter Mill Road Proposed Historic District and Dulles International Airport Historic District, as that use is described above, and the project included all possible planning to minimize harm, as detailed in the Section 106 MOA and measures identified above.

8 FINANCIAL ANALYSIS

This chapter describes the initial financial analysis and planning for the construction and operations of the Locally Preferred Alternative (LPA).

The alternative formerly known as "LPA Phase 1" in the October 2003 *Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation* has been renamed the Wiehle Avenue Extension in this Final EIS and is expected to begin operations in 2011. This change reflects the federal approach to the project's funding under the Federal Transit Administration's New Starts program. It will assure consistency among the environmental, engineering and financial documents during the project's development.

In the October 2003 *Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation* as well as this Final EIS, the term "full LPA" represents the Wiehle Avenue Extension and the second phase of the Dulles Corridor Rapid Transit Project. This second phase would extend west from Wiehle Avenue to Washington Dulles International Airport and Route 772 and is expected to begin operations in 2015.

The term "LPA", "proposed action", or "selected LPA" refers to both the Wiehle Avenue Extension and the full LPA collectively.

Section 8.1 is the Capital Funding Strategy. It describes the capital cost estimate, presents the expenditure schedule of capital costs, identifies the capital funding sources and shares, and describes the financing approach for the Wiehle Avenue Extension and the full LPA.

Section 8.2 is the Operating Funding Strategy. It describes the methodology of the operating and maintenance cost estimates and of Metrorail revenue forecasts, presents the Metrorail operating costs, revenues and deficit for the opening year and the forecast year, and explains the allocation of the Metrorail operating subsidy among WMATA Compact jurisdictions.

Section 8.3 is the Risk Assessment of the capital and operating funding strategies. Possible approaches for addressing these risks are also discussed.

The financial analysis and planning documented in this Final Environmental Impact Statement (EIS) reflects a level of detail appropriate for a project in the planning phase. The next phases of project development - preliminary engineering and final design - will define the project in detail, produce more reliable cost estimates and result in a final financial plan. In accordance with the Federal Transit Administration (FTA) guidance for its New Starts program, the general content of the financial plan remains the same throughout the planning and project development process.

Based on guidance from FTA, phased construction of the full LPA is necessary to spread the capital costs over a longer period of time and reduce annual Federal funding needs. Although the entire project is being evaluated for potential environmental impacts and FTA expects to issue a single Record of

Decision, only the Wiehle Avenue Extension will be advanced in the New Starts program at this time. Any FTA decision on funding the construction of the Wiehle Avenue Extension will be made without regard to future completion of the full LPA. FTA may consider the remainder of the full LPA for Federal funding in the future, but has made no commitment to do so. In that context, this chapter of the Final EIS focuses on capital and operating funding strategies for both the Wiehle Avenue Extension and the full LPA.

8.1 CAPITAL FUNDING STRATEGY

This section describes the methodology of estimates, the project construction expenditure schedule, funding sources and shares, and financing approach.

8.1.1 CAPITAL COST ESTIMATE

The capital cost estimates for the Wiehle Avenue Extension and the full LPA presented in this Final EIS are preliminary and are based on the level of engineering detail included in the Final General Plans (Volumes IV and V). The capital cost estimate is based on an implementation schedule that assumes an opening date for the Wiehle Avenue Extension in 2011; and an opening date of the full LPA in 2015. Capital costs are estimated in year 2004 dollars, and then escalated to fiscal year-of-expenditure (YOE) dollars. All references to fiscal year (FY) refer to FTA's fiscal year (October 1 through September 30). Inflation projections are used to convert 2004 dollars into year-of-expenditure amounts. The Final EIS cost estimates assume an annual 3 percent rate of inflation for all costs using the assumed construction schedules for the Wiehle Avenue Extension and the full LPA. Future refinements to the project's financial plan will apply regional inflation projections based on construction industry indices.

Tables and 8.1-1 and 8.1-2 summarize the capital costs for the Wiehle Avenue Extension and the full LPA. For planning purposes, the capital cost of the Wiehle Avenue Extension is estimated to be approximately $1.5 billion (YOE), and the capital cost of the full LPA is estimated to be approximately $3.5 billion (YOE). Any financing costs necessary to cover delays or shortfalls in funding once construction begins are not included in these estimates. A more detailed implementation schedule and refined cost estimates will be developed during preliminary engineering. The cost to complete the National Environmental Policy Act of 1969 (NEPA), as amended, environmental review process, to prepare General Plans on all alternatives of the Draft EIS, Supplemental Draft EIS, and Final EIS, and to conduct various analyses related to advancing the project in FTA's New Starts process is not included in the capital cost estimate for the Wiehle Avenue Extension or the full LPA.

Development of the capital cost estimate methodology and categories is consistent with FTA guidelines. FTA's updated standard cost categories, released in early 2004, are used for capital cost reporting. The Guideway and Track category includes the surface, aerial and subway/tunnel construction costs, including trackwork for Metrorail. The Stations, Stops, Terminals and Intermodal category includes the stations, platforms, parking lots, access roads, parking garages, pedestrian overpasses, and support infrastructure associated with the passenger stations (e.g. bus park-and-rides, Kiss & Ride). The Yards, Shops and Administrative/Support Facilities category includes vehicle storage yards and maintenance buildings, office support buildings and shop equipment. The Sitework and Special Conditions category includes anticipated costs for environmental mitigation, roadway modifications, utility modifications and demolitions. The Right-of-Way, Land, and Existing Improvement category includes land, property rights, and relocation costs, if required. The Systems category includes costs for control systems, electrification, communications, revenue collection, and vertical access (escalators and elevators). Vehicle costs

Table 8.1-1: Capital Cost Estimate and Expenditure Forecast – Wiehle Avenue Extension (Millions YOE Dollars)

FTA Standard Cost Category	Total	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Guideway and Track Elements	**$362.8**	$0.0	$0.0	$0.0	$51.6	$88.5	$109.4	$93.9	$19.3	$0.0	$0.0
Stations, Stops, Terminals, Intermodal	**$268.7**	$0.0	$0.0	$0.0	$25.3	$65.3	$80.7	$83.1	$14.3	$0.0	$0.0
Yards, Shops, Admin/Support Facilities	**$57.2**	$0.0	$0.0	$0.0	$5.4	$13.9	$17.1	$14.7	$6.1	$0.0	$0.0
Sitework and Special Conditions	**$51.0**	$0.0	$0.0	$0.0	$32.8	$18.2	$0.0	$0.0	$0.0	$0.0	$0.0
ROW, Land, Existing Improvements	**$88.7**	$0.0	$0.0	$52.6	$36.1	$0.00	$0.0	$0.0	$0.0	$0.0	$0.0
Systems	**$172.7**	$0.0	$0.0	$0.0	$24.4	$33.5	$43.1	$44.4	$27.4	$0.0	$0.0
Vehicles	**$189.5**	$0.0	$0.0	$0.0	$1.6	$18.1	$26.6	$21.8	$102.6	$12.5	$6.3
Soft Costs [1]	**$265.1**	$9.4	$24.1	$24.9	$38.4	$39.6	$46.2	$42.0	$35.6	$5.9	$0.0
Contingency[2]	**$65.8**	$0.0	$0.0	$0.0	$6.1	$12.7	$16.3	$16.8	$13.8	$0.0	$0.0
Total Project Costs [3]	**$1,521.5**	**$9.4**	**$24.1**	**$77.5**	**$221.7**	**$289.8**	**$339.5**	**$316.7**	**$218.1**	**$18.4**	**$6.3**

Notes:

1. *Soft Costs* include preliminary engineering, final design, construction management, project management, owner administration, FTA and other agency coordination, insurance, and project start-up and testing.
2. *Contingency* costs include allowances for change orders.
3. Costs shown are preliminary and subject to change based on the results of preliminary engineering, design-build negotiations, and funding availability.

Table 8.1-2: Capital Cost Estimate and Expenditure Forecast – Full LPA (Millions YOE Dollars)

FTA Standard Cost Category	Total	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Guideway and Track Elements	**$805.4**	$0.0	$0.0	$0.0	$51.6	$88.5	$109.4	$93.9	$82.3	$108.0	$133.5	$114.6	$23.6	$0.0	$0.0
Stations, Stops, Terminals, Intermodal	**$610.9**	$0.0	$0.0	$0.0	$25.4	$65.3	$80.7	$83.1	$46.6	$83.1	$102.7	$105.8	$18.2	$0.0	$0.0
Yards, Shops, Admin/Support Facilities	**$186.4**	$0.0	$0.0	$0.0	$5.4	$13.9	$17.1	$14.7	$18.2	$31.3	$38.7	$33.3	$13.7	$0.0	$0.0
Sitework and Special Conditions	**$130.0**	$0.0	$0.0	$0.0	$32.8	$18.2	$0.0	$0.0	$50.8	$28.2	$0.0	$0.0	$0.0	$0.0	$0.0
ROW, Land, Existing Improvements	**$117.3**	$0.0	$0.0	$52.6	$36.1	$0.0	$0.0	$8.4	$11.5	$8.7	$0.0	$0.0	$0.0	$0.0	$0.0
Systems	**$431.1**	$0.0	$0.0	$0.0	$24.4	$33.5	$43.1	$44.4	$63.8	$50.0	$64.4	$66.3	$27.3	$14.1	$0.0
Vehicles	**$393.3**	$0.0	$0.0	$0.0	$1.6	$18.1	$26.6	$21.8	$104.4	$23.1	$38.9	$27.9	$82.6	$40.6	$0.0
Soft Costs	**$631.2**	$9.4	$24.1	$24.9	$38.4	$52.5	$79.5	$76.3	$87.7	$60.6	$63.8	$58.0	$47.8	$8.2	$7.6
Contingency	**$154.5**	$0.0	$0.0	$0.0	$6.2	$12.7	$16.5	$16.8	$22.1	$17.1	$22.0	$22.7	$18.7	$0.0	$0.0
Total Project Costs	**$3,460.1**	**$9.4**	**$24.1**	**$77.5**	**$221.7**	**$302.7**	**$372.8**	**$359.5**	**$487.4**	**$410.1**	**$464.0**	**$428.5**	**$231.9**	**$62.9**	**$7.6**

Notes:

1. *Soft Costs* include preliminary engineering, final design, construction management, project management, owner administration, FTA and other agency coordination, insurance, and project start-up and testing.
2. *Contingency* costs include allowances for change orders.
3. Costs shown are preliminary and subject to change based on the results of preliminary engineering, design-build negotiations, and funding availability.

include new Metrorail vehicles that would operate on the Dulles Corridor line. The vehicle cost estimates are derived from a planned WMATA procurement of its Series 7000 rail cars. *Soft Costs* include preliminary engineering, final design, construction management, project management, owner administration, FTA and other agency coordination, insurance, and project start-up and testing. *Contingency* costs include allowances for change orders.

8.1.2 WIEHLE AVENUE EXTENSION CAPITAL FUNDING STRATEGY

FTA, the Commonwealth of Virginia, and Fairfax County will provide capital funding for the Wiehle Avenue Extension. WMATA and its member jurisdictions will be responsible for funding the operations and maintenance of the system, including the operating subsidy, as described in Section 8.2.

The required funding amounts from FTA, the Commonwealth of Virginia and Fairfax County for the Wiehle Avenue Extension are shown in Table 8.1-3. The share of capital funding proposed for each jurisdiction is approximate, pending the completion of preliminary engineering and a final cost allocation agreement.

That allocation agreement would outline the level and timing of funding required from each jurisdiction, and would be used to support the request to begin final design and negotiation of a Full Funding Grant Agreement (FFGA). Prior to FTA approval of final design and the FFGA, each jurisdiction will have taken the steps necessary to fully commit the funding through their respective legislative or administrative processes. This could include legislative appropriations or authorizations, board actions, and/or administrative approvals.

Table 8.1-3: Sources of Capital Funding – Wiehle Avenue Extension (Millions of YOE Dollars)

Source	Funding Level	Funding Share
Federal Sources		
5309 New Starts	$760.7	50.0%
Total Federal Funds	**$760.7**	**50.0%**
Non-Federal Sources		
Virginia Transportation Act of 2000	$75.0	5%
Dulles Toll Road Revenues	$305.4	20%
Dulles Rail Transportation Improvement District	$380.4	25%
Total Non-Federal Funds	**$760.8**	**50.0%**
TOTAL WIEHLE AVENUE EXTENSION BUDGET	**$1,521.5**	**100.0%**

8.1.2.1 Federal Transit Administration

DRPT and its funding partners are seeking $760.7 million in Federal funding for the Wiehle Avenue Extension through FTA Section 5309 New Starts program. This funding level represents 50 percent of the estimated project costs, consistent with FTA's recent practice for major transit capital investments.

A. FTA Section 5309 Funds

FTA's discretionary New Starts (Section 5309) program is the Federal government's primary financial resource for supporting locally-planned, implemented, and operated "fixed guideway" transit capital investments. FTA provides grants through this program to state and local governments for the

development of new and improved transit facilities and services. The program is discretionary and FTA's funding decisions are made on a project-by-project basis.

The New Starts program is authorized in multi-year budget cycles. For FY 1998 to 2003, the Transportation Equity Act for the 21st Century (TEA-21) authorized approximately $8.2 billion for the New Starts program. Based on the Administration's current proposal and congressional proposals, FTA expects this level of funding to be maintained in the transportation reauthorization. Therefore, continued funding of the New Starts program at these levels to support the Dulles Corridor Rapid Transit Project and other major transit capital investments in the years to come is expected. Based on guidance from FTA, an annual maximum of $100 million in New Starts program funding could be provided to support construction of the Wiehle Avenue Extension.

Section 380 of the FY 2001 Department of Transportation and Related Agencies Appropriation Act makes available additional FTA contingent commitment authority in the amount of $217.8 million specifically for the Dulles Corridor Rapid Transit Project. Contingent commitment is a tool used by the FTA to provide funding for New Starts projects beyond the limits of the current authorization. Of that contingent commitment, a total of $163.5 million in New Starts funding has been appropriated for the Project through FY 2004 to support project planning, environmental review, and engineering activities. An additional $20 million of New Starts funding for the project is expected in FY 2005. In addition to these appropriations, DRPT has requested that $600 million in additional New Starts funding be authorized for the Dulles Corridor Rapid Transit Project in the pending transportation reauthorization.

A FFGA will be required to secure any authorized federal New Starts funding for construction of the Wiehle Avenue Extension. The terms of the FFGA, including the level and timing of federal funding participation, will be finalized following completion of preliminary engineering activities.

8.1.2.2 Commonwealth of Virginia

The Commonwealth of Virginia will be responsible for funding 25 percent of the Wiehle Avenue Extension capital costs, approximately $380.4 million (YOE), using Virginia Transportation Act (VTA) of 2000 and Dulles Toll Road revenues.

A. Virginia Transportation Act of 2000

In May 2000, the Virginia General Assembly passed the Virginia Transportation Act of 2000. This legislation created the Priority Transportation Fund and authorized the Commonwealth Transportation Board (CTB) to issue Federal Reimbursement Anticipation Notes (FRANs) in the maximum aggregate principal amount of $1.2 billion outstanding at any one time. FRANs are a revolving line of credit used by the Commonwealth to fund construction of transportation improvements.

Since 2000, the CTB has issued $547.7 million in FRANs for specific public transportation, rail, highway, port, and aviation projects throughout the Commonwealth. A total of $75 million in FRAN revenues have been allocated to the Dulles Corridor Rapid Transit Project and are programmed in the *FY 2005-2010 Virginia Transportation Six-Year Program.* DRPT intends to use these funds for the local share of preliminary engineering costs.

B. Dulles Toll Road Revenues

The Dulles Toll Road, which opened in 1984, was constructed by the Virginia Department of Transportation (VDOT) and financed using Transportation Facilities Bonds issued by the Commonwealth of Virginia. Existing toll rates for automobiles range from $0.25 to $0.85, depending upon the length of the trip. Electronic toll collection is available at all toll plazas for cars equipped with transponders. Per

CTB policy, any available revenues, once debt service and operating expenses are paid must be used to finance transportation improvements within the Dulles Corridor. In September 2001, the CTB directed that a minimum of 85 percent of available revenues be dedicated to public transportation initiatives in the Dulles Corridor. These funds have been used to support construction of new transit facilities and operate the current Express Bus Service in the corridor.

To fund the Commonwealth's share of the Dulles Corridor Rapid Transit Project with available revenues and limited use of short-term financing, a toll increase is planned. Based on an initial analysis of current traffic and growth projections, a toll of $0.75 at the main toll plaza and $0.50 at each interchange ramp toll plaza provides sufficient revenues to meet the Commonwealth's obligations for the Wiehle Avenue Extension. A final decision on the revised toll structure would be made by the CTB after the completion of a formal traffic and revenue study and its administrative review process.

The Commonwealth is currently conducting a rate adjustment study for the Dulles Toll Road. This study will evaluate various tolling options and be used to secure financing supported by the Dulles Toll Road revenues. The results of the study and formal recommendations are expected in late 2004. Following this, a final decision on a revised toll structure would be made by the CTB. Any approved toll increases would be implemented in advance of construction to begin building reserves for the project, perhaps as early as January 2005.

8.1.2.3 Fairfax County

Approximately $380.4 million (YOE), representing 25 percent of the capital costs for the Wiehle Avenue Extension, would be provided by Fairfax County using revenues from the newly formed Dulles Rail Transportation Improvement District, and if necessary, General Obligation bonds.

A. Fairfax County Dulles Rail Transportation Improvement District

During the 2001 session, the Virginia General Assembly passed legislation that authorized the establishment of special transportation improvement districts within Fairfax County and the Town of Herndon to support construction of the Dulles Corridor Rapid Transit Project. In January 2004, a landowner's group submitted a petition to the Fairfax County Board of Supervisors to establish a Dulles Rail Transportation Improvement District for the Wiehle Avenue Extension. This district would support Fairfax County's share of the Wiehle Avenue Extension capital costs. The Petitioners proposed to contribute the full amount of the County's net share for the Wiehle Avenue Extension through the imposition of a voluntary tax on commercial and industrial properties within the proposed district, which includes all of the facilities needed to construct and operate the Wiehle Avenue Extension. The petition was approved by the Fairfax County Board of Supervisors in February 2004, and a commission comprised of local elected officials and a member of the CTB was appointed to govern the district. A board of landowners has also been created to advise the Commission on the management of the district.

Fairfax County and the landowners group have structured the district to provide sufficient revenues to cover the County's share of costs for the Wiehle Avenue Extension. Although payments will not be due until December 2004, on July 1, 2004, Fairfax County began charging commercial landowners an additional 22 cents per $100 of assessed value for their properties on top of the base real estate tax rate of $1.13. Fairfax County projects that the tax rate could eventually increase to 29 cents per $100 of assessed value once a Full Funding Grant Agreement is reached. The actual levy will be established each year based on current assessments and the amount of outstanding debt. The district, which had an assessed value of $6.8 billion in June 2004, is expected to generate up to $400 million for the construction of the Wiehle Avenue Extension.

State law allows Fairfax County several options for issuing debt that would be supported by the Dulles Rail Transportation Improvement District tax levy. At this time, specific details on the structure of any bond issue have not been finalized, though Fairfax County is pursuing a strategy that would achieve an investment grade rating on the bonds.

B. Fairfax County General Obligation Debt

If Transportation Improvement District revenues are not sufficient, Fairfax County may consider supporting its capital obligations for the Dulles Corridor Rapid Transit Project through a voter approved general obligation debt offering. The County is actively examining options for increasing debt capacity in the future. Fairfax County has shown a strong commitment to fund Metrorail construction by issuing $125.3 million in general obligation bonds through voter approval. In FY 2004, Fairfax County issued approximately $83.7 million in General Obligation debt, of which $14.8 million was for Metrorail construction. Fairfax County commonly issues tax-exempt general obligation bonds to finance major capital projects.

8.1.3 FULL LPA - CAPITAL FUNDING STRATEGY

The Federal Transit Administration, Commonwealth of Virginia, Fairfax County, Loudoun County, and the Metropolitan Washington Airports Authority (MWAA) would provide capital funding for the full LPA. WMATA and its member jurisdictions will be responsible for funding the operations and maintenance of the system, including the operating subsidy, as described in Section 8.2.

The capital funding strategy for the full LPA would consist of the financial plan for the Wiehle Avenue Extension, as well as a separate financial plan for the remainder of the full LPA. The latter funding plan will be similar to that of the Wiehle Avenue Extension, with the addition of MWAA and Loudoun County as funding partners. Table 8.1-4 outlines the anticipated levels of capital funding required from each funding partner for construction of the full LPA. This allocation of capital funding reflects the current status of ongoing discussions among the non-federal funding partners. The share of capital funding proposed for each jurisdiction is approximate, pending the completion of preliminary engineering and a final cost allocation agreement. That allocation agreement would outline the level and timing of funding required from each jurisdiction, and would be used to support the request to begin final design and negotiation of a FFGA. Prior to FTA approval of final design and the FFGA, each jurisdiction will have taken the steps necessary to fully commit the funding through their respective legislative or administrative processes. This could include legislative appropriations or authorizations, board actions, and/or administrative approvals.

Table 8.1-4: Sources of Capital Funding – Full LPA (Millions of YOE Dollars)

Sources of Funds	Funding Level	Funding Share
Federal Sources		
5309 New Starts	$1,730.0	50.0%
Total Federal Funds	**$1,730.0**	**50.0%**
Non-Federal Sources		
Virginia Transportation Act of 2000	$75.0	2.2%
Dulles Toll Road Revenues and Future Transportation Appropriations	$790.0	22.8%
Fairfax County Dulles Rail Transportation Improvement Districts	$557.1	16.1%
Loudoun County Public Transportation Fund	$1.9	0.1%
Loudoun County BPOL Bonds	$164.2	4.7%
MWAA Passenger Facility Charges	$141.9	4.1%
Total Non-Federal Funds	**$1,730.1**	**50.0%**
TOTAL PROJECT BUDGET	**$3,460.1**	**100.0%**

8.1.3.1 Federal Transit Administration

The FTA is being requested to fund 50 percent of the Dulles Corridor Rapid Transit Project's total capital costs through the FTA Section 5309 New Starts program, for a total estimated amount of $1,730 million (YOE). Additional information on the New Starts program is provided in Section 8.1.2.1.

8.1.3.2 Commonwealth of Virginia

Virginia will be responsible for funding 25 percent of the Dulles Corridor Rapid Transit Project's total capital costs, approximately $865 million (YOE). In addition to the Virginia Transportation Act of 2000 funds and Dulles Toll Road revenues that are planned to fund the Wiehle Avenue Extension, the Commonwealth may consider additional sources, including future transportation appropriations, to fund construction of the remainder of the full LPA. Additional information on the Commonwealth's proposed funding sources is provided in Section 8.1.2.2.

8.1.3.3 Fairfax County

Approximately $557 million (YOE), representing 16.1 percent of the project's capital costs, will be provided by Fairfax County. Fairfax County's portion of the capital costs for the Wiehle Avenue Extension would be funded by the Dulles Rail Transportation Improvement District. It is expected that Fairfax County will utilize a second tax district that includes properties west of Wiehle Avenue to fund the remainder of its share of the full LPA.

A new landowner's group, called the Western Alliance for Rail to Dulles (WARD), has formed to explore the potential of developing another tax district, similar to the Dulles Rail Transportation Improvement District, that would include properties within Fairfax County west of Wiehle Avenue. WARD has drafted a petition and began circulating it among landowners in July 2004. This petition envisions an initial rate of 5 to 7 cents per $100 of assessed value that would be used to build reserves and a rate stabilization fund. This rate would increase in later years when debt supported by the district's revenues is issued. WARD

anticipates that the maximum tax rates will be similar to those projected by Fairfax County for the Dulles Rail Transportation Improvement District.

8.1.3.4 Metropolitan Washington Airports Authority

In 1987, the operating responsibility for the Washington Dulles International Airport (Dulles Airport) and Ronald Reagan Washington National Airport (National Airport) was transferred by long-term lease from the U.S. Department of Transportation (U.S. DOT through FAA) to MWAA. The Authority was created by legislation enacted by the Commonwealth of Virginia and the District of Columbia, consistent with federal legislation authorizing the lease. The majority of the project alignment is in MWAA-controlled property in the median of the Dulles International Airport Access Highway (DIAAH). MWAA is considering the following capital funding source for its share of the full LPA.

A. Passenger Facility Charges

In 1990, Congress approved the Aviation Safety and Capacity Expansion Act, which authorized domestic airports to impose a Passenger Facility Charge (PFC) on enplaning passengers. In May 1991, the FAA issued the regulations for the use and reporting of PFCs. PFCs may be used for airport projects that must meet at least one of the following criteria: preserve or enhance safety, security, or capacity of the national air transportation system; reduce noise or mitigate noise impacts resulting from an airport; or furnish opportunities for enhanced competition between or among carriers. MWAA was granted permission to begin collecting a $3 PFC effective November 1, 1993, at National Airport and January 1, 1994, at Dulles Airport. The charges, less an administrative processing fee charged by the airlines, are collected by the airlines and remitted on a monthly basis to MWAA. Due to their restricted use, PFCs are categorized as non-operating revenue and are accounted for on the accrual basis.

In February 2001, MWAA applied for and received the authority to increase the PFC collection from $3.00 to $4.50, effective May 2001. Historically, PFC cashflows have not matched the airport's construction spending schedule. Therefore, MWAA entered into agreements to provide lines of credit. As of June 30, 2004, MWAA has utilized $187 million of a $255 million line of Flexible Term PFC Revenue Notes. These notes are rated AA-1/A-1 by Standard & Poor's. MWAA expects to redeem all the Notes by November 2009.

MWAA's PFCs are currently committed through 2017 for its current expansion program at Dulles Airport. However, MWAA anticipates it may be able to provide its share of capital funding by borrowing against future PFC revenues beyond 2017. FAA approval would be required for any use of MWAA funds towards the project.

8.1.3.5 Loudoun County

Loudoun County is a jurisdictional member of the WMATA Compact. However, because Loudoun County does not currently receive WMATA service, it does not contribute to the operations or capital budget. The introduction of the Dulles Corridor Rapid Transit Project is anticipated to add Loudon County to the other Virginia jurisdictions contributing to the WMATA budget. Loudoun County does operate its own transit services, and in FY 2002 created the Office of Transportation Services and a Public Transportation Fund to provide resources for its increasing transportation responsibilities.

Loudoun County presently funds the local share of transportation projects through the use of the local gasoline tax and the Business Professional and Occupancy License (BPOL) revenue. In FY 2004, the adopted six-year Capital Improvement Plan (CIP) allocated $1.9 million from the County Public Transportation Fund and $23 million from BPOL pledge bonds for FY 2005-2010 to the Dulles Corridor

Rapid Transit Project. Loudoun County is proposing the use of these funding sources for its share of the full LPA capital costs.

A. BPOL Bonds

BPOL bonds in the amount of $23 million have been programmed for construction of the full LPA between FY 2004 to 2008, with an additional $139.6 million in BPOL bonds programmed for FY 2010 - 2015. The County plans to divert BPOL revenues from the General Fund to provide a dedicated source of funding for the project. The loss of BPOL revenues from the General Fund is expected to be compensated through growth in other sources (largely real property taxes) resulting from continued residential and commercial development in the County.

The County currently carries a debt load of $712 million and the Notes are rated by Moody's as AAA, Standard & Poors as AA+ and Fitch as AA+. By the end of FY 2010, the level of outstanding debt is anticipated to be $988 million. County debt service has been held at a relatively constant level over the past two years. The increased debt load is anticipated to increase the debt service obligation from $96 million in FY 2005 to $145 million by FY 2010.

B. Loudoun County Public Transportation Fund

Funds in the amount of $1.9 million were programmed for full LPA construction-related activities in FY 2004.

8.1.4 FUNDING SECURED TO DATE

To date, federal and state funding sources for the Dulles Corridor Rapid Transit Project include both appropriations and future funding commitments. Funds secured, or authorized to date for the project total over $650 million. This includes $163.5 million in Section 5309 New Starts funding for the project appropriated between FY 1999 and FY 2004, $75 million in VTA 2000 funding, $3 million in excess Dulles Toll Road revenues, and $10.6 million in allocations from Commonwealth Transportation Fund sub-accounts. Another $400 million was recently authorized with the formation of Fairfax County's Dulles Rail Transportation Improvement District.

To date, $32 million in federal funding and $13.6 million in Commonwealth funding has been used to complete the NEPA environmental review process, to prepare General Plans on all alternatives of the Draft EIS, Supplemental Draft EIS and Final EIS, and to conduct various analyses related to advancing the project in FTA's New Starts process. No funds from the Dulles Rail Transportation Improvement District, Loudoun County or MWAA have been used to date.

8.1.5 CAPITAL FINANCING APPROACH

The capital financing approach for both the Wiehle Avenue Extension and the full LPA is discussed below.

8.1.5.1 Wiehle Avenue Extension

During preliminary engineering, DRPT will prepare a final financial plan for the Wiehle Avenue Extension and negotiate funding agreements with its non-federal funding partners, all in support of a FFGA with FTA. A preliminary financial plan for the Wiehle Avenue Extension was prepared by DRPT in August 2003 in support of its request for preliminary engineering approval. That plan identified the financing tools and capital financing approaches (which are summarized below) most likely to be used for construction.

An updated and more detailed capital financing plan will be prepared during preliminary engineering to support the FFGA, local funding agreements, and any required debt issues.

Federal Funding. For the Wiehle Avenue Extension capital plan, federal New Starts funding of $100 million per year is assumed to be available for construction expenditures between FY 2006 and 2011. These funds would be combined with prior federal appropriations and non-federal funding to match the construction expenditure schedule. No long-term financing of federal funds for the Wiehle Avenue Extension construction is anticipated. Short-term financing, through a letter of credit or similar mechanism may be required if annual federal funding levels do not match the terms of the signed FFGA.

Commonwealth of Virginia Funding. With the proposed toll increase, the excess Dulles Toll Road revenues available through 2015 are sufficient to fund the Commonwealth's share of the Wiehle Avenue Extension capital costs on a "pay-as-you-go" basis. However, to meet the proposed implementation schedule, debt financing would be used for a portion of the construction expenditures. New Commonwealth debt (revenue bonds) issued on behalf of the Dulles Corridor Rapid Transit Project would be repaid with future Dulles Toll Road excess revenues. A variety of debt financing instruments, including short-term, long-term, and variable rate debt, are available to the Commonwealth. The terms and repayment schedules would vary depending on the type of debt instrument used. In the past, the CTB has issued debt on behalf of the Commonwealth for transportation projects. The Commonwealth may also consider a Transportation Infrastructure Financing and Innovation Act (TIFIA) loan or issuance of additional FRANs to finance a portion of its capital contribution. A final determination on the most appropriate type of debt financing will be made during preliminary engineering based on an evaluation of statewide transportation needs and current market conditions.

Fairfax County Funding. Fairfax County's primary contribution to the construction costs of the Wiehle Avenue Extension would be supported by tax revenues generated by the Dulles Rail Transportation Improvement District. New long-term debt would be issued. Fairfax County anticipates that this debt would be issued in two installments in FY 2007 and FY 2008. State law allows Fairfax County several options for issuing debt that would be supported by the Dulles Rail Transportation Improvement District tax levy. At this time, specific details on the structure of any bond issue have not been finalized, though Fairfax County is pursuing a strategy that would achieve an investment grade rating on the bonds. The final terms and timing of any new debt supported by the Transportation Improvement District will be determined by Fairfax County and the District Commission.

8.1.5.2 Full LPA

Because FTA is now advancing only the Wiehle Avenue Extension in the New Starts program, a detailed financing approach has not been developed for the full LPA. A preliminary financial plan for the full LPA will be developed subsequently, when DRPT seeks approval from FTA to advance that portion of the project into preliminary engineering. As with the Wiehle Avenue Extension, a more detailed financial plan would then be developed to support an FFGA for the remainder of the full LPA.

8.2 OPERATING FUNDING STRATEGY

Upon its acceptance of the Dulles Corridor Rapid Transit Project, WMATA will operate Metrorail service in the Dulles Corridor. WMATA's acceptance of the project is contingent upon fulfillment of the following seven conditions:

1. Satisfactory completion of the Final EIS;

2. Issuance of a Record of Decision (ROD) by FTA;

3. Board approval of a final financial plan for the construction, acquisition and operation of the new facilities;

4. Execution of implementing financial commitments between DRPT and funding sources in the form of local funding agreements and the federal FFGA;

5. WMATA's determination that the project has been completed in accordance with the Final EIS, approved General Plans and all WMATA system requirements and that the project, as built and tested, is suitable for acceptance into the Adopted Regional System;

6. Conveyance to WMATA by DRPT of a property interest in the project property adequate to assure WMATA's continuing control of the project property throughout the useful life of the project; and

7. Any indemnification obligation from WMATA to Toll Road Investors Partnership II (TRIP II), MWAA, or any other entity associated with the project is subject to Board approval and any indemnification obligation provided by DRPT to TRIP II, MWAA, or any other entity associated with the project will be subject to a determination by WMATA that such indemnification does not create a liability or potential liability for WMATA.

As DRPT prepares the final financial plan for the Wiehle Avenue Extension during the preliminary engineering (PE) phase, DRPT will work closely with WMATA on the final operating funding plan of operating costs, revenues and subsidy. At this time, operation of the Dulles Corridor Rapid Transit Project consists of Metrorail service for a system that has a reconfiguration of lines and longer headways and that has the Wiehle Avenue Extension in 2011 and the full LPA in 2015, and existing and enhanced local and express bus services by Fairfax and Loudoun Counties and WMATA as feeders to the proposed Metrorail extension.

8.2.1 OPERATING AND MAINTENANCE COSTS

The estimated, annual incremental Wiehle Avenue Extension and full LPA operating and maintenance (O&M) costs in year of expenditure (YOE) dollars for the opening years and forecast year (2025) for Metrorail are presented in Tables 8.2-1 and 8.2-2. For the Wiehle Avenue Extension at the time of its opening in 2011, the increment is $47.47 million, rising to $67.64 million in 2025. These costs are a 6.8 percent increase over the costs of the No Build Alternative in 2025.

Systemwide costs for Metrorail were developed by using WMATA’s new operating and maintenance cost model calibrated for WMATA FY 2004 data, based on costs by WMATA management center and by object class.

Tables 8.2-1 and 8.2-2 present the annual, incremental changes to the O&M costs, revenue and subsidy allocation to WMATA Compact jurisdictions for the Wiehle Avenue Extension and the full LPA. Opening year and forecast year results are provided for comparison.

Table 8.2-1: Compact Member Incremental Subsidy Requirements for the Wiehle Avenue Extension (Millions of YOE Dollars)

	Wiehle Avenue Extension	
	Opening Year 2011	Forecast Year 2025
Metrorail O&M Costs	$ **47.47**	$ **67.64**
Metrorail Operating Revenue	$ **(27.52)**	$ **(39.48)**
WMATA Compact Member Subsidy		
District of Columbia	$ **4.64**	$ **5.60**
Virginia[1]	$ **9.75**	$ **15.56**
Alexandria	$ 0.67	$ 0.85
Arlington County	$ 1.45	$ 1.86
Fairfax City	$ 0.09	$ 0.12
Fairfax County	$ 7.48	$ 12.63
Falls Church	$ 0.07	$ 0.11
Loudoun County	$ -	$ -
Maryland[1]	$ **5.55**	$ **7.01**
Montgomery County	$ 2.88	$ 3.80
Prince George's County	$ 2.67	$ 3.21
Total Subsidy	$ **19.95**	$ **28.17**

[1] Internal totals may not tally precisely due to rounding.
Operating subsidies distributed to Virginia jurisdictions are supported with state formula assistance.

Table 8.2-2: Compact Member Incremental Subsidy Requirements for full LPA (Millions of YOE Dollars)

	Full LPA	
	Opening Year 2015	Forecast Year 2025
Metrorail O&M Costs	$ **93.92**	$ **117.88**
Metrorail Operating Revenue	$ **(63.42)**	$ **(79.37)**
WMATA Compact Member Subsidy		
District of Columbia	$ **3.91**	$ **2.96**
Virginia[1]	$ **21.52**	$ **30.83**
Alexandria	$ 0.63	$ 0.56
Arlington County	$ 1.37	$ 1.26
Fairfax City	$ 0.09	$ 0.11
Fairfax County	$ 11.35	$ 16.32
Falls Church	$ 0.09	$ 0.10
Loudoun County	$ 8.00	$ 12.46
Maryland[1]	$ **5.08**	$ **4.73**
Montgomery County	$ 2.71	$ 2.70
Prince George's County	$ 2.37	$ 2.03
Total Subsidy	$ **30.50**	$ **38.51**

[1] Internal totals may not tally precisely due to rounding.
Operating subsidies distributed to Virginia jurisdictions are supported with state formula assistance.

8.2.2 OPERATING REVENUES

Several operating funding sources are proposed as revenue streams for the Dulles Corridor Rapid Transit Project. The majority of operating revenues would come from farebox revenues and the annual operating subsidy provided by member jurisdictions of the WMATA Compact. The WMATA Compact is an agreement among Virginia, Maryland and the District of Columbia that governs the management and operation of the Washington region's Metrorail, Metrobus, and MetroAccess systems. The annual incremental Metrorail subsidy is allocated among its members using an established and approved formula. As an extension to the existing Metrorail system, the Project will add Metrorail operating revenue but it would not be sufficient to cover the costs of the project, thus increasing the Metrorail subsidy. Existing and potential sources of operating funds are described below.

8.2.3 PASSENGER FARE REVENUES

Fare revenues have been estimated for the Metrorail system with the Wiehle Avenue Extension and with the full LPA, based on ridership projections, FY 2005 fare structure and periodic fare increases. The impacts of fare increases on projected ridership are included, adjusted for fare elasticities. These elasticities account for the fare increase impact on ridership characteristics and the resulting revenue yields. This approach generates a conservative estimate of passenger fare revenues.

8.2.4 OTHER SYSTEM REVENUES

Joint Development Revenues: This will include potential development above transit stations, station facilities, and line as well as connections to development on adjacent properties. WMATA already has a successful joint development program that has generated revenue contributions to the operating budget for many years. Projection of these revenues will be based on development opportunities identified during the design process and in the outreach with stakeholders, including major property owners and real estate developers in the Dulles Corridor. Joint development income is an important source of operating revenue for WMATA, amounting to $11 million of the total $473 million Metrorail operating budget in FY 2003.

Parking Revenues: WMATA is one of the few rapid transit systems in the U.S. that charges for parking at its stations. Parking fees are determined as part of the WMATA Tariff and through fare policy discussions with the WMATA Board and local jurisdictions. The parking fee has two components: a) the cost of daily operations and maintenance of the parking facilities, and b) a parking surcharge that, in coordination and consultation with local jurisdictions, is used to construct additional parking facilities at Metrorail stations.

Advertising: This includes revenues generated from advertising on vehicles and in stations. Advertising revenues are generally based on contract rates negotiated with national advertising firms. The Dulles Corridor Rapid Transit Project will contribute incrementally to the existing WMATA program.

Concessions: This includes income from telephones, vending machines, and (potentially) retail operations within stations.

8.2.4.1 Federal Funds

Federal funding to support Metrorail operations may be provided from two programs.

1. **Section 5307 Urbanized Area Formula Funds**: These grants are applied to capital projects and preventive maintenance; that is, maintenance activities in the operating budget that may be classified as capital for the purpose of qualifying for Section 5307 grants.

2. **Congestion Mitigation Air Quality (CMAQ) Funds**: Allocation of these resources is based on regional consensus through the region's Transportation Planning Board. CMAQ funds may be used for operations in the first three years of new transit service.

8.2.4.2 State Funds

The Commonwealth of Virginia may support Project operations with funding from the DRPT Formula Assistance. DRPT administers this formula assistance program to local transit operators throughout the Commonwealth. The Northern Virginia Transportation Commission annually receives at least 60 percent of total program funds, which it passes through to Northern Virginia localities to support local transit operating needs, including Metrorail operations. In FY 2005, DRPT will provide $51.6 million in formula assistance.

8.2.4.4 Projected WMATA Subsidy Allocation

For FY 2005, WMATA's budget for operating and maintenance costs of Metrorail, Metrobus, and MetroAccess is $872.3 million, of which Metrorail costs will account for about 57 percent of the total. WMATA Compact jurisdictions contribute to the agency's annual operating budget deficit in accordance with Board-approved allocation formulas that reflect ridership and service levels for Metrorail, Metrobus, and MetroAccess service. The Compact jurisdictions' contribution to WMATA's FY 2005 operating deficit for Metrobus, Metrorail, and MetroAccess is $402.2 million.

The WMATA policy for the funding of operating deficits for extensions to the Metrorail system, such as the proposed Dulles Corridor Rapid Transit Project, is stated in the WMATA Board of Directors Resolution #2000-35, dated May 25, 2000:

> "The operating deficit of an extension will be allocated among all the Compact member jurisdictions in accordance with the formula in effect for the funding of the Metrorail operating deficit in the years that such deficit occurs."

The rail subsidy consists of two separate allocation formulas: the rail maximum fare formula and the base rail subsidy formula. The total maximum fare subsidy is deducted from the total rail subsidy and the result is allocated based on the base rail subsidy formula. The base rail subsidy allocation formula determines the subsidy share of the Compact jurisdictions, based on three elements in the following proportions:

1. One-third of the relative number of stations in operation in each jurisdiction.

2. One-third of the subsidy is distributed on the basis of a **weighted average of urbanized area population and population density** using census data and the census population definition of the urbanized area.

3. One-third of the subsidy is distributed on the basis of the **weekday Metrorail passengers by jurisdiction of residence.**

The maximum fare subsidy is one-half the revenue differential between what riders traveling more than six composite miles actually pay and what they would have paid without a tapered mileage charge or a fare limit. The allocation of this subsidy by jurisdiction is determined from the Metrorail passenger survey.

The charge to each jurisdiction reflects the residence of the riders receiving the benefit of the reduced regular fares and the value of the benefit received. The estimated amount of the max-fare subsidy for FY 2005 is $4.5 million (less than one percent of the operating budget). The results presented in this section have been allocated solely by the base subsidy formula.

The systemwide revenues from fares and the other operating revenue previously described are subtracted from systemwide costs to yield the operating subsidy for WMATA Compact member jurisdictions. The WMATA Compact subsidy allocation is based on the Metrorail Subsidy Allocation Formula.

8.3 RISKS AND UNCERTAINTIES

Although the financial analysis defines a proposed funding strategy based on secured funding to date and reasonable funding source, financing and cost assumptions, there are a number of risks that could influence the stability of the project's financial plan, including construction cost risk and operating cost risk.

8.3.1 CONSTRUCTION COST AND REVENUE RISK

Differences between projected and actual construction costs may occur because of unforeseen conditions, variations in construction unit cost, bid quantities, changes in design elements, mitigation of environmental impacts, or special security measures that may be required for transit facilities. Some of the conditions that may affect actual construction costs include the following:

Changes in Design or Construction Conditions. Differences in construction costs may occur because of changes in technology requirements; unforeseen conditions such as soil and utility relocations; and changes in design elements.

Real Inflation. The rate of inflation may vary, significantly affecting the base unit costs.

Dedicated Revenues. Variations in dedicated revenues from participating jurisdictions may affect the ability to provide capital funding or cover debt service.

Schedule. Delays in the construction schedule may increase the overall project cost and extend the inflation risk.

Capital Funding Availability. The availability of capital funds from Federal, state and local jurisdictions affects the timing and overall cost of the project. Delays may result in additional financing requirements or schedule adjustments.

Interest Rates. Variations in interest rates impact the long-term debt service payments.

Financing Approach. There are many variations to the debt issuance requirements, including some that are market driven. The debt issuer, terms, and schedule may change the project's financing costs.

8.3.2 OPERATING COST AND REVENUE RISK

Differences between projected and actual bus and rail operating costs may impact the anticipated subsidy requirements to address the gap between revenue and expenses. Some of the conditions that may affect actual operating costs include the following:

Fares, Fare Policy and Cost Recovery. Changes in fare levels and structures affect ridership, fare revenue and cost recovery. Changes in ridership affect the level of service required, which affects capital and operating costs.

Service Levels. The frequency of service and hours of operation affect ridership, fare revenue, capital and operating costs.

8.3.3 RISK ASSESSMENT AND MITIGATION

FTA has established procedures for identifying, assessing and mitigating risks associated with major transit capital projects in preliminary engineering and final design. As of FY 2004, FTA is undertaking risk assessment through its Project Management Oversight (PMO) process. PMO contractors have been assigned to the specific projects to assess the capital and operating risks, and identify potential strategies for addressing them. The steps involved in FTA's risk analysis process include: 1) Validation of Base Conditions, 2) Risk Identification and Quantification, 3) Assessment and Modeling, 4) Implementation and Monitoring, and 5) Risk Mitigation Planning. Possible strategies identified by FTA that are available to mitigate for risk include corrective management actions, contract language that shares risks with or transfers risks to other parties, purchase of insurance to mitigate project risks; and additional unallocated contingencies in the project budget.

Based on the results of the risk assessment conducted by FTA, DRPT and WMATA will incorporate appropriate risk mitigation strategies into the financial plan as it is further refined and finalized during preliminary engineering.

9 SECONDARY AND CUMULATIVE EFFECTS

This chapter presents the long-term secondary and cumulative effects of the No Build Alternative, the Wiehle Avenue Extension, and the full LPA. The secondary effects associated with construction of the Wiehle Avenue Extension and the full LPA would result primarily from induced development (also referred to as secondary development) at transit station areas. Potential cumulative effects would occur due to construction of the Wiehle Avenue Extension and the full LPA in addition to the past, present, and future reasonably foreseeable projects described for the No Build Alternative in Chapter 2.

The alternative formerly known as "LPA Phase 1" in the October 2003 *Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation* has been renamed the Wiehle Avenue Extension in this Final EIS and is expected to begin operations in 2011. This change reflects the federal approach to the project's funding under the Federal Transit Administration's New Starts program. It will assure consistency among the environmental, engineering and financial documents during the project's development.

In the October 2003 *Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation* as well as this Final EIS, the term "full LPA" represents the Wiehle Avenue Extension and the second phase of the Dulles Corridor Rapid Transit Project. This second phase would extend west from Wiehle Avenue to Washington Dulles International Airport and Route 772 and is expected to begin operations in 2015.

The term "LPA", "proposed action", or "selected LPA" refers to both the Wiehle Avenue Extension and the full LPA collectively.

This section of this chapter discusses the following topics:

Section 9.1 describes the general methodology used to conduct the secondary and cumulative effects analysis.

Section 9.2 identifies the resources that could be sensitive to secondary or cumulative impacts.

Section 9.3 contains the analysis of potential secondary effects.

Section 9.4 contains the analysis of potential cumulative effects.

Section 9.5 includes a discussion of mitigation.

As described in the Draft Environmental Impact Statement (EIS), several resources were evaluated for secondary effects, including neighborhoods, community services and cohesion; displacements; visual and aesthetic conditions; cultural resources; parks and recreational resources; geologic resources; water resources; aquatic biota and habitat; terrestrial biota and habitat; rare, threatened, and endangered species; and traffic and associated air quality impacts. Most of these resources were also assessed for

cumulative effects. However, if the proposed project does not result in an impact to a certain resource, then it would be considered as not contributing to cumulative impacts to that resource.

9.1 GENERAL METHODOLOGY

The process used to evaluate secondary and cumulative effects is based on the guidance provided in the Federal Highway Administration Technical Advisory, "Guidance for Preparing and Processing Environmental and Section 4(f) Documents" (October 30, 1987). It involves the identifying sensitive resources and area of effect, sources of potential secondary and cumulative effects on resources, and potential effects.

Each of these steps is described briefly in the following sections.

9.1.1 IDENTIFY SENSITIVE RESOURCES AND AREA OF EFFECT

The first step in the process is the identification of sensitive resources to be analyzed for effects. These resources would include: those that are directly affected by the Wiehle Avenue Extension or the full LPA, those affected by the secondary development that is associated with the stations under consideration, and those resources that are particularly susceptible to cumulative effects (e.g., wetlands can experience multiple individual impacts from many projects over time, that when summed result in cumulative effects). Not all impacts tend to "accumulate"—that is, similar impacts from more than one project do not always add together and create a greater impact. However, some resources may experience project impacts that result in minimal change, but when impacts from several actions are summed cumulatively, they may experience greater effects over time.

Sensitive resources were identified using the environmental information prepared for the various sections of this Final EIS, as well as public and agency scoping comments received. In addition, the agencies shown in Table 9.1-1 were contacted to request information regarding sensitive resources and other major actions that should be considered in determining cumulative effects. After the sensitive resources were identified, a composite map of the resources was prepared to determine an overall geographic boundary for the analysis. This methodology to determine a unified geographic boundary is consistent with secondary and cumulative effects analyses being conducted in other states.

Table 9.1-1: Agencies Contacted for Secondary and Cumulative Effects Analysis

Federal Agencies	State Agencies
Federal Aviation Administration, Office of Airports Planning & Programming	Virginia Department of Historic Resources, Northern Regional Preservation Office
Federal Aviation Administration, Washington Airports District Office	Virginia Department of Game and Inland Fisheries
National Marine Fisheries Service, Northeast Region Public Affairs Office	Virginia Department of Historic Resources, State Historic Preservation Office
National Park Service, National Capital Region	Virginia Department of Transportation
National Park Service, Wolf Trap Farm Park	Virginia Marine Resources Commission
Smithsonian's National Air and Space Museum	Virginia Outdoors Foundation
U.S. Army Corps of Engineers, Norfolk District	**County Agencies**
U.S. Army Corps of Engineers, Northern Virginia Field Office	Fairfax County Executive
U.S. Army Corps of Engineers, Northern Virginia Reg. Section	Fairfax County Department of Transportation
U.S. Department of Agriculture, National Resource Conservation Service	Fairfax County Economic Development Authority
	Fairfax County Community & Recreation Services

Federal Agencies	County Agencies
U.S. Department of Agriculture, Virginia Conservationist	Fairfax County Park Authority
U.S. Environmental Protection Agency	Fairfax County Planning and Zoning
U.S. Fish & Wildlife Service, Virginia Field Office	Fairfax County Public Works and Environmental Services
Regional Agencies	Fairfax County Water Authority
National Capital Planning Commission	Loudoun County Building and Development
Northern Virginia Regional Commission	Loudoun County Administrator
Metropolitan Washington Airports Authority, Planning	Loudoun County Parks, Recreation and Community Services
Metropolitan Washington Airports Authority, President	Loudoun County Transportation Planning Program
Metropolitan Washington Council of Governments	Loudoun County Planning
Northern Virginia Regional Park Authority	**Local Agencies**
Northern Virginia Soil and Water Conservation District	City of Falls Church, Planning Department
State Agencies	City of Falls Church, City Manager
Virginia Department of Aviation	Dulles Greenway, Director of Operations
Virginia Department of Environmental Quality	Town of Herndon, Community Development
Virginia Department of Forestry	

The study area for the cumulative effects analysis was based on a combination of factors. Within Fairfax County, the corridor boundary, which was largely based on the travel shed, was used. Fairfax County is currently highly developed and the corridor boundary was drawn to include the greatest number of trips that would be drawn to the new transit improvements. In Loudoun County, this area was modified to follow the various watershed boundaries of the streams that traverse the Dulles Corridor. These boundaries were used because Loudoun County is more rural in character and cumulative effects would be more likely to involve natural resources. Therefore, the watershed boundaries were used to define the study area. Figure 9.1-1 presents the study area for the secondary and cumulative effects. The horizon year for the analysis is 2025.

9.1.2 IDENTIFY POTENTIAL SOURCES OF EFFECTS

By definition, the sources of secondary and cumulative effects are the Dulles Corridor Rapid Transit Project and the other actions planned within the project's area of influence. These other actions, which are included as part of the No Build Alternative, are listed in Table 9.1-2.

For the Dulles Corridor Rapid Transit Project, the primary source of potential secondary effects is the increased development allowed at the station areas for the Wiehle Avenue Extension and the full LPA. Though the addition of transit does not directly cause development to occur, county comprehensive plans have been modified to ensure that new development is located in the vicinity of stations if a new transit line is built. This induced increase in development has the potential to have effects on social, environmental, and transportation conditions beyond those directly associated with the proposed project.

During the public scoping process for the project, the potential for secondary effects due to increases in the allowable density of development were of primary concern to local citizens. Commenters consistently requested an analysis of the effects that increased density would have on traffic congestion and their quality of life. Fairfax County officials also requested an analysis of the effects of increases in allowable densities.

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LEGEND

- Cumulative Effects Study Boundary
- County Boundary
- Rail Yard

PROPOSED METRORAIL ALIGNMENT

- At-grade/Retained Fill
- Aerial
- Underground
- Aerial Yard Lead

- Existing Metrorail Orange Lineand Stations
- Proposed Station

0 1 2 3 MILES

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

Figure 9.1-1

Secondary and Cumulative Effects Study Area

Dulles Corridor Rapid Transit Project

There are a variety of other potential transportation projects within the study area for secondary and cumulative effects that are in the initial planning phase. These projects include major transportation projects such as the I-66 widening and Metrorail Orange Line extension project, the Tri-County Parkway Location Study and other initiatives. In addition, there are local improvements listed in the comprehensive plans of Fairfax and Loudoun counties. However, projects such as the Edmund Haley Drive underpass and the Rock Hill Road overpass are in the initial stages of planning and no definitive information is available as to their likely construction, preferred location, funding and impacts. Consequently, these projects are not considered to have reasonably foreseeable effects on this project and are not included in this analysis.

Table 9.1-2: Other Projects or Actions Included in the Cumulative Effects Analysis

Project	Description
Transit Projects (Included in No Build Alternative)	
New Bus Access Slip Ramps on DIAAH and Dulles Toll Road	Construction of new bus-only, at-grade slip ramps to allow for bus access between the DIAAH and Dulles Toll Road and to improve safety and schedule reliability. Three of the ramps have been constructed and are in use.
Expansion of Reston East Park-and-Ride	Fairfax County has studied alternatives designed to expand the Reston East Park-and-Ride to include a multi-level garage with 2,300 spaces by 2010.
Highway Projects (Included in No Build Alternative)	
Route 123	Route 123 within Tysons Corner from Route 7 to I-495 is planned for expansion from six to eight lanes by 2010.
Route 7	Route 7 within Tysons Corner is planned for expansion from six to eight lanes by 2010. Route 7 is also planned for expansion from four to six lanes between Reston Parkway and the Dulles Toll Road, and Rolling Holly Drive and Reston Parkway.
DIAAH Widening	The Access Highway from Dulles Airport to Route 123 is planned for expansion from four to six lanes by 2010.
I-495	A section of the Capital Beltway, I-495, from the I-9/I-395/I-495 interchange and the American Legion Bridge is planned for capacity improvements, including HOV lanes and ramps providing direct HOV access to Tysons Corner at Route 123. Implementation of these improvements is anticipated by 2010.
Route 7100	Route 7100 is planned for expansion from four to six lanes between I-66 and Sunrise Valley Drive by 2010.
Route 50	A segment of Route 50 between Old Lee Road and the Fairfax/Loudoun County line is planned for expansion from four to six lanes by 2020.
Route 28 Improvements	This is a design/build project to widen Route 28 from six to eight/ten lanes from I-66 to Route 7 and to add interchanges (to be completed in 2005); the project is included in the 2003 update of the CLRP and 2002-2007 TIP; the project accommodates a possible, future light rail guideway.
Loudoun County Parkway	This is a two- to four-lane, north-south roadway, which will link the Dulles Greenway and Route 7 and be widened to a four- to six-lane facility by 2010.
Other Projects (Other Actions not Transit Related)	
Wolf Trap Master Plan Improvements	Expanded and improved parking and circulation improvements at the park.
Dulles Airport Layout Plan Improvements	MWAA is implementing or planning the following improvements: the newly opened Smithsonian Air and Space Museum, Tier 2 concourse improvements, airside automatic people mover (APM), on-airport roadway improvements, runway reconstruction, new control tower, and two new runways with associated projects. The two new runways are a new parallel north-south runway, approximately 9,473 feet long by 150 feet wide and a new parallel east-west runway, approximately 10,500 feet long by 150 wide. Associated with the runways project are taxiways and navigational aids (NAVAIDS) for runways, property acquisition, Tier 3 Concourse development, relocation of National Oceanographic and Atmospheric Administration (NOAA)/National Weather Service (NWS) Sterling facilities and extension of the APM.

9.1.3 IDENTIFY POTENTIAL EFFECTS

The final steps in the secondary and cumulative effects analysis process involve the determination of effects the potential sources have on the identified resources.

For the assessment of cumulative effects, the projects identified in Table 9.1-2 were evaluated relative to the same social, environmental, economic, and transportation criteria presented in the Final EIS, though at a lower level of detail. The mitigated condition for the evaluated projects was assumed for the analysis. The anticipated effects of these projects were combined with identified impacts of the Dulles Corridor Rapid Transit Project to determine the potential for cumulative effects.

The results of these effects analyses are presented in Sections 9.3 and 9.4.

9.2 RESOURCE IDENTIFICATION

The following resources were identified as sensitive to secondary and cumulative effects:

- Neighborhoods, Community Services and Cohesion;
- Acquisitions and Displacements;
- Visual and Aesthetic Conditions;
- Cultural Resources;
- Parks and Recreation Resources;
- Geologic Resources;
- Water Resources;
- Aquatic Biota and Habitat;
- Terrestrial Biota and Habitat;
- Rare, Threatened and Endangered Species; and
- Traffic and Air Quality Impacts.

If a proposed project does not result in an impact to a certain resource, it would not contribute cumulative impacts to that resource.

9.3 SECONDARY DEVELOPMENT EFFECTS

This section addresses long-term secondary effects of the No Build Alternative, the Wiehle Avenue Extension and the full LPA. Secondary development effects are impacts related to the increased density of development that would occur. The characteristics of the secondary development generated at station areas under the No Build Alternative, the Wiehle Avenue Extension and the full LPA are described further in Chapter 5 of this document. As noted earlier, the provision of transit within the corridor does not, in and of itself, cause secondary development to occur. However, because local jurisdictions have plans in place that allow for greater density to occur in some areas if transit is provided, it is considered induced or secondary development for the purposes of this analysis. In order to address all potential for secondary effects, density bonuses at station areas are included; however, it is important to note that the allowed density bonuses may or may not occur. Discussion of the related effects is presented to disclose, to the extent possible, all potential effects.

Future land development would be greatly influenced by factors outside of the control of the project sponsor. Such factors as the economy, changes in land use plans by the local jurisdictions, and technological trends can all affect how, when, and to what degree land is developed. The growth projections can be considered to be predictive based on current information and similar land use development patterns in the corridor. Actual growth may be more or less than that projected as part of this analysis.

After estimating the potential growth, the impacts of this growth were analyzed in much the same way that the direct impacts of the project were analyzed. Study areas were defined around each proposed station location for the Wiehle Avenue Extension and the full LPA. The size of these study areas varied depending upon where density bonuses were allowed by the local jurisdictions: 1,600 feet radius for the Tysons Corner area, one-half mile radius for Fairfax County (but not within the Town of Herndon where there are no density bonuses at this time), and one-half mile radius for Loudoun County. No assessment of secondary development impacts was undertaken for the Dulles Airport station area because no density bonuses are allowed in this area. Outside of station areas and along regional transportation facilities, the expected effects of secondary development were assessed qualitatively.

The effects on other sensitive resources were evaluated qualitatively, because only general information is known regarding the location, scale, and appearance of the projected development. For example, it is difficult to conduct an in-depth analysis of visual effects associated with new development when specific designs and plans are not available. However, knowing the anticipated density and scale of development, and the relatively confined area in which it is allowed, a general assessment of its visual effects could be conducted. The same methodology applies to other resources as well.

9.3.1 LONG-TERM EFFECTS

This section describes the long-term secondary development effects of the No Build Alternative, the Wiehle Avenue Extension, and the full LPA. The primary source of potential secondary effects would be the increased development allowed at the station areas under the Wiehle Avenue Extension and the full LPA. Although transit does not directly cause development to occur, it does help direct development where infrastructure can better support it. County comprehensive plans have been modified to ensure that new development would be located in the vicinity of stations if a new transit line were built.

A comparison of the alternatives in terms of station area population, employment and development, is shown in Table 9.3-1. The No Build Alternative shows the predicted development characteristics if the LPA was not implemented. It should be noted that the predicted character of development is highly speculative. It represents how development would occur under circumstances similar to today—policies that are applicable today, growth rates based on what is known today, and market influences that are in force today—although it is very unlikely that all of these conditions would continue unchanged until 2025. Therefore, the predicted growth presented in this analysis is useful mostly for comparative purposes and should not be considered as the actual future population, employment, and land use that would occur in 2025.

9.3.1.1 No Build Alternative

Under the No Build Alternative, the density bonuses at the station areas would not be triggered and current development patterns would continue. Development would be driven by market conditions

throughout the corridor and would not be focused in certain areas as it would under the Wiehle Avenue Extension or the full LPA. Undeveloped lands, including natural lands and farmlands in the corridor, would continue to be developed based on market demands. Under the No Build Alternative, traffic congestion on local roads and regional highways would continue to worsen.

Table 9.3-1: Secondary Development Effects

Projections	No Build Alternative (2025)	Locally Preferred Alternative[1]		
		Wiehle Avenue Extension (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
Station Area Population Projections	15,500	Not Applicable	90% Increase (Station Areas Only)	233% Increase (Station Areas Only)
Station Area Employment Projections	130,500	Not Applicable	17% Increase (Station Areas Only)	48% Increase (Station Areas Only)
Station Area Residential Development (square feet)	8.7 million	Not Applicable	80% Increase (Station Areas Only)	201% Increase (Station Areas Only)
Station Area Commercial Development (square feet)	42.8 million	Not Applicable	17% Increase (Station Areas Only)	35% Increase (Station Areas Only)

1. Projections are based on information for 2025 only. Opening year forecasts were not prepared due to the longer period of time required for development to take effect following the opening of the LPA.

Commercial includes office, retail, hotel, industrial, and institutional.

Station Area totals include 1,600 foot radii from each station in Tysons and half-mile in remainder of corridor.

9.3.1.2 Wiehle Avenue Extension

For the Wiehle Avenue Extension, the primary source of potential secondary effects is the increased commercial and residential development generated by density bonuses that would occur near planned Metrorail stations. This would result in secondary effects on population, employment, community facilities and services, land development patterns, water resources and traffic. To a lesser extent, the visual character of the area would be affected.

Secondary development would result in a potential increase in population and employment near station areas. This increase in population and employment would in turn create an additional strain on community facilities and services within the study area for the Wiehle Avenue Extension. However, under the No Build Alternative, population and employment is projected to increase within the area and would also cause a strain on these facilities and services.

The allowable transit-related growth would result in an increase in development in the immediate vicinity of stations throughout the corridor, but does not represent a dramatic increase in the overall level of growth allowed in Fairfax and Loudoun counties, as defined in their land use regulations. Rather, the comprehensive plans refocus the previously anticipated levels of growth into patterns that will increase the number of viable travel options available to corridor residents and employees, including transit, walking, and bicycling. As an additional benefit, compact development reduces the cost of providing utilities, facilities, and services to new residential and commercial developments. Comparatively, the No Build Alternative would likely lead to a dispersed pattern of development and would be highly auto-oriented, leaving people with few travel choices and resulting in widespread congestion.

The increase in development near station areas would likely result in greater areas of impervious surfaces. However, due to the existing level of development within the area and the lack of undeveloped, pervious surfaces, the increase would likely be minimal compared to the No Build Alternative.

Analysis of travel effects related to secondary development is primarily focused on station area travel patterns in relation to ridership, transit mode share, pedestrian and bicycle trips, total person and vehicle trips, vehicle miles traveled, and traffic volumes at selected intersections. Travel effects related to secondary development would include increases in peak-period traffic levels, transit mode shares, and pedestrian and bike trips to stations and also support of the reverse commute market through the increase of employment densities near stations. While it is expected that increased density would result in localized traffic congestion in station areas, the new, transit-oriented urban form related to the Wiehle Avenue Extension would help to increase overall mobility in the corridor, the counties, and the region.

Under the Wiehle Avenue Extension, changes in visual character due to denser, transit-oriented development would occur in Tysons Corner and at the Wiehle Avenue Station area. Changes in visual character due to denser development would not be significant in the western part of Fairfax County and Loudoun County, as current development patterns and trends would continue.

9.3.1.3 Full LPA

Secondary effects of the full LPA would be similar to those described for the Wiehle Avenue Extension, albeit to a greater extent due to the less developed character of the western portions of Fairfax County and Loudoun County within the study area.

As with the Wiehle Avenue Extension, the increases in population and employment would result in additional strain on the existing infrastructure, community facilities and services. However, the benefit of compact development reduces the cost of providing utilities, facilities and services to new residential and commercial developments.

The total increase in development projected under the full LPA would be less than the total build-out permitted by the Fairfax and Loudoun county comprehensive plans in the absence of transit. In the Reston and Herndon area, the full LPA could support an increase in development of about 49 million square feet of development by 2025, while total allowable build-out for transit-related growth in this area is approximately 70 million square feet. The compact, high-density form of development would promote mobility much more effectively than sprawled development.

Secondary development would contribute to increased areas of impervious surface and reductions in potential terrestrial and to a lesser extent, aquatic habitat. Unlike the Wiehle Avenue Extension where the majority of the study area is primarily urbanized, the western portion of the study area is more suburban and rural in nature. However, the increase in impervious surfaces and minor loss of undeveloped, rural land would not be substantially greater than that which would occur as projected under the No Build Alternative.

Analysis of travel effects related to secondary development primarily focused on station area travel patterns in relation to ridership, transit mode share, pedestrian and bicycle trips, total person and vehicle trips, vehicle miles traveled, and traffic volumes at selected intersections. While it is expected that increased density will result in localized traffic congestion in station areas, the new, transit-oriented urban form related to the full LPA would help to increase overall mobility in the corridor, the counties, and the region to a greater extent than the Wiehle Avenue Extension.

Changes in visual character would be noticeable in the western portion of the study area due to the existing rural and suburban characteristics. However, current development patterns and trends in this area that are altering the visual setting will continue with or without transit investment.

9.4 CUMULATIVE EFFECTS

Determining the cumulative environmental consequences of an action requires delineating the cause-and-effect relationships between the multiple actions and the resources, ecosystems, and human communities of concern. The analysis of cumulative impacts addresses the "mitigated condition" for both the Dulles Corridor Rapid Transit Project and the other projects included in the analysis.

In determining the cause-and-effect relationships between the multiple actions and the resources, ecosystems, and human communities of concern, the projects listed in Table 9.1-2 were reviewed in conjunction with the social, environmental, economic, and transportation effects detailed in the Final EIS. If the proposed project and the other projects added together would result in an impact that would be considered substantial as a direct impact, then a substantial cumulative impact would occur. At this point, the proposed project level of contribution to the cumulative impact must be considered and mitigation, if available, must be identified appropriate to that contribution.

9.4.1 LONG-TERM EFFECTS

This section describes the cumulative effects of the No Build Alternative, Proposed Action and relevant, reasonably foreseeable actions that could contribute to cumulative effects on four resources: water resources, air quality, historic resources and Section 4(f) resources.

One reasonably foreseeable action within the Dulles Corridor study limits with the potential to influence the analysis of cumulative effects is the program of improvements of Washington Dulles International Airport. The FAA, in association with MWAA, is exploring ways that Dulles Airport can meet the projected demands for air transportation. In order to enable the airport to safely and efficiently meet the forecasted levels of aviation activity, MWAA is proposing to implement airside and landside improvements to Dulles Airport that are part of the 2003 Airport Layout Plan. MWAA is implementing or planning the following improvements: Tier 2 concourse improvements, airside automatic people mover (APM), on-airport roadway improvements, runway reconstruction, new control tower, and two new runways with associated projects. The runways project features a new parallel north-south runway, approximately 9,473 feet long by 150 feet wide and a new parallel east-west runway, approximately 10,500 feet long by 150 feet wide. Associated with the runways project are taxiways and navigational aids (NAVAIDS) for the runways, property acquisition, Tier 3 Concourse development, relocation of National Oceanographic and Atmospheric Administration (NOAA)/National Weather Service (NWS) Sterling Facilities and extension of the APM. With the exception of the Dulles Runways and Associated Projects, which is still under environmental review, the following projects have received Findings of No Significant Impacts (FONSI): Dulles Concourse and Related Projects Environmental Assessment, completed August 2002; Dulles Air Traffic Control Tower Environmental Assessment; completed May 2003; and the Dulles Construction Service Road – Environmental Assessment – Finding of No Significant Impact, completed August 2003. These three projects are considered as part of the No Build and are not evaluated as part of the cumulative effects analysis presented for the Dulles Corridor Rapid Transit Project.

Coordination with FAA on the runways project has resulted in the identification of four potential resource areas where cumulative effects may be of concern. These resource areas of concern are: water resources, air quality, historic resources and resources protected under Section 4(f). The following is a summary of approximate effects related to the Dulles Airport Runways Project on the four identified resource areas. This summary of potential impacts associated with the Dulles Airport Runways Project is provided as a context for the evaluation of potential cumulative effects associated with the Dulles Corridor Rapid Transit Project.

Water Resources

The Dulles Airport Runways Project would have approximately 170 to 180 acres of wetland impacts, primarily to palustrine emergent and forested wetland types. Between 60,000 and 63,500 linear feet of streams would be impacted. Direct impacts to wetlands and streams would result from activities such as clearing vegetation, altering hydrology, filling wetlands and grading for construction activities. Indirect impacts would potentially result from alterations in hydrology. New development would occur within the 100-year floodplain, resulting in lost floodplain storage volume. Approximately 35 to 40 acres of floodplain would be affected.

Air Quality

Total Operation Emissions for the Dulles Airport Runways Project are below minimum levels and conform to the SIP. Construction-related emissions exceed minimum levels. However, they are accounted for in the SIP.

Historic Resources

The Dulles Airport Runways Project is not expected to result in impacts to historic architectural resources. Fourteen archaeological sites within the APE for the runways project have the potential to be impacted. Further studies and coordination are ongoing to determine potential adverse effects to these resources.

Section 4(f) Resources

The Dulles Airport Runways Project would not result in any use of Section 4(f) resources.

9.4.1.1 No Build Alternative

The No Build Alternative would not result in any project-related cumulative impacts. However, there are projects included in the No Build Alternative that will have direct and indirect effects within the limits of the study area. These projects and potential changes are unrelated to the LPA and would occur with or without the transit investment.

9.4.1.2 Wiehle Avenue Extension

Water Resources

The Wiehle Avenue Extension would not result in major long-term effects to wetlands, streams, floodplains or critical areas as defined in Section 4.2 and therefore would not contribute cumulatively to effects on these resources. For construction related effects and minor long-term effects, mitigation is proposed.

There would be no loss of wetlands as a result of the Wiehle Avenue Extension. The alignment crosses five streams, none of which would experience long-term effects.

The construction of bridge piers within floodplains would not result in an increase in surface elevations of more than one-foot within the 100-year floodplains identified. There would be no increased risk of on or off-site flooding associated with the project; therefore, the Wiehle Avenue Extension would not contribute cumulatively to effects on 100-year floodplains.

The Wiehle Avenue Extension would not result in the degradation of critical areas associated with water resources; therefore, it would not contribute cumulatively to effects on these areas.

Air Quality

The Dulles Corridor Rapid Transit Project is included in the Constrained Long-Range Plan (CLRP) prepared by the MWCOG Transportation Planning Board. EPA, FHWA, and FTA have concurred with the conformity determination for the CLRP. Therefore, the project conforms to the Virginia SIP. Fairfax and Loudoun counties, including the Dulles Corridor, are in attainment for CO, NO_2, PM10, Pb, and SO_2. The Dulles Corridor is located in an ozone non-attainment area. None of the one-and eight-hour CO concentrations are predicted to exceed the NAAQS at any of the intersections modeled; therefore, no mitigation is proposed. The Wiehle Avenue Extension would not contribute cumulatively to effects on the region's air quality.

Historic Resources

The Wiehle Avenue Extension would have no adverse effects on known archaeological resources or historic architectural resources. The Wiehle Avenue Extension would result in minor impacts related to slight increase in noise (that would not exceed FTA impact criteria) and minor visual impacts to three historic architectural resources. However, construction of the Wiehle Avenue Extension would not affect the characteristics that contribute to these resources' eligibility for the NRHP. The Wiehle Avenue Extension would not contribute cumulatively to effects on historic resources within the study area.

Section 4(f)

Seven Section 4(f) resources were identified within the limits of the Wiehle Avenue Extension. Based on the existing conditions, the Wiehle Avenue Extension operations would not substantially impair the protected activities, features, or attributes to six of these resources. Therefore, no use of these Section 4(f) resources would occur.

However, a potential physical use to one of these resources could result. The Wiehle Avenue Extension has the potential to constitute an additional Section 4(f) use of the Proposed Hunter Mill Historic District. However, the formal boundaries of this potential district have not been determined. Depending on the determination of the boundaries, the Wiehle Avenue Extension could potentially result in a physical use of this resource.

9.4.1.3 Full LPA

The cumulative effects analysis for the full LPA described below takes into consideration the potential effects identified for the Dulles Airport Runways Project. Even with these potential effects, the full LPA is not expected to result in cumulative effects, given the relatively small scale of the potential effects associated with the full LPA.

Water Resources

The full LPA would result in minor construction related and long-term effects to water resources. However, all impacts would be mitigated. A total of 5.2 acres of wetland impact, of which most occurs

with the Route 28 Station and S&I Yard Site 15. Of the 5.2 acres, 3.6 acres is associated with aerial bridge structures that would permanently change the vegetative class from forested wetland to emergent, but would not be a permanent impact per se because the wetlands would remain but rather, reestablish as an emergent wetland. Given the complexity and length of the project, the wetland impacts are relatively minor. Therefore, it is unlikely these wetland impacts would substantially contribute to the loss of wetlands.

In all, the corridor crosses ten streams. The Route 772 Station would result in piping underground 220 linear feet of a tributary to Broad Run and 25 linear feet of another intermittent tributary to Broad Run, for a total of 245 feet. Appropriate mitigation for these impacts is proposed.

The construction of bridge piers within floodplains would not result in an increase in surface elevations of more than one-foot within the 100-year floodplains identified. There would be no increased risk of on or off-site flooding associated with the project; therefore, the full LPA would not contribute cumulatively to effects on 100-year floodplains.

The full LPA would not result in the degradation of critical areas associated with water resources; therefore, it would not contribute cumulatively to effects on these areas.

Air Quality

The Dulles Corridor Rapid Transit Project is included in the Constrained Long-Range Plan (CLRP) prepared by the MWCOG Transportation Planning Board. EPA, FHWA and FTA have concurred with the conformity determination for the CLRP. Therefore, the project conforms to the Virginia SIP. Fairfax and Loudoun counties, including the Dulles Corridor, are in attainment for CO, NO_2, PM10, Pb, and SO_2. The Dulles Corridor is located in an ozone non-attainment area. None of the one- and eight-hour CO concentrations are predicted to exceed the NAAQS at any of the intersections modeled; therefore, no mitigation is proposed. The full LPA would not contribute cumulatively to effects on the region's air quality.

Historic Resources

Seven archaeological resources were identified within the APE for archaeology. None of these resources would be impacted by construction of the LPA. Eight historic architectural resources were identified within the APE for architecture. In all, five of these resources would experience effects from the full LPA.

Four resources that are potentially eligible for listing in the NRHP would experience minor impacts related to slight increases in noise (that would not exceed FTA impact criteria) and minor visual impacts. However, construction of the LPA would not affect the characteristics that contribute to these resources' eligibility for the NRHP.

One resource, the Dulles Airport Historic District, would be adversely affected under Section 106. The addition of a Metrorail alignment within the district has a visual effect on the "peekaboo sequence" which is a contributing element to the district. However, the impacts would be mitigated through design considerations and the implementation of various treatment measures, which include interpretive exhibits, public artwork, photo documentation and/or landscaping to help preserve the airports' unique historic characteristics. It is not likely that the full LPA would contribute cumulatively to effects on historic resources.

Section 4(f)

In addition to the visual effects on the Dulles Airport Historic District, the full LPA would also result in a Section 4(f) physical use of the historic district. The alignment transitions would also result in a section 4(f) physical use of the historic district. The alignment transitions from at-grade to underground and from underground to aerial structure, which requires an easement from the MWAA.

The full LPA has the potential to constitute an additional Section 4(f) use of the Proposed Hunter Mill Historic District. However, the formal boundaries of this potential district have not been determined. Depending on the determination of boundaries, the LPA could potentially result in a physical use of this resource.

Assessment of Cumulative Effects

The Dulles Airport Runways Project and the Dulles Corridor Rapid Transit Project are not related actions; they are independent of one another. The extent of potential impacts resulting from the Dulles Airport Runways Project has the potential to far exceed those impacts identified for the Dulles Corridor Rapid Transit Project. Based on the technical analysis conducted for the Final EIS, the Proposed Action would not result in major impacts to the resources identified and therefore, would not contribute substantially to potential cumulative effects related to other relevant, foreseeable projects, such as the Dulles Airport Runways Project.

9.5 MITIGATION

Secondary and cumulative effects associated with this project are primarily attributable to projects considered part of the No Build Alternative and secondary development at transit station areas.

Direct impacts resulting from the other projects included in the No Build Alternative would be mitigated as a part of their construction. Any secondary or cumulative effects to the built and natural environment resulting from additional station area development would be mitigated through compliance with Fairfax and Loudoun Counties' land use policies and development permitting processes. County regulations allow the localities to cluster future development in locations that are best able to support that development in terms of providing transit, pedestrian, and bicycle access to residents and employees. In the future, the counties may limit development at station areas if necessary to mitigate any associated impacts to the surrounding community.

Mitigation measures specific to the four resource areas identified are described in the relevant Sections of this Final EIS. No additional mitigation measures are proposed.

10 EVALUATION OF ALTERNATIVES CARRIED FORWARD

This chapter presents a comparative evaluation of the alternatives carried forward in this Final Environmental Impact Statement (EIS). The intent of this evaluation is to demonstrate the relative effectiveness of the alternatives in meeting the stated project goals and objectives, and to highlight the key differences between alternatives to facilitate the decision-making process.

The alternative formerly known as "LPA Phase 1" in the October 2003 *Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation* has been renamed the Wiehle Avenue Extension in this Final EIS and is expected to begin operations in 2011. This change reflects the federal approach to the project's funding under the Federal Transit Administration's New Starts program. It will assure consistency among the environmental, engineering and financial documents during the project's development.

In the October 2003 *Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation* as well as this Final EIS, the term "full LPA" represents the Wiehle Avenue Extension and the second phase of the Dulles Corridor Rapid Transit Project. This second phase would extend west from Wiehle Avenue to Washington Dulles International Airport and Route 772 and is expected to begin operations in 2015.

The term "LPA", "proposed action", or "selected LPA" refers to both the Wiehle Avenue Extension and the full LPA collectively.

Consistent with FTA's project development process, the New Starts Baseline Alternative is introduced in this chapter. The New Starts Baseline Alternative is required by the FTA for comparison the Wiehle Avenue Extension. The resulting New Starts data is also summarized in this chapter.

Section 10.1 discusses the performance of the No Build Alternative, the Wiehle Avenue Extension and the full LPA relative to the measures of effectiveness that reflect the project goals and objectives.

Section 10.2 summarizes the Wiehle Avenue Extension performance relative to the FTA New Starts Criteria based on a comparison with the New Starts Baseline Alternative. This comparison is required for all projects seeking FTA funding under the New Starts program.

10.1 EVALUATION RELATIVE TO PROJECT GOALS AND OBJECTIVES

This section presents the evaluation of the Wiehle Avenue Extension and the full LPA in comparison to the No Build Alternative. Project goals form the basis of evaluation, which are translated into objectives, which are, in turn, translated into quantifiable measures of effectiveness. In general the measures correspond to the effects documented in Chapters 3 through 9 of the Final EIS. As previously defined, the alternatives are:

No Build Alternative. The No Build Alternative includes all existing highway and transit infrastructure and services within the corridor, and any that are committed to be implemented by 2025, aside from the Dulles Corridor Rapid Transit Project. The No Build Alternative is consistent with the "no-action alternative" required by the Council of Environmental Quality's (CEQ's) regulations for implementing the National Environmental Policy Act of 1969 (NEPA), as amended, and provides a baseline for comparison against the full LPA and the Wiehle Avenue Extension.

The Wiehle Avenue Extension. The Wiehle Avenue Extension is the first 11.6 miles of the full LPA with four stations in Tysons Corner and a fifth interim end-of-line station at Wiehle Avenue. Express Bus Service would be provided between Wiehle Avenue and the western portion of the corridor until the remainder of the full LPA is constructed.

The full LPA. The full LPA is a 23.1 mile extension of Metrorail that generally follows an alignment between the Metrorail Orange Line near the West Falls Church Station and Route 772 in Loudoun County, using the median of the Dulles Connector Road, the DIAAH, and the Dulles Greenway. The alignment diverges from these routes to serve Tysons Corner and Dulles Airport. The LPA would include 11 new stations, as well as ancillary facilities, such as a new Metrorail S&I Yard on Dulles Airport property, traction power substations, tie-breaker stations, and storm water management ponds.

As described in Chapter 1, Table 10.1-1 outlines the goals and objectives for the Dulles Corridor Rapid Transit Project which are intended to reflect the transportation needs of the corridor.

The goals and objectives include the following:

Table 10.1-1: Goals and Objectives

Goals	Objectives
Goal 1 Improve Transportation Service	§ Provide more frequent service for trips to the core of the region, Tysons Corner, Reston/Herndon, Dulles Airport, and eastern Loudoun County. § Provide multi-modal access. § Improve travel times within the corridor and the region. § Provide integrated, seamless transit service to Tysons Corner and other major activity centers. § Provide improved transit service in the corridor in the near term.
Goal 2 Increase Transit Ridership	§ Provide more frequent service for trips to the core of the region, Tysons Corner, Reston/Herndon, Dulles Airport, and eastern Loudoun County. § Provide multi-modal access. § Improve the amenities of the existing transit service within the corridor and the region. § Improve travel times within the corridor and the region. § Provide integrated, seamless transit service to Tysons Corner and other major activity centers. § Provide improved transit service in the corridor in the near term.
Goal 3 Support Future Development	§ Provide improved accessibility to existing and planned activity centers in the corridor and the region. § Provide transit service that supports and is consistent with the character of the existing and future land use and development. § Provide stations that are compatible with the character of the surrounding neighborhoods and encourage transit use.
Goal 4	§ Contribute to the attainment of regional air quality standards.

Goals	Objectives
Support Environmental Quality	§ Minimize negative impacts to traffic patterns. § Minimize negative impacts on neighborhoods and residential land uses. § Minimize negative impacts to ecologically sensitive areas. § Minimize negative impacts to historic and cultural resources. § Minimize negative visual and aesthetic impacts.
Goal 5 Provide Cost-effective, Achievable Transportation Solutions	§ Develop transportation improvements that are consistent with the funding and financial capacity of the region. § Minimize project-operating costs. § Optimize cost-effectiveness.
Goal 6 Serve Diverse Populations	§ Balance benefits and impacts to all residents within the corridor. § Improve accessibility to existing and planned employment centers from low-income and minority areas. § Provide transportation improvements that comply with the Americans with Disabilities Act standards. § Minimize and mitigate negative impacts to low-income and minority populations.

In general, the No Build Alternative would not meet the goal of providing improved transit service in the Dulles Corridor. Moreover, the No Build Alternative would be inconsistent with local and regional comprehensive plans, which specifically identify rapid transit improvements in the Dulles Corridor as a critical element in shaping development in the corridor and meeting regional economic development goals.

The Wiehle Avenue Extension and the full LPA would offer a much better level of transit service than what is included under the No Build Alternative, enhancing mobility for corridor residents and employees, especially during the midday. The full LPA would provide higher transportation and economic development benefits than the proposed the Wiehle Avenue Extension. Only the full LPA would be consistent with future land use designations or future land development patterns west of Wiehle Avenue and provide high-quality, high-capacity transit service to the Dulles International Airport, one of the world's fastest growing airports.

The Wiehle Avenue Extension would have fewer negative effects on environmental resources and communities in the Dulles Corridor than the LPA. In general, the Wiehle Avenue Extension would perform similarly to the full LPA from Wiehle Avenue Station to the existing Metrorail Orange Line. Implementation of Express Bus Service in the western end of the corridor for the Wiehle Avenue Extension would typically have minimal physical effects and fewer transportation and development benefits.

The general consensus among elected officials, public agencies, and the general public, including property owners, community groups, civic associations, and businesses, has been that Metrorail should be ultimately extended for the full length of the Dulles Corridor from the existing Orange Line through Tysons Corner to Route 772 in Loudoun County.

By use of measures of effectiveness, Table 10.1-2 summarizes each alternative relative to the project's goals and objectives for the No Build Alternative, the full LPA, and the Wiehle Avenue Extension.

Table 10.1-2: Measures of Effectiveness

Measures of Effectiveness by Objective		Locally Preferred Alternative		
	No Build Alternative	Wiehle Avenue Extension Opening Year (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
Goals 1 and 2: Improve Transit Service and Increase Transit Ridership				
Provide More Frequent Service				
Peak Period Headways (Minutes)	5 – 30	7	7	7
Off Peak Period Headways (Minutes)	30 - 60	12	12	12
Provide Multi-Modal Access				
Access to Park and Ride Facilities	4	5	5	6
Access to New Rail Stations	0	5	5	11
Rail Service to Dulles Airport	0	0	0	1
Improve Travel Times	No	Partial	Partial	Yes
Provide Integrated, Seamless Service	No	Partial – East of Wiehle Ave.	Partial –East of Wiehle Ave.	Yes
Improve the Amenities of the Existing Transit Service	No	Yes – Less than full LPA	Yes – Less than full LPA	Yes
Goal 3: Support Future Development				
Improved Accessibility to Activity Centers	No	Partial	Partial	Yes
Consistent with Existing Land Use	Yes	Yes	Yes	Yes
Consistent with Future Land Use Plan	No	Partial	Partial	Yes
Stations Compatible with Neighborhoods	No Stations	Yes	Yes	Yes
Goal 4: Support Environmental Quality				
Attainment of Air Quality Goals				
Reduced Vehicle Emissions	Yes	Yes	Yes	Yes
Reduction in Regional VMT (Miles)	-	251.6M	153.8M	401.7M
NAAQS Violations	No	No	No	No
Minimize Negative Impacts to Traffic Patterns				
Number of Intersections at LOS F – p.m.	16	3	6	16
Number of Intersections Requiring Mitigation	-	7	0	13

Measures of Effectiveness by Objective		Locally Preferred Alternative		
	No Build Alternative	Wiehle Avenue Extension Opening Year (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
Minimize Negative Impacts on Neighborhoods and Residential Land Use				
Residential Displacements	0	0	0	0
Residential Parcels Partially Acquired	0	11	11	11
Community Cohesion	-	No Effect	No Effect	No Effect
Community Facility Impacts	0	1	1	1
Minimize Negative Impacts to Ecologically Sensitive Areas				
Wetlands Effects (Acres)	0	0	0	5.2
Stream/Water Quality Effects (Linear Feet)	0	0	0	245
Minimize Negative Impacts to Historic and Cultural Resources				
Potential Adverse Effects Archaeological Sites	0	0	0	0
Potential Adverse Effects Historic Sites	0	0	0	1
Section 4(f) Use	0	0	0	1
Minimize Negative Visual and Aesthetic Impacts				
Tysons Corner	No	No Effect	No Effect	No Effect
W&OD Railroad Regional Park	No	No Effect	No Effect	No Effect
Dulles Airport Historic District	No	No Effect	No Effect	Substantial
Goal 5: Provide Cost Effective, Achievable Transportation Solutions				
Improvements Consistent with Funding Capacity				
Capital Costs (YOE$)	$0	$1.5B	$1.5B	$3.5 B
Non-Federal Funding Sources	-	Commonwealth of Virginia, Fairfax County	Commonwealth of Virginia, Fairfax County	Commonwealth of Virginia, Fairfax and Loudoun Counties, MWAA
Minimize Project Operating Costs				
Annual Incremental O&M Costs – (YOE$)	Base	$47.5M	$67.6M	$117.9M
Optimize Cost-Effectiveness				
Metrorail O&M Cost Per Revenue Mile (2004$)	$9.29 (2011) $12.15 (2025)	$8.94	$11.81	$11.69
Incremental Metrorail O&M Cost Per New trip	Base	$5.55	$6.68	$8.39

Measures of Effectiveness by Objective		Locally Preferred Alternative		
	No Build Alternative	Wiehle Avenue Extension Opening Year (2011)	Wiehle Avenue Extension (2025)	Full LPA (2025)
Metrorail O&M Cost Per Passenger Mile	$0.41 (2011) $0.55 (2025)	$0.40	$0.52	$0.50
Goal 6: Serve Diverse Populations				
Low-Income and Minority Areas Without Rail Service	6	4	4	0
Compliance with ADA	Yes	Yes	Yes	Yes
Physical Impacts to Low-Income and Minority Areas	None	None	None	None

The remainder of this section describes the effectiveness of the alternatives in satisfying each of the project's goals and objectives.

10.1.1 GOALS 1 AND 2: IMPROVE TRANSPORTATION SERVICE AND INCREASE TRANSIT RIDERSHIP

A. Provide More Frequent Service for Trips to the Core of the Region, Tysons Corner, Reston/Herndon, Dulles Airport, and Eastern Loudoun County

The measures used to evaluate how well the alternatives would provide more frequent service in the study area include peak period and off-peak period headways in minutes. Transit service headways provided in the corridor range between 5 and 30 minutes in the peak period and increase to between 30 and 60 minutes in the off-peak. The Wiehle Avenue Extension and the full LPA provide seven minute headways during the peak hour and 12 minute headways during the off-peak period. The Wiehle Avenue Extension and the full LPA generally provide higher service levels than the No Build Alternative especially in the midday and evening off-peak periods.

B. Provide Multi-Modal Access

The alternatives considered provide direct access to a number of intermodal facilities including park-and-ride, bus transit transfer centers, new rail transit stations, and airports. The full LPA maintains existing bus connections and provides new rail connections to the greatest number of these facilities. The full LPA includes 6 park-and-ride facilities, 11 new rail transit stations, and provides rail service connections to one airport. The Wiehle Avenue Extension serves a fewer number of intermodal centers including five park-and-ride facilities, five new rail transit stations, and connections to one airport. The No Build Alternative provides the fewest intermodal connections serving four park-and-ride facilities, no new rail transit stations, and provides no rail transit service connections to Dulles Airport.

C. Improve Travel Times within the Corridor and the Region

Transit travel times for several trip origin and destination pairs have been estimated for each of the alternatives as documented in Chapter 6. These origin and destination pairs include:

- Tysons Corner and Metro Center
- Tysons Corner and Dulles Airport
- Reston Town Center and Union Station
- Reston Town Center and Tysons Corner
- Reston Town Center and Dulles Airport
- Rosslyn and Dulles Airport
- Herndon-Monroe and Pentagon
- Herndon-Monroe and Tysons Corner

For all of these origin and destination (O/D) pairs, the full LPA provides shorter transit travel times compared to the No Build Alternative, with the exception of the Tysons Corner/Metro Center and Herndon-Monroe/Pentagon pairs. For the Tysons Corner/Metro Center trip the No Build Alternative provides a 37 minute travel time and the LPA provides a 38 minute travel time. For the Herndon-Monroe/Pentagon trip the No Build Alternative provides a 50 minute trip and the LPA provides a 55 minute travel time. All of the other trip origin and destination pairs result in transit travel time savings of between 5 and 53 minutes when the No Build Alternative is compared to the full LPA.

In general, the Wiehle Avenue Extension would offer less travel time savings than the full LPA, but it would still offer an improvement in transit travel times over the No Build Alternative for most O/D pairs. For trips between Wiehle Avenue and points east, the Wiehle Avenue Extension would provide similar travel times to the full LPA, because the Metrorail service would be similar in this portion of corridor. For trips with at least one end west of Wiehle Avenue, the Wiehle Avenue Extension would have greater travel times than the full LPA due to transfer requirements and decreased service frequency in the reverse peak direction. If the LPA is not implemented in its entirety in 2025, the Wiehle Avenue Extension would generally have travel times that are 5 to 10 minutes longer than the full LPA.

D. Provide Integrated, Seamless Transit Service to Tysons Corner and Other Major Activity Centers

The full LPA provides a seamless high capacity premium transit service to the Tysons Corner as well as other key activity centers such as Dulles Airport, Reston Town Center, and Herndon-Monroe. The Wiehle Avenue Extension provides service to Tysons Corner but does not serve the centers west of Wiehle Avenue with seamless service. The No Build Alternative does not provide this seamless, high level service to the activity centers in the corridor.

E. Provide Improved Transit Service in the Corridor in the Near Term

The No Build Alternative does not provide substantially improved transit service in the corridor. Wiehle Avenue Extension provides improved service through a portion of the corridor as early as 2011. The full LPA provides improved transit through the whole corridor but would not be fully complete until 2015.

F. Improve Amenities of the Existing Transit Service

The No Build Alternative does not provide significant additional transit service amenities that would not also be included in the full LPA or the Wiehle Avenue Extension alternatives. However, the Wiehle Avenue Extension and the full LPA offer several passenger amenities at station sites including advanced fare collection, simple transfers between lines, multiple door vehicle boarding from level platforms, park-and-ride lots, and kiss and ride access.

10.1.2 GOAL 3: SUPPORT FUTURE DEVELOPMENT

A. Provide Improved Accessibility to Existing and Planned Activity Centers in the Corridor and the Region

The full LPA provides direct access to the Tysons Corner as well as other key activity centers such as Dulles Airport, Reston Town Center, and Herndon-Monroe. The Wiehle Avenue Extension provides service to the Tysons Corner but does not serve the centers west of Wiehle Avenue. The No Build Alternative generally does not provide improved access to the activity centers in the corridor.

B. Provide Transit Service that Supports and is Consistent with the Character of the Existing and Future Land Use and Development

All of the alternatives provide bus and rail transit services that are consistent with the existing land uses in the corridor. However, the No Build Alternative would be inconsistent with local comprehensive plans and regional transportation plans, which specifically identify rapid transit improvements in the Dulles Corridor as a critical element in shaping development in the corridor and meeting regional economic development goals. Only the full LPA would be consistent with future land use designations or future land development patterns west of Wiehle Avenue and provide high-quality, high-capacity transit service to Dulles International Airport.

C. Provide Stations that are Compatible with the Character of the Surrounding Neighborhoods and Encourage Transit Use

Because both the Wiehle Avenue Extension and the full LPA would be constructed primarily within existing transportation rights-of-way, direct land use conversions and conflicts with surrounding land uses would be minimal. The extension of Metrorail within existing transportation corridors would be consistent with existing and future land uses. This is also consistent with existing zoning along the proposed alignment, except in some stations where special exceptions may be required for the construction of station facilities. To encourage transit use, station facilities typically include entrance pavilions, mezzanines, platforms, parking facilities, bus bays, kiss-and-ride areas, and park-and-ride lots.

10.1.3 GOAL 4: SUPPORT ENVIRONMENTAL QUALITY

A. Contribute to the Attainment of Regional Air Quality Standards

All the alternatives offer some reduction in vehicle emissions compared to the existing condition. However, the Wiehle Avenue Extension and the full LPA provide substantial reductions in regional Vehicle Miles Traveled (VMT) when compared to the No Build Alternative. VMT is a major indicator of the amount of total vehicle emissions that result from each of the alternatives. The full LPA results in the largest reduction of VMT, about 401.7 million miles per year in 2025. The Wiehle Avenue Extension results in a reduction of about 251.6 million miles per year in 2011 (opening year) and 153.8 million miles per year in 2025. None of the alternatives would result in NAAQS violations.

B. Minimize Negative Impacts to Traffic Patterns

The impact of each of the alternatives on traffic patterns measured in terms of intersection levels of service in the p.m. peak hour have been estimated. Intersection levels of service are used to characterize traffic operations for roadway segments and intersections. Levels of Service (LOS) range from A to F, with A representing no congestion or delay and F representing failure and extreme congestion and delay. Levels of service for major intersections in the immediate vicinity

of each of the stations for the Wiehle Avenue Extension and the full LPA have been estimated based on future traffic conditions. In the Wiehle Avenue Extension station areas, three intersections would operate at LOS F during the p.m. peak hour in 2011, and six for the Wiehle Avenue Extension in 2025. For the full LPA station areas, 16 intersections would operate at LOS F in the p.m. peak period in 2025.

C. Minimize Negative Impacts on Neighborhoods and Residential Land Uses

The No Build Alternative has no significant negative impacts on neighborhoods with regard to residential displacements, partial acquisitions of residential properties, community cohesion, or community facility impacts. Located primarily in existing transportation right-of-way, the Wiehle Avenue Extension and the full LPA also include no residential displacements or negative effects on community cohesion. However, the Wiehle Avenue Extension and the full LPA both include the partial acquisition of 11 residential properties.

D. Minimize Negative Impacts to Ecologically Sensitive Areas

Both the No Build Alternative and the Wiehle Avenue Extension have no significant negative impacts to ecologically sensitive areas such as wetlands, streams, or prime upland systems. The full LPA has no impacts to prime upland systems but has the potential to impact 5.2 acres of wetlands and 245 linear feet of streams along its alignment from Wiehle Avenue to Route 772.

E. Minimize Negative Impacts to Historic and Cultural Resources

The full LPA Alternative could potentially impact one historic/cultural resource site at Dulles Airport. No potential impacts to historic and cultural resources have been identified for the No Build or the Wiehle Avenue Extension Alternatives.

F. Minimize Negative Visual and Aesthetic Impacts

The No Build Alternative has no significant negative visual or aesthetic impacts. Both the Wiehle Avenue Extension and the full LPA would introduce new visual elements, such as Metrorail stations, pedestrian walkways, parking structures, tie-breaker stations and traction power substations, into the existing visual setting of the study area. However, due to the existing land uses and existing visual and aesthetic characteristics of the area, overall the proposed improvements and associated facilities would have a less than substantial effect on sensitive resources and viewers.

10.1.4 GOAL 5: PROVIDE COST-EFFECTIVE, ACHIEVABLE TRANSPORTATION SOLUTIONS

A. Develop Transportation Improvements that are Consistent with the Funding and Financial Capacity of the Region

The No Build Alternative minimizes the potential capital costs of the system. The Wiehle Avenue Extension has an estimated capital cost of approximately $1.5 billion in YOE dollars. The full LPA is the highest cost alternative with capital costs of approximately $3.5 billion in YOE dollars. It is assumed that approximately 50 percent of these costs would be funded from state and local sources.

B. Minimize Project Operating Costs

The No Build Alternative minimizes the potential incremental operating costs of the system. The Wiehle Avenue Extension includes an estimated incremental operating cost of $47.47 million per

year in 2011 that rises to $67.64 million per year by 2025. The full LPA is the highest cost alternative with incremental operating costs of $117.88 per year by 2025.

C. Optimize Cost-Effectiveness

Estimates of the operating and maintenance cost per revenue mile of service, operating and maintenance cost per new trip, and operating cost per passenger mile have been identified as measures of cost effectiveness. The estimated Metrorail operating and maintenance cost per revenue mile with the Wiehle Avenue Extension in the opening Year 2011 is approximately $8.94 per revenue mile. When Year 2025 revenue miles are considered the value is about $11.81 per revenue mile. The full LPA in Year 2025 results in a values of $11.69 per revenue mile. The estimated operating cost per new trip for Metrorail is lowest for the Wiehle Avenue Extension in 2011, with a value of $5.55. This increases to $6.68 for the Wiehle Avenue Extension in 2025. The full LPA in 2025 has the highest value of $8.39 per new trip. The Metrorail operating costs are approximately $0.40 per passenger mile of service for the Wiehle Avenue Extension in 2011 and about $0.52 and $0.50 per passenger mile for the Wiehle Avenue Extension and the full LPA in the Year 2025, respectively.

10.1.5 GOAL 6: SERVE DIVERSE POPULATIONS

A. Balance Benefits and Impacts to all Residents within the Corridor

None of the alternatives include physical impacts to low income or minority neighborhoods identified in the corridor. The Wiehle Avenue Extension would serve only one of the low income or minority neighborhoods with Metrorail service, leaving five low income or minority neighborhoods without Metrorail service. The full LPA would provide Metrorail service to all six of the identified low income and minority neighborhoods.

B. Improve Accessibility to Existing and Planned Employment Centers from Low-Income and Minority Areas

The No Build Alternative does not provide increased accessibility to any of the six low income and minority areas. The Wiehle Avenue Extension would serve one low income and minority neighborhood with Metrorail service and four additional low income and minority neighborhoods would receive improved access via new Express Bus Services connecting to the Wiehle Avenue Metro station. The full LPA would have direct Metrorail access to all six low income and minority neighborhoods. Those neighborhoods that do have access to the Metrorail system or new Express Bus Services would have improved transit connections to employment centers in the Tysons Corner area and other activity centers served by the Washington Metrorail system.

C. Provide Transportation Improvements that Comply with the Americans with Disabilities Act Standards

All alternatives include services that are in compliance with the Americans with Disabilities Act.

D. Minimize and Mitigate Negative Impacts to Low-Income and Minority Populations

None of the alternatives include physical impacts to low income or minority neighborhoods identified in the corridor.

10.2 NEW STARTS CRITERIA

This section describes the New Starts Criteria and associated evaluation measures the FTA uses to evaluate and rate fixed guideway transit projects seeking federal funding for implementation.

The New Starts program is the Federal government's primary financial resource for supporting locally-planned, implemented, and operated transit "guideway" capital investments.

Each year FTA prepares its Annual Report on New Starts for Congress as a companion document to the annual budget submitted by the President. The report documents recommendations for the allocation of funds under Section 5309 of Title 49 of the United States Code. The Transportation Efficiency Act for the 21st Century (TEA-21) requires that the annual report include the evaluation and ratings of new or extended fixed-guideway transit projects. The FTA reviews the criteria results for each candidate project and assigns a rating for each criterion. Based on criteria ratings, a candidate project receives an overall rating of either highly recommended, recommended, or not recommended.

Project sponsors are asked to provide the results on specific project measures that respond to each of the criteria. The August 2004 submittal was based on the Wiehle Avenue Extension . The measures are derived by comparing the estimated results of the Wiehle Avenue Extension to those of a Baseline Alternative. The Baseline Alternative represents a lower cost alternative with comparable service to the LPA (Build) alternative. The Baseline Alternative for this project consists of expanded Fairfax, WMATA Metrobus, and Loudoun bus services in the corridor, with service focused on new express bus service along the Dulles Access/Toll Road. The new Express Bus Service would connect the same major destinations that are served by the Wiehle Avenue Extension .

The criteria measures are described as follows:

A. Project Justification

Mobility Improvements - The estimated transit system user benefits for the candidate project compared to the Baseline Alternative expressed in terms of minutes saved per passenger mile. This criterion also considers the number of low income households within ½ mile of station sites.

Environmental Benefits - This criterion considers the potential impact on pollutants and annual energy savings for the project in comparison to the Baseline Alternative. Pollutants include Carbon Monoxide (CO), Nitrogen Oxide (NOx), Volatile Organic Compounds (VOCs), Hydrocarbons (HC), Particulate Matter (PM10), and Carbon Dioxide (CO_2).

Operating Efficiencies - This criterion includes the estimated system operating cost per passenger mile.

Cost Effectiveness - This criterion includes the estimated incremental cost per system user benefit (hour of travel time savings)

Transit-Supportive Land Use and Future Patterns - This criterion is measured based on a qualitative assessment of the project's ability to address several land use related issues including existing land use compatibility, containment of sprawl, transit supportive corridor policies, supportive zoning regulations near stations, tools to implement land use policies, and performance of land use policies.

B. Local Financial Commitment

Stability and Reliability of Capital Financing Plan - The project financial plan is reviewed including an assessment of the local financial commitment to fund the capital needs of the project.

Stability and Reliability of Operating Finance Plan - The project financial plan is reviewed including an assessment of the local financial commitment to fund the operating needs of the project.

Table 10.2-1 summarizes the quantitative measures submitted for the Wiehle Avenue Extension in August 2004.

Table 10.2-1: Summary of New Starts Quantitative Measures for the Wiehle Avenue Extension

Criteria	Measure	Results
Mobility Improvements	Total Transit System User Benefits Per Passenger Mile (in minutes)	1.89
	Number of Low Income Households within ½ Mile of Stations	170
	Number of Total Jobs within ½ Mile of Stations	100,980
Environmental Benefits	Change in Carbon Monoxide Emitted (tons per year)	-160.87
	Change in Nitrogen Oxides Emitted (tons per year)	-31.01
	Change in Volatile Organic Compounds Emitted (tons per year)	-13.98
	Change in Particulate Matter Emitted (tons per year)	-10.68
	Change in Carbon Dioxide emitted (millions of tons per year)	-5,521.07
	Energy (millions of BTUs per year)	-9,329.02
Operating Efficiencies	Incremental System Operating Cost Per Passenger Mile	$0.005
Cost Effectiveness	Cost per Hour of User Benefits	$21.08
	Cost per New Trip	$24.73
Land Use (Year 2025)	Total Housing Units in Station Areas	6,943
	Total Population in Corridor	155,179
	Total Employment in Corridor	226,504
	Corridor Population as a % of Metropolitan Area	2.6%
	Corridor Employment as a % of Metropolitan Area	5.6%
	Population Density in Corridor (per square mile)	3,535
	Employment Density in Corridor (per square mile)	5,159
Financial Plan Information	Total Capital Cost (YOE $)	$1,521,500,000
	Proposed Federal Section 5309 New Starts Share of Capital Costs (YOE $)	$760,700,000
	Proposed State Sources for Capital Funding (YOE $)	$380,400,000
	Proposed Local Sources for Capital Funding (YOE $)	$380,400,000
	Estimated Annual Incremental Operating Costs - 2025 (millions of YOE$)	$67.6

11 PUBLIC COORDINATION AND COMMENTS

This chapter presents the public involvement and agency coordination activities for the Dulles Corridor Rapid Transit Project. It also presents an overview of the comments and responses received from the public and agencies throughout the duration of the project.

Section 11.1 describes the public involvement program and outreach techniques undertaken throughout the duration of the project and future public outreach efforts.

Section 11.2 summarizes the extensive agency coordination efforts undertaken with federal, state and local resource agencies.

Section 11.3 presents an overview of the comments and responses received from the public and resource agencies for the Dulles Corridor Rapid Transit Project.

The development and selection of the Locally Preferred Alternative (LPA) for the Dulles Corridor Rapid Transit Project was based upon extensive coordination with the public and federal, state and local agencies. This chapter presents the public involvement and agency coordination activities and findings that supported decision-making during project development and review under the National Environmental Policy Act of 1969 (NEPA), as amended. Insights and recommendations received from the public and agencies over the course of the NEPA process influenced the design and implementation of the project to reduce potential environmental consequences, including the development of mitigation measures to offset short-term construction and long-term operational impacts associated with the LPA. Coordination with the public and federal, state, and local agencies was ongoing throughout the project development process. Public and agency comments were formally solicited and documented during project scoping between July 2000 and September 2000 and following the public circulation of two major NEPA documents: the June 2002 *Dulles Corridor Rapid Transit Project Draft Environmental Impact Statement and Section 4(f) Evaluation* (Draft EIS) and the October 2003 *Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation* (Supplemental Draft EIS).

As part of the public review period for these documents, public hearings were held on the Draft EIS in July of 2002, and on the Supplemental Draft EIS in December 2003. Following the close of the formal NEPA review periods, the public and agencies were provided additional opportunities to comment during post-hearing coordination activities conducted by the Virginia Department of Rail and Public Transportation (DRPT) and the Washington Metropolitan Area Transit Authority (WMATA). These activities included the public circulation of public hearing reports prepared to summarize comments and responses, and convening of post-hearing conferences to address potential refinements to project design and implementation. Through this process, this Final EIS has incorporated information and project refinements needed to address comments received on the project during the public review of the Draft EIS and the Supplemental Draft EIS.

Comments made during this process, as well as responses to the comments, are included in this Final EIS as Appendix J (Public and Agency Comments and Responses).

Copies of correspondence received from federal, state, regional, and local agencies are included as Appendix K (Agency Correspondence).

The alternative formerly known as "LPA Phase 1" in the October 2003 *Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation* has been renamed the Wiehle Avenue Extension in this Final EIS and is expected to begin operations in 2011. This change reflects the federal approach to the project's funding under the Federal Transit Administration's New Starts program. It will assure consistency among the environmental, engineering and financial documents during the project's development.

In the October 2003 *Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation* as well as this Final EIS, the term "full LPA" represents the Wiehle Avenue Extension and the second phase of the Dulles Corridor Rapid Transit Project. This second phase would extend west from Wiehle Avenue to Washington Dulles International Airport and Route 772 and is expected to begin operations in 2015.

The term "LPA", "proposed action", or "selected LPA" refers to both the Wiehle Avenue Extension and the full LPA collectively.

11.1 PUBLIC INVOLVEMENT

During the preparation of the Draft EIS and the Supplemental Draft EIS, a comprehensive public involvement program was conducted to provide citizens with an interest in the Dulles Corridor Rapid Transit Project the opportunity to keep informed of project developments, to participate in project planning and to provide their insights to decision-makers for the selection of the LPA. In order to facilitate public participation in project planning and design, several different outreach techniques were employed to reach a wide range of participants. These included a variety of information dissemination outlets and interactive techniques, in addition to meetings and coordination and public hearings as described below.

11.1.1 PUBLIC OUTREACH ACTIVITIES AND INFORMATION EXCHANGE

A number of different techniques and activities were conducted over the course of the environmental review process in order to ensure that the public remained informed of project developments and were provided the opportunity to comment throughout project planning and design. Major activities conducted for the project included a call-in line, mailing list, newsletter, update bulletins, comment forms, website, and email address, as well as the distribution of project materials through the project kiosk and information center, libraries and community centers. Other outreach techniques included representation at community fairs and festivals, and presentations to communities and businesses.

Project INFO Line (1-888-566-7245). The project INFO line, a toll-free, 24-hour telephone number, was established to provide project information to interested individuals and answer their questions, as well as to receive their comments. A telephone number was also established incorporating Telecommunications Device for the Deaf (TDD) technology for callers requiring such special assistance (202-638-3780).

Project Mailing List. A project mailing list was maintained and used to distribute newsletters, updates, meeting notices, and other project materials. The project mailing list will be maintained for all future public outreach efforts.

Project Newsletters. Newsletters have been produced and distributed at project milestones throughout the environmental review and project development process to update the public and to obtain public comment. Since May 2001, newsletters have included a news item in Spanish to announce that additional Spanish language project information is available through the Project INFO line. Project newsletters will be part of continuing public outreach efforts.

Project Updates. Project updates were published between newsletters beginning in August 2000. These brief bulletins discussed the latest project developments and future public participation opportunities. Continuing public outreach efforts will include project updates posted on the project website.

Comment Forms. Comment forms were made available in project newsletters, at public meetings, and at other project venues. The forms could be returned at drop-off boxes at meetings or hearings or placed in the mail (they included pre-paid postage).

Project Website (www.dullestransit.com). The project website was updated on an on-going basis to provide information about the project including a project overview, schedule, description of the preliminary engineering and NEPA process, alternatives under consideration, public involvement opportunities, publications, maps, photographs, frequently asked questions, and other transit-related materials. The website also offered a link to contact the project team directly through the project e-mail address (dullescorridor@aol.com) for those wishing to make a comment. The project website will be maintained through preliminary engineering.

Project E-mail Address (dullescorridor@aol.com). This address was included on all publicly distributed project materials, and offered a convenient way for the public to provide comments, ask questions, request additional information on the project, and link to the project website.

Project Kiosk. Located at a regional shopping mall in the midst of a major employment center, the Tysons Corner Center Kiosk was operated from October 2000 until July 2003 during normal mall hours, (Monday through Saturday from 10 a.m. to 9:30 p.m. and on Sunday from 11 a.m. to 6 p.m.) seven days a week. The kiosk provided the opportunity for citizens to participate in the project by reviewing project materials, speaking with project staff members, using the project website, signing up for project mailings, and making comments on the project.

Project Information Center. A project information center operated in 2001 at the Spectrum at Reston Center. The information center provided the opportunity for citizens to participate in the project by reviewing project materials, speaking with project staff members, using the project website, signing up for project mailings, and making comments on the project.

Libraries and Community Center Outreach. More than 20 libraries and community centers within the Dulles Corridor displayed project materials such as project newsletters, updates, and reports that could be examined during normal hours of operation.

Representation at Community Fairs and Festivals. The public had the opportunity to learn about and comment on the project and sign up for the project mailing list at special community events where project information was displayed:

- § Fall for Fairfax Festival at the Fairfax County Government Center on October 7, 2000;
- § Reston Community Connections event at the Reston Town Center on October 12, 2000;
- § Fall Family Fun Fest in McLean on October 14, 2000;
- § McLean Day at Lewinsville Park on May 19, 2001; and
- § Celebrate Fairfax 2001 at the Fairfax County Government Center on June 8-10, 2001.
- § Fall for Fairfax, September 29, 2001.

Community Presentations and Business Briefings. Project team members have conducted over 250 briefings and presentations with organized groups including communities and associations, as well as area businesses. The presentations were given upon request, and have been useful to inform the groups about the project and provided a forum for questions and comments related to the specific areas of interest. Community presentations and business briefings will be included in continuing outreach efforts.

11.1.2 PUBLIC COORDINATION MEETINGS AND PUBLIC HEARINGS

As required by Federal Transit Laws 49 USC §5323(b) and §5324(b) public coordination meetings and public hearings were held. Notices of public hearings were also provided. Meetings were held with the general public and stakeholders on an as-needed basis to understand the issues of concern to area residents and stakeholders, as well as to inform the development and evaluation of potential alternatives and the selection of the LPA. Public meetings held to support the development of the project included public scoping meetings, public information meetings, stakeholder meetings, and public hearings on the Draft EIS and the Supplemental Draft EIS, as well as post-hearing conferences.

11.1.2.1 Public Scoping Meetings

Scoping is the process by which the range of alternatives and issues for study during the environmental review process are identified. During the scoping process, a series of public scoping meetings were conducted on July 25, 26, and 27, 2000 to provide the public with an overview of the project and an opportunity to comment. Public notification of the scoping meetings was provided through TV, radio, and print communication outlets, and included the following:

- § Public Scoping Information Packets, including invitations to public scoping meetings, mailed to 4,725 invitees;
- § Meeting announcements sent to local libraries, community centers, and transportation management associations;
- § Cable television notices provided to three local cable networks;
- § News releases distributed to more than 50 print and broadcast media outlets in the region;
- § Newspaper advertisements placed in 13 local newspapers;
- § Notices on the DRPT and WMATA websites; and,
- § A project INFO line was established and a recorded message broadcasted the dates, times, and locations of the public and agency meetings; and

In all, more than 400 members of the public attended the three scoping meetings.

During the July 25, 2000 meeting at George C. Marshall High School in Falls Church, 203 members of the public attended and 29 members of the public spoke. Comments at this meeting were generally related to:

- Support for mass transit in the corridor;
- Parking;
- Pedestrian access;
- Land use and development close to the proposed station locations;
- Station locations and alignment alternatives; and
- Impacts (e.g., noise levels, pollution, property values, congestion, and crime).

During the scoping meeting held on July 26, 2000 at Langston Hughes Middle School in Reston, 149 members of the public attended and 19 members of the public spoke. Comments at this meeting were generally related to:

- Support for the project and the extension of Metrorail service;
- Project schedule;
- Transit-friendly and mixed-use development;
- Increased density near proposed station locations;
- Impacts on the community (e.g., air quality);
- Pedestrian access and provisions for people with disabilities;
- Transferring between Metrorail and bus/Bus Rapid Transit (BRT) service;
- Increased frequency of service and extended hours of operations for service to Dulles Airport;
- An integrated transportation system in Northern Virginia (including feeder bus service); and
- Costs and/or funding.

During the scoping meeting held on July 27, 2000 at Ashburn Elementary School in Ashburn, 61 members of the public attended, and 12 members of the public spoke. Comments at this meeting were generally related to:

- Support for the project;
- Project schedule and implementation;
- Alternatives under consideration;
- Transit that would serve commuters from western Fairfax County and Loudoun County;
- Land use planning and density near proposed station locations and parking facilities;
- Sprawl;
- Capacity of the Metrorail system;
- Cost and funding (including the impacts associated with the BRT national demonstration project);
- Purpose of an Environmental Impact Statement (as opposed to moving forward with an Environmental Assessment); and
- An integrated transit system in Northern Virginia.

In addition to the public testimony received at the scoping meetings, a total of 210 comment forms were received. These comments, combined with the verbal testimony, were used to identify and refine the alternatives considered during development of the Draft EIS. Appendix J includes a more detailed summary of all public comments, including those made at the scoping meetings. Comments received from federal, state, and local agencies during the scoping process are included in Appendix K. The results of the public coordination during the scoping process were documented in the September 2000 *Scoping Process Report.*

11.1.2.2 Public Information Meetings and Stakeholder Meetings

These meetings were held to provide updates on the development of alternatives under consideration for the project, to obtain public perspectives and insights on the project, and their comments on alternatives. Public information meetings held during alternatives development following project scoping. Stakeholder meetings with civic associations, business owners, developers, landowners, and tenants in and near proposed station areas were held to help inform the design process and the evaluation of alternatives by incorporating the perspectives of those individuals and groups that would be most directly affected by proposed transit improvements. Stakeholder meetings were open to any individual or group wishing to attend.

A. Public Information Meetings

Public information meetings convened during the alternatives analysis process to coordinate the development, consideration and evaluation of alternatives to be considered in the Draft EIS, and to provide the opportunity for public comment. Public notification of the information meetings was provided through TV, radio, and print communication outlets. Nearly 300 people in total attended the three meetings. Following an informational presentation, participants were encouraged to discuss their concerns with representatives from DRPT and WMATA. In addition, a total of 20 comment forms were received from individuals attending the meetings. The specific issues raised at each of the meetings included the following:

January 30, 2001 at George C. Marshall High School in Falls Church:

- Pedestrian access and overpasses;
- Coordination with other transit studies;
- Service to Tysons Corner Center;
- Support for and opposition to aerial alignments;
- Cost and funding;
- Operational flexibility; and
- Enhanced bus service.

January 31, 2001 at Langston Hughes Middle School in Reston:

- Smart growth;
- Land use planning and mixed-use development;
- Pedestrian and bicycle access to station locations;
- Location of the Wiehle Avenue and Reston Parkway stations; and
- Parking.

February 1, 2001 at Ashburn Elementary School in Ashburn:

- The BRT Maintenance and Storage Facility and Metrorail S&I Yard;
- Bus and pedestrian access;
- Land use planning and mixed-use development; and
- Parking.

In addition to the specific comments summarized above, general comments were received regarding the scoping process, evaluation criteria, and other aspects of the project including:

- Impacts on the Metrorail Orange Line;
- Impact of the proposed widening of I-66 in Arlington;
- Opposition to BRT service;
- Light rail transit;
- Project schedule;
- Support for the results of the scoping process;
- Parking;
- Induced development from existing employment centers;
- Impacts of connecting to the East Falls Church or West Falls Church Metrorail Station;
- Noise, vibration, and visual impacts;
- Service design (prior to designing the tracks);
- Location of the Wolf Trap Farm Park Station and its designation as a special use station;
- Feeder bus service;
- Coordination with other transit studies and connectivity between the lines;
- High density development;
- Opposition to the Hunter Mill Road Station; and
- Locations of the BRT Maintenance and Storage Facility and the Metrorail S&I Yard.

B. Stakeholder Meetings

Meetings with stakeholders occurred throughout the project development and environmental review processes. Meetings occurred before, during and after the formal comment period so that the concerns of those most directly affected by the project were considered throughout decision-making. Comments received by stakeholders are located in Appendix J.

Stakeholder Meetings During Alternatives Analysis

Stakeholder meetings were held during the period that the project team was conducting the initial analysis of alternatives to provide project information and to obtain stakeholder input. Stakeholders typically are individuals and groups that would be most affected by proposed transit improvements. For the project, stakeholders are the business owners, developers, landowners, and tenants in and near proposed station areas. Stakeholders were identified using real estate maps and information from agencies and organizations active in the Dulles Corridor. Stakeholder meetings were open to any individual or group wishing to attend.

Stakeholder meetings were held on December 12, 13, and 14, 2000. Each meeting focused on one of three geographic sections of the corridor. Tysons Corner area; the Wiehle Avenue, Reston Parkway, Herndon-Monroe, and Route 28 areas; and the Route 606 and Route 772 areas (which include the proposed BRT Maintenance and Storage Facility and Metrorail S&I yard locations). A total of 159 stakeholders were invited to attend the meetings and approximately 60 attended.

Stakeholder Meetings During the Draft EIS Comment Period

To supplement the July 29, 30, and 31, 2002, public hearings on the Draft EIS and to enhance public understanding of the project during the Draft EIS circulation, additional meetings and presentations were made upon request to stakeholders and community groups between June 25, 2002 and August 28, 2002. These public presentations were made to increase public outreach and provide a forum for questions and comments. The presentations provided an overview of the environmental review process and results, the alternatives considered in the Draft EIS, summary of the potential effects, and an overview of project costs and financing.

Meetings were held with a variety of stakeholders including property owners, tenants, businesses, residential community associations and other organizations located along the proposed project alignment. A summary of each meeting is provided in Table 11.1-1.

Table 11.1-1: Stakeholder Meetings During the Draft EIS Comment Period

Date	Stakeholder	Meeting Purpose
June 25, 2002	Citizens Advisory Committee, National Capital Region Transportation Planning Board	Provided an overview of the Draft EIS and General Plans, financial analysis, environmental constraints and limits of disturbance.
June 26, 2002	Capital One	Provided information regarding the Metrorail Alternative and Tysons East Station location, and to discuss potential effects on the Capital One property.
June 28, 2002	Combined Chambers of Commerce (Fairfax County, Greater Reston, Greater McLean, Herndon-Dulles and Vienna-Tysons)	Provided a project status report and an overview of the Draft EIS and General Plans, financial analysis, and next steps for the project.
July 3, 2002	Rusty Blues (IBM Retirees)	Provided a project status report.
July 9, 2002	Toll Road Investors Partnership II (TRIP II)	Provided information regarding the proposed alignment in Loudoun County and discussed potential effects and impacts to the Dulles Greenway.
July 9, 2002	Providence District Homeowner Associations	Provided a project overview and discussed the various proposed alignments of the Metrorail Alternative through Tysons Corner.
July 10, 2002	Fairfax County Park Authority Board	Provided a project status report and discussed the potential effects on parks and recreational areas.
July 10, 2002	Northern Virginia Regional Park Authority (NVRPA)	Provided a project status report and discussed potential effects on the Washington & Old Dominion (W&OD) Railroad Regional Park and associated trail crossing that would be required under the Metrorail Alternative in the Reston area.
July 11, 2002	Dulles Corridor Rail Association Seminar	Provided a project status report, reviewed future land use in the vicinity of the proposed stations in Fairfax and Loudoun counties, and discussed the financial plan.
July 15, 2002	Fairfax County Supervisor Gerald Connolly	Discussed the Draft EIS recommendations and analyses.
July 16, 2002	Fairfax County Supervisor Catherine Hudgins' Draft EIS Task Force	Reviewed the Draft EIS and provided opportunity for the task force to make comments.
July 17, 2002	National Association of Industrial and Office Properties	Provided a project status report.
July 18, 2002	Mr. Art Walsh and Ms. Elizabeth Baker; Walsh, Colucci, Stackhouse, Emrich & Lubeley, P.C.	Provided information and discussed transit-oriented development and joint development possibilities at the Tysons West Station.
July 23, 2002	Fairfax County Supervisor Catherine Hudgins' Draft EIS Task Force	Continued to answer the Task Force members' questions on the Draft EIS.
July 23, 2002	Host Marriott	Provided a project status report to discuss specific questions regarding the project alignment and potential impacts to Marriott-owned property in Tysons Corner.
July 24, 2002	Hunter Mill District Public Information Meeting	Provided community members with a summary of the project background and an overview of the Draft EIS and General Plans.
July 26, 2002	Rapid Transit Action Committee	Reviewed the estimated capital, operations, and maintenance costs for the Dulles Corridor Rapid Transit Project.
August 5, 2002	Fairfax County Board of Supervisors Public Hearing	Received comments regarding the project, Draft EIS and General Plans.

Date	Stakeholder	Meeting Purpose
August 8, 2002	Tysons Corner Center, Wilmorite Properties, Incorporated	Provided a project status report and discussed the possible Metrorail alignments through Tysons Corner and the proposed location of the Tysons Central/Tysons Central D Station, with specific emphasis on the provision for station facilities on the Tysons Corner Center property.
August 13, 2002	Boston Properties, Inc.	Discussed the proposed Reston Parkway Station/Stop location, extension of the Metrorail west of Tysons Corner, pedestrian access to station, parking, bus circulation and stormwater management requirements.
August 14, 2002	Supervisor Stuart Mendelsohn, Dranesville District Civic Associations	Provided a project status report and reviewed project maps.
August 16, 2002	Centennial Contractors Enterprises	Presented a project status report and discussed the proposed Metrorail Alignments through Tysons Corner.
August 21, 2002	Greenwich Street Residents	Discussed the effects from the elevated rail line in the Dulles Connector Road, existing noise impacts from the Dulles Connector Road and West Falls Church Yard, projected noise levels from Metrorail, and proposed mitigation measures.

Stakeholder Meetings Following the Draft EIS Comment Period

Following the Draft EIS public comment period, stakeholder meetings continued upon request with elected officials, government agency representatives, property owners, tenants, and businesses along the proposed project alignment. The meetings generally included an overview of the Draft EIS public hearing process and results, and the recommendations for the proposed LPA, including a summary of the potential effects, overview of project costs, and financing. Some meetings included a discussion of project impacts to specific properties and a review of the property acquisition process. A summary is provided in Table 11.1-2 for each of the 16 meetings held during this phase.

Table 11.1-2: Stakeholder Meetings Following the Draft EIS Comment Period

Date	Stakeholder	Meeting Purpose
September 6, 2002	City of Falls Church, Virginia	Provided an overview of the Draft EIS public hearing results and the Project Team's recommendations for the Locally Preferred Alternative, including a summary of the potential effects, overview of project costs, and financing.
September 12, 2002	Dr. and Mrs. William Tyrell	Discussed the proposed lotion of a storm water management facility on a portion of the owners' property and the potential impacts.
September 18, 2002	Northern Virginia Chapter of the American Planning Association	Provided a status report and an overview of the Draft EIS and General Plans, financial analysis, and subsequent steps for the project.
September 20, 2002	Gannett Company	Provided a general project update to review the proposed General Plans for the Reston Parkway Station under the various Build Alternatives considered in the Draft EIS.
September 27, 2002	Boston Properties, Inc.	Provided a general project update to review the proposed General Plans for the Reston Parkway Station under the various Build Alternatives considered in the Draft EIS.
October 9, 2002	Dulles Corridor Rapid Transit Project Technical Working Group	Reviewed the Draft EIS public hearing process and results, the Project Team's recommendations for the Locally Preferred Alternative, including a recommended mitigation plan, and presented the subsequent steps in the environmental review process.
October 10, 2002	Federal Aviation Administration District Office	Reviewed the Draft EIS public hearing process and results, the Project Team's recommendations for the Locally Preferred Alternative, including a recommended mitigation

Date	Stakeholder	Meeting Purpose
		plan, and presented the subsequent steps in the environmental review process.
October 15, 2002	Signature Flight Support	Presented the Project Team's recommendations for the Locally Preferred Alternative, discussed the current horizontal and vertical rail alignment on airport property and the methods of underground construction envisioned for this area.
October 15, 2002	Leo Schefer, Washington Airports Task Force	Discussed the Public Hearings Report and the Project Team's basis for recommending the T-6 alignment as the LPA.
October 17, 2002	Host Marriott	Provided a project update, including the Draft EIS public hearing results, the Project Team's responses to Host Marriott's comments on the Draft EIS, the Project Team's recommendations for the Locally Preferred Alternative, and a discussion of the relocation of the portal away from the Dulles Airport Marriott frontage.
October 18, 2002	Fairfax County Board of Supervisors Transportation Committee	Provided an overview of the purpose and need for transit improvements in the Dulles Corridor, the Draft EIS public hearing process and results, and the Project Team's recommendations for the Locally Preferred Alternative, including a summary of the potential effects, overview of the project costs, and financing.
October 21, 2002	Marsteller Realty and Merchant's Tire and Auto	Provided participants with an overview of the project and discussed the proposed facilities at Tysons Central C Station.
October 23, 2002	Carr America	Provided a project update, including the Draft EIS public hearing results and the Project Team's recommendations for the LPA.
October 24, 2002	Holly Haley, Federal Realty Investment Trust	Provided an overview of the project and discussed the project impacts on Pike 7 Plaza and on an existing retail center adjacent to the proposed Tysons Central C station facilities.
October 25, 2002	Boston Properties, Inc.	Discussed alternative access and configuration options for the proposed Reston Parkway Station and Kiss & Ride facilities.
October 28, 2002	Fairfax County Board of Supervisors	Project Team answered questions about the project.

Stakeholder Meetings During the Supplemental Draft EIS Comment Period

WMATA and DRPT made presentations to several community groups and stakeholders during the public comment period for the Supplemental Draft EIS. These presentations provided an overview of refinements to the LPA as documented in the Supplemental Draft EIS. These presentations were made in an effort to increase public outreach and provide a forum for questions and comments. A standard presentation was used at a majority of these meetings. For some meetings, the presentation was modified to address specific issues and concerns of the audience. Comments received during these meetings are located in Appendix J. Federal, state, and local agency comments and coordination are located in Appendix K.

Presentations were given to groups and a variety of stakeholders including property owners, tenants, businesses, residential community associations and other organizations in the proposed project corridor. A total of 23 meetings were held between October 31, 2003, the date the Supplemental Draft EIS was made available to the public, and December 29, 2003, the end of the Supplement Draft EIS public comment period. A summary of each meeting is provided in Table 11.1-3 below. In addition to these meetings, the Dulles Corridor Steering Committee met on November 24 and December 10, 2003 for updates on the project.

Table 11.1-3: Stakeholder Meetings During the Supplemental Draft EIS Comment Period

Date	Stakeholder	Meeting Purpose
November 5, 2003	Fairfax County Non-Motorized Transportation Subcommittee	Reviewed issues of pedestrian and bicycle access to the proposed stations.
November 5, 2003	Fairfax County Supervisor Catherine Hudgins	Discussed the results of Supplemental Draft EIS.
November 5, 2003	Hunter Mill District Council	Provided a project status report.
November 10, 2003	VDOT Northern Virginia District Office (NoVa) and Fairfax County	Discussed roadway mitigation measures.
November 19, 2003	City of Falls Church	Discussed the West Falls Church Yard and updated the City on the project and Supplemental Draft EIS.
November 19, 2003	Commercial property owners at Wiehle Avenue Station	Briefed the property owners about project revisions and discussed station facilities and land requirements of the proposed Wiehle Avenue Station.
November 19, 2003	Westhampton Civic Association	Briefed the community prior to the two public hearings about project revisions and effects on the surrounding area.
November 20, 2003	HBL Group and Tysons dealerships	Provided project status and effects.
November 24, 2003	Dulles Corridor Rail Association	Annual meeting. Provided a project status report.
November 25, 2003	Clyde's Restaurant and Tysons Square/Relm Inc.	Provided a briefing on project status and discussed the effects of proposed facilities in the area of Tysons Central 7 Station.
November 25, 2003	Communities at West Falls Church Yard and residents at Tie Breaker Station location	Discussed the revisions to the West Falls Church Yard, project effects on the surrounding area, the TBS location and the access driveway at Baldwin Drive.
November 25, 2003	Town of Herndon and commercial property owners	Town Hearing on the Transportation Improvement District.
December 1, 2003	HBL Group and Tysons Properties LLC/Storehouse	Provided a briefing about project status and discussed the effects of proposed facilities.
December 1, 2003	Reston Association Board and Civic Associations	Provided an update on the project and the effects of the project revisions on the surrounding areas.
December 2, 2003	Town of Herndon and commercial property owners	Town Council vote on the Transportation Improvement District
December 5, 2003	Toll Road Investors Partnership II (TRIP II)	Reviewed the project status and discussed any outstanding issues or concerns.
December 9, 2003	Marsteller Realty Inc./Merchant Tire & Auto	Discussed the project status and its effects on Merchant Tire & Auto and the surrounding area.
December 10, 2003	Agency Coordination	Reviewed with representatives from the agencies and jurisdictions affected by the project, the revisions documented in the Supplemental Draft EIS and provided an update on the status of Preliminary Engineering.
December 11, 2003	HBL Group	Discussed the Tysons West Station facilities.
December 12, 2003	VDOT Northern Virginia District Office and Fairfax County	Discussed roadway mitigation measures.
December 15, 2003	Town Council of Vienna	Provided a project status report and discussed the effects of the project on the traffic along Maple Avenue and Route 123.
December 17, 2003	Ray Updike/1992 Chain Bridge Road	Discussed the status of the project and its effects on the area surrounding the property.
December 17, 2003	Chuch Veatch/Reston Self Storage	Discussed the effects of proposed facilities at the Wiehle Avenue Station and property acquisition requirements.

Stakeholder Meetings Following the Supplemental Draft EIS Comment Period

In an effort to increase public outreach and provide a forum for questions and comments on the project team's recommendations for the revised LPA, the project team continued to hold meetings with stakeholders after the Supplemental Draft EIS review period ended on December 29, 2003. Public comments and agency coordination are located in Appendices J and K, respectively.

A summary is provided in Table 11.1-4 below for each of the meetings held from December 30, 2003 through March 2, 2004.

Table 11.1-4: Stakeholder Meetings Following the Supplemental Draft EIS Comment Period

Date 2004	Stakeholder	Meeting Purpose
January 6, 2004	Town of Herndon Council Special Work Sessions	Technical question and answer workshop on alternative scenarios for project implementation and on a transportation improvement district.
January 22, 2004	Fairfax County Supervisor Hudgins	Review of Team Recommendations.
January 23, 2004	Ourisman Automotive	Proposed development of American Security Storage property.
January 28, 2004	Fairfax County Supervisor Smyth	Review of Team Recommendations.
January 29, 2004	RMC Tyco, LLC	Options for Tysons West Station facilities.
January 29, 2004	Fairfax County Chairman Connolly	Review of Team Recommendations.
February 2, 2004	Fairfax County Supervisor DuBois	Review of Team Recommendations.
February 9, 2004	Cherner Lincoln Mercury	Options for Tysons West Station facilities.
February 12, 2004	Northern Virginia Regional Park Authority (NVRPA)	Project effects on W&OD Railroad Regional Park.
February 19, 2004	Rosenthal Honda	Options for Tysons West Station facilities.
February 20, 2004	Peacock Buick	Options for Tysons West Station facilities.
February 23, 2004	Fairfax County and commercial property owners	County Hearing on Phase 1[1] Transportation Improvement District
February 25, 2004	Fairfax County Park Authority	Alternative location of Tie Breaker Station 2 and access driveway at Olney Park.
February 26, 2004	Tamarack Homeowners Association	Project status and traffic effects of Phase 1[1] on Hunter Mill Road and at Wiehle Avenue Station.
March 2, 2004	WestPark Hotel and SAIC	Tysons Central 7 Station entrance.
March 2, 2004	Wiehle Avenue Steering Committee of Fairfax County Supervisor Hudgins	Recommended traffic mitigation measures and joint development initiative at Wiehle Avenue Station.
April 9, 2004	Robert Young, property owner of McLean Self Storage Parcel	Discussed Tysons West Station options.
April 21, 2004	Tysons Corner Center/ Cooley Godward LLP/RTKL	Discussed Tysons Central 123 Station.
May 3, 2004	Fairfax County Non-Motorized Transportation Subcommittee	Discussed station access in general, in addition to the Tysons Central 7 entrance.
May 14, 2004	Cherner Lincoln/Mercury and Peacock Buick	Discussed Tysons West Station options.
May 24, 2004	Chris Antigone, owner and developer at Route 696 Station	Discussed Route 606 Station alternatives.
May 27, 2004	HBL, Cherner Lincoln/Mercury and Peacock Buick.	Discussed Tysons West Station options.
June 10, 2004	Virginia Baseball Stadium Authority & Developer	Discussed a proposed stadium near the Route 28 Station.
July 14, 2004	Rosenthal Honda	Discussed Tysons West options.
July 22, 2004	Transportation Committee of Fairfax County Planning Commission	Provided a Project status update.

Note:
[1]Phase 1 refers to the Wiehle Avenue Extension.

11.1.2.3 Public Hearings on the Draft EIS and the Supplemental Draft EIS

Public hearings were held to support the environmental review process under NEPA during public circulation of the Draft EIS and the Supplemental Draft EIS.

Public hearings on the Draft EIS and the Supplemental Draft EIS were conducted in accordance with NEPA requirements, Federal Transit Administration (FTA) regulations and guidelines, the procedures of the Commonwealth of Virginia, and WMATA Compact requirements. A number of means were used to notify the public of the release of both the Draft EIS and the Supplemental Draft EIS and the opportunity to review and comment on the document and proposed project. A summary of the public notification process and an overview of the public hearings are provided below. More detailed information relating to the comments received at each hearing and during the comment period, how these comments influenced project design, and the responses to the comments is provided in section 11.3 of this chapter and in Appendix J.

A. Public Hearings on the Draft EIS

The public hearings on the Draft EIS are described below in terms of notification, attendance, and comments received.

Draft EIS Public Hearing Notification

On July 12, 2002, the Notice of Availability of the Draft EIS was published by the Environmental Protection Agency (EPA) in the *Federal Register*, and included the times and location of public hearings at three different locations in the project corridor:

Monday, July 29, 2002 Spring Hill Elementary School 8201 Lewinsville Road McLean, Virginia 22102	Hearing No. 147, Docket R02-1
Tuesday, July 30, 2002 Langston Hughes Middle School 11401 Ridge Heights Road Reston, Virginia 22091	Hearing No. 148, Docket R02-1
Wednesday, July 31, 2002 Stone Bridge High School 43100 Hay Road Ashburn, Virginia 20147	Hearing No. 149, Docket R02-1

To help the public to prepare for the public hearings and to facilitate public participation in the project, on June 28, 2002, the Draft EIS and General Plans for the Dulles Corridor Rapid Transit Project were made available for public review and comment at 30 locations including local libraries and other community facilities. Public notices of the hearings were published in the Washington Post on June 28 and July 5, 2002. Additional advertisements of the availability of the Draft EIS and the upcoming public hearings also appeared in the *Northern Virginia Journal*, the *Connection Newspaper*, and the *Times Community Newspaper*.

Press releases in English and Spanish announcing public hearing dates were delivered to over 60 media outlets in the region on July 22, 2002. Meeting announcements designated for public service broadcasting were sent to over 50 radio and television stations in the region. In addition, announcements for posting on television "bulletin boards" were delivered to Loudoun Cable Television, Fairfax Cable Access Television, Reston Comcast Cable Television, and Herndon Community Television. Public hearing information was available on the project website, at the project information center in Reston and the Tysons Center kiosk, and at libraries and community centers throughout Fairfax and Loudoun counties. A project newsletter announcing the Draft EIS public hearings was sent to over 11,000 recipients.

In all, approximately 13,000 Notices of Public Hearings were distributed. The Notice of Public Hearings (Notice) was distributed to properties in the vicinity of the proposed project improvements, including hand delivery to 2,728 properties and tenants located in the vicinity of the proposed transit improvements. In addition, the Notice was sent by first-class mail to 5,661 property owners and tenants within the project area. The Notice was also sent via United States Postal Service Certified Mail to the 94 property owners from whom property may be acquired. In addition, the Notice was distributed to state and local agencies and representatives of civic associations within the study area.

Draft EIS Public Hearing Attendance

Over the three-night period, approximately 750 people were in attendance, with a total of 110 witnesses providing testimony. In addition, 131 comment cards were received. A court reporter was available at each hearing to record oral comments from those not wishing to speak publicly. Attendees were also encouraged to complete a comment card, submit a letter, or send an e-mail if they preferred not to provide testimony. Additional information on public hearing attendance is included in the October 2002 *Public Hearings Report – Review of Public Hearings and Project Team Recommendations for the Draft Environmental Impact Statement and General Plans* (Draft EIS Public Hearings Report).

Draft EIS Public Hearing Comments

An overview of the comments provided at each of the three public hearings is provided below. Appendix J of this Final EIS includes a more detailed summary of all public comments and responses.

July 29, 2002 Draft EIS Public Hearing - Approximately 350 people attended the hearing at Spring Hill Road Elementary School near Tysons Corner in McLean. Attendees included elected officials, representatives from interest groups, local businesses, and neighborhood associations, as well as concerned citizens living in proximity to the proposed improvements. Of the 41 people providing comments, 25 supported Metrorail, five supported BRT, one supported BRT/Metrorail, two supported Phased Implementation, two supported a monorail/light rail mode, and six provided comments but did not state a preference for an alternative. Comments included:

- Support for the project and Metrorail Alternative;
- Support for bus rapid transit (BRT);
- Need for rapid transit to Dulles Airport;
- Need to address traffic congestion and improve air quality;
- Visual effect of an aerial alignment through Tysons Corner;
- Maximizing transit oriented development and air rights development opportunities;
- Metrorail only through Tysons Corner and implementing Express Bus Service to the west in Reston, Herndon and Loudoun County;
- Concern about the placement of parking garages;

- Potential traffic effects on adjacent local streets;
- Adequate parking at the western terminus and the lack of parking at the proposed Route 772 Station;
- Effects of increased land use densities triggered by transit improvements;
- Existing and project-related noise impacts at and near the West Falls Church Service and Inspection (S&I) Yard;
- Additional analysis of local roadway impacts;
- Proposed noise mitigation measures;
- Feeder bus, bicycle, and pedestrian access to transit stations; and
- Need for innovative financing (i.e., through the Public Private Transportation Act (PPTA) and concern about the adequacy and fairness of funding sources.

July 30, 2002 Draft EIS Public Hearing - Approximately 250 people attended the hearing at Langston Hughes Middle School in Reston including elected officials, representatives from interest groups and neighborhood associations, as well as concerned citizens and primary landowners living in proximity to the proposed improvements. Of the 39 witnesses providing oral comments, 34 provided public testimony and five provided comments directly to the court reporter. Of the 39 witnesses, 24 supported Metrorail, four supported BRT, one supported Phased Implementation, one supported a monorail/light rail mode, three supported rapid transit but stated no preference for an alternative, and six provided comments but did not state a preference for an alternative. Comments at the hearing included:

- Opinion on the Metrorail Alternative;
- Opinion on BRT;
- Metrorail through Tysons Corner only;
- Opinion on alignment T8;
- Concern about existing and project-related noise;
- Location of a proposed storm water management pond and a traction power substation;
- The amount of time provided to the public for review of the Draft EIS and submission of comments;
- Adequacy of the analysis to determine neighborhood impacts (i.e. noise, existing residential water wells, increased traffic volumes on local streets and overflow parking); and
- Access to the Reston Parkway Station from all four quadrants of the interchange between Reston Parkway and the Dulles Toll Road.

July 31, 2002 Draft EIS Public Hearing - Approximately 150 people attended the final public hearing at Stone Bridge High School in eastern Loudoun County, including elected officials, representatives from interest groups and neighborhood associations, as well as concerned citizens and primary landowners living and working in proximity to the proposed improvements. Of the 30 witnesses providing oral comments, 28 witnesses provided public testimony and two provided comments directly to the court reporter. Of the 30 witnesses, 20 supported Metrorail, three supported BRT, one supported monorail, one supported rapid transit but stated no preference, and five provided comments but did not state a preference for an alternative. Comments made at the hearing included:

- Opinion on the Metrorail Alternative;
- Opinion on BRT;
- Opinion on Yard Site 15;

- § Concern over Loudoun County's self-imposed prohibition to regional park-and-ride lots within transit oriented development areas, citing the need for adequate commuter parking facilities at the terminus of the system (Route 772) to maximize ridership opportunities;
- § Increased tolls;
- § Traffic congestion resulting from the additional build-out of residential, retail, office and hotel uses around the station areas;
- § Financial impacts of Loudoun County becoming an active member of the WMATA;
- § Importance of "connectivity" to local neighborhoods and the expansion of transit within the county for those who prefer to use public transportation but cannot drive to access rapid transit; and
- § Need for adequate bus and feeder systems, as well as bicycle and pedestrian access.

The comments received at the public hearings and during the Draft EIS circulation and comment period were assessed by the project team, and used as a basis for future project recommendations, including the selection of a Locally Preferred Alternative. The comments and responses were documented in the Draft EIS Public Hearings Report as was project background summaries of the public hearings; public hearing presentation; comments received for the record and meetings held during the comment period; responses to comments received for the public record; and recommendations of the project team for the Build Alternative, general plans, mitigation plan, continuing coordination and unresolved issues. Appendix J of this document contains responses to comments received at the public hearings and during the Draft EIS circulation and comment period. Agency coordination is provided in Appendix K.

The Draft EIS Public Hearings Report was sent to state, regional, and local governments and agencies, elected officials, community organizations, private parties who presented testimony or submitted supplemental material for the record, all property owners on the official property acquisition list, and others who had previously expressed interest in the project. In total, approximately 1,200 copies of the Report were distributed for public review. In addition, the Report was made available on the project web site at www.dullestransit.com. Comments on the Report were accepted until November 1, 2002.

Comments on the Draft EIS Public Hearings Report were received from 11 public agencies and 35 private parties. Comments made on the Draft EIS Public Hearings Report included:

- § Opinion about the Project;
- § Noise mitigation;
- § Visual impacts;
- § Traffic and parking impacts in neighborhoods;
- § Aerial alignments;
- § Acquisitions and compensation;
- § Endangered species;
- § S&I Yard Site 15; and
- § Parking at Route 772.

The comments and responses were documented in the November 2002 Draft EIS Public Hearings Report Supplemental, and can be viewed in Appendix J. Agency coordination is provided in Appendix K.

B. Public Hearings on the Supplemental Draft EIS

The public hearings on the Supplemental Draft EIS are described below in terms of notification, attendance, and comments received.

Supplemental Draft EIS Public Hearing Notification

On November 7, 2003, the EPA published a Notice of Availability for the Supplemental Draft EIS in the *Federal Register* indicating the date, time and location of public hearings at two locations:

Wednesday, December 3, 2003 — Hearing No. 159, Docket R03-6
Langston Hughes Middle School
11401 Ridge Heights Road
Reston, VA 20191

Thursday, December 11, 3003 — Hearing No. 160, Docket R03-6
Farmwell Station Middle School
44281 Gloucester Parkway
Ashburn, VA 20147

To assist the public in preparing for the upcoming December 2003 public hearings, the Supplemental Draft EIS and General Plans for the Dulles Corridor Rapid Transit Project were made available for public review on October 31, 2003. Copies of these documents were available at the local libraries and other community facilities. The Supplemental Draft EIS was also circulated to federal, state, and local agencies for review and comment (as described in section 11.2).

A number of means were used to notify the public of the release of the Supplemental Draft EIS, the opportunity to review and comment on the document and proposed project, and the December public hearings in accordance with the requirements of the WMATA Compact and federal regulations. Notice of the hearings was published in the *The Washington Post* on November 1 and 8, 2003. Public hearing advertisements were also published in the *Connection Newspaper* (Reston, Herndon, Vienna/Oakton, McLean, and Loudoun County), the *Washington Post* (Metro section and Fairfax and Loudoun Extras), the *Times Community Newspaper* (Reston/Herndon, Vienna/McLean/Great Falls, and Eastern Loudoun County), and the *Observer Newspaper* (Herndon, Reston, and Eastern Loudoun County). Press releases (in English and Spanish) announcing public hearing dates were delivered to 48 media outlets in the region on November 12, 2003. Meeting announcements designated for public service broadcasting were sent to 32 radio and television stations in the region. In addition, announcements on television "bulletin boards" were delivered to Loudoun Cable Television, Fairfax Cable Access Television, Reston Comcast Cable Television, and Herndon Community Television.

Public hearing information was available on the project website, www.dullestransit.com, at the 3-D architectural model of the Tysons Corner Metrorail alignment options displayed at Tysons Corner Center, and at 28 locations, including a variety of public libraries and community centers throughout Fairfax and Loudoun counties. A project newsletter announcing the public hearings was sent to approximately 12,000 residents.

Approximately 8,560 Notices of Public Hearings (Notice) were distributed. The Notice was hand-delivered to 2,735 property owners and tenants located in the vicinity of the proposed transit improvements, and was sent by first-class mail to 3,372 property owners and tenants. The Notice was also sent via United States Postal Service Certified Mail to 74 property owners from whom property may be acquired. The Notice was also distributed to state and local agencies and representatives of civic associations within the study area.

Supplemental Draft EIS Public Hearing Attendance

Over the two-night period, a total of 48 witnesses provided testimony and eight comment cards/exhibits were collected. A court reporter was available at the December 3 hearing to record oral comments from those not wishing to speak publicly. Attendees were encouraged to encouraged to complete a comment card, submit a letter, or send an e-mail if they did not want to provide testimony. Additional information on public hearing attendance is included in Appendix J of this FEIS as well as in the February 2004 *Public Hearings Report for the Supplemental Draft Environmental Impact Statement and General Plans* (Supplemental Draft EIS Public Hearings Report Supplement).

Supplemental Draft EIS Public Hearing Comments

An overview of the comments provided at each of the two public hearings is provided below. Appendix J includes a more detailed summary of all public comments and responses.

December 3, 2003 Supplemental Draft EIS Public Hearing - Approximately 156 people attended the hearing. Attendees included elected officials, representatives from interest groups, civic associations, area businesses, as well as concerned citizens living in proximity to the proposed project alignment. Of the 31 witnesses who provided oral comments, 28 witnesses provided public testimony, and three people provided comments directly to the court reporter. Twenty of the witnesses provided oral comments in support of the project, although some had conditions of support. Main comments at the hearing related to:

- Phased implementation of the LPA;
- Vehicular traffic noise;
- Visual impacts and sound barriers;
- Coordination and accountability between agencies;
- Traffic analysis needed on neighborhood streets;
- Importance of getting rail to Tysons Corner;
- Design of station parking;
- Mode changes;
- Pedestrian, bike and feeder bus access;
- Intersection improvements and traffic calming measures;
- Tolls;
- Existing traffic congestion, particularly near Wiehle Avenue; and
- The proposed tax assessment district.

December 11, 2003 Supplemental Draft EIS Public Hearing – Representation at the hearing included elected officials, representatives from interest groups, civic associations, area businesses, as well as concerned citizens living in proximity to the proposed project alignment. Approximately 41 people attended, with 17 people providing oral comments. Of those providing testimony, 13 supported the project, some with conditions of support. Main comments at this hearing included:

- Immediate need for rail in Loudoun County;
- Station parking design;
- Mode changes;
- Pedestrian, bike, and feeder bus access for transit oriented development;
- Noise mitigation;
- Moving pedestrian access or extending platforms over roads;
- Need for two entrances at each station;

- Coordinating noise mitigation;
- Modifying station/parking designs;
- Location and design of the station and Kiss & Ride at Tysons West;
- Bus rapid transit; and
- Transportation improvement district for Fairfax County.

The comments received at the public hearings and during the Supplemental Draft EIS circulation and comment period were assessed by the project team and basis for future project recommendations, including the selection of a Locally Preferred Alternative. The comments and responses are documented in the February 2004 Supplemental Draft EIS Public Hearings Report, as well as in Appendix J of this Final EIS. Agency coordination is provided in Appendix K.

The Supplemental Draft EIS Public Hearings Report was sent to state, regional, and local governments and agencies, elected officials, community organizations, private parties who presented testimony or submitted supplemental material for the record, all property owners on the property acquisition list, and others who had previously expressed interest in the project. In total, approximately 600 copies of the report were distributed. In addition, the document was made available on the project website at www.dullestransit.com. Comments on the Supplemental Draft EIS Public Hearings Report were accepted until February 25, 2004.

Comments on the Supplemental Draft EIS Public Hearings Report were received from 17 individuals and six public agencies. The comments were reviewed to identify issues raised for further consideration in the Final EIS, and to identify potential additional alternatives that would meet the project's purpose and need. The comments received were addressed in the March 2004 Supplemental Draft EIS Public Hearings Report Supplement, and can be viewed in Appendix J of this Final EIS.

Main comments received on the Supplemental Draft EIS Public Hearings Report included:

- Tysons West Station Design and Operation;
- Tysons Central 7 Station Design and Operation;
- Wiehle Avenue Station Design and Operation;
- Route 772 Station Design and Operation;
- Noise mitigation efforts;
- Transit service from Herndon-Monroe;
- Premium Bus Service replacing Express Bus Service; and
- Financial analyses.

The project recommendations resulting from a review of the public record were made available on the project website at www.dullestransit.com.

C. Post-Hearing Conference

On Tuesday, May 18, 2004, a post-hearing conference was held by DRPT and WMATA at the following location:

McLean Governmental Center
1437 Balls Hill Road
McLean, Virginia 22101

The purpose of the post-hearing conference was to receive and consider comments, suggestions and alternatives on alternative site plans and locations for Tie-Breaker Station #2. Traction Power Substation #2, and the Tysons West Station entrance and facilities.

Approximately 60 people were in attendance. Attendees included elected officials, representatives from county agencies and local businesses, as well as concerned citizens living in proximity to the proposed improvements. Of the 14 attendees who provided oral testimony, four spoke regarding Tie Breaker Station #2, two of whom opposed Option B and two of whom presented concerns over the effects of Option A on their homes. Ten people spoke about Tysons West Station entrance and facilities, most of whom favored Option C or D.

Written or electronic comments were accepted through June 1, 2004. Comments were also accepted verbally and in writing at the post-hearing conference. Main comments at the conference included:

- Continuing dialogue with developers and the public;
- Tysons West Station options;
- New variations of Tysons West Station Options C and D;
- Impact of Tie Breaker Station #2 Option B on Tuckahoe Recreation Club; and
- Effects of Tie Breaker Station #2 Options A and B on neighboring properties.

A Post Hearing Conference Report and Supplement were prepared for public review and for the decision-making Boards, respectively. Comments from these meetings are included in Appendix J.

11.1.3 CONTINUING PUBLIC OUTREACH EFFORTS

To maintain public and stakeholder support for the project, DRPT will continue public outreach efforts throughout preliminary engineering and final design. The focus of these outreach activities will be to keep the public, stakeholders, and affected property owners informed about he project's progress. Continuing outreach efforts may include participation in community outreach activities and public information meetings and events, circulate project newsletters, brochures, and fact sheets, project website updates, and development of presentations or meeting materials for interested parties.

11.2 AGENCY COORDINATION

This section summarizes the coordination with local, state, and federal agencies to support the environmental review process for the project in terms of early agency coordination and scoping and ongoing agency coordination and comments. Agency comments and correspondence are provided in Appendices J and K.

Coordination activities began with publication of a Notice of Intent to Prepare (Notice) an EIS in the *Federal Register* on June 26, 2000. This Notice was also published in the legal section of the *Washington Post*.

FTA is the lead agency for the project, the DRPT is the project sponsor, WMATA is the technical manager, and FAA is acting as a cooperating agency. Coordination activities have involved federal, state and local environmental, regulatory, and resource agencies. These agencies have provided technical

expertise regarding the identification of resources, impacts assessment, and development of mitigation. Major issues raised as a result of agency comments include:

- Potential noise impacts along the corridor and at West Falls Church S&I Yard;
- Visual impacts and aesthetic effects;
- Safety and security;
- Changing Virginia Pollution Discharge Elimination System (VPDES) requirements for the Commonwealth of Virginia;
- Section 106 coordination and Section 4(f) coordination;
- Wetlands management; and,
- Traffic and parking impacts.

Appendix J contains the complete listing of comments received from agencies during the preparation of the Draft and the Supplemental Draft EIS. Appendix K contains agency correspondence.

11.2.1 EARLY AGENCY COORDINATION AND SCOPING

Early agency coordination and scoping activities are described in the following subsections.

11.2.1.1 Agency Interviews

Interviews with agencies were initiated in April 2000 to present the schedule for the preliminary engineering and environmental phase of the project, to review the initial scope of work, and to describe the known alternatives and their locations. Agency interviews included:

- April 11, 2000 - Fairfax County;
- April 21, 2000 - Metropolitan Washington Airports Authority (MWAA);
- May 25, 2000 - Virginia Department of Transportation (VDOT);
- June 16, 2000 - Loudoun County; and
- August 14, 2000 - Metropolitan Washington Airports Authority (MWAA).

Issues discussed at the meetings included:

- Configuration of the Dulles Airport Station, including accommodation of a future people-mover, and methods to minimize disruption to ground transportation facilities and operations during construction;
- Coordination with the State Historic Preservation Officer (SHPO) with regard to the historic resources of the Dulles Airport terminal;
- Appropriate agency contacts for project coordination;
- The region's long-range plan and Fairfax County's Comprehensive Plan;
- Designing the pedestrian bridges of the project's stations to be freely accessible by the general public rather than solely by BRT or Metrorail patrons;
- Improvements planned for the Dulles Toll Road and Access Road;
- Impacts on parking, bus, and Kiss & Ride facilities at East Falls Church Station;
- Extension of BRT service to East Falls Church;
- Evaluation of land use impacts;
- Pedestrian/bikeway bridge to provide access to the West Falls Church Station from the south side of I-66;
- Orange Line capacity;

- § Fairfax County's procedural requirements for amending the Comprehensive Plan for special exemptions and for planning approvals;
- § A loop alignment with two tracks in lieu of the single track along Routes 123 and 7;
- § Locating Wolf Trap Farm Park Station as part of the decision-making process during the preparation of the Draft EIS;
- § Pedestrian access between all four quadrants of the Reston Parkway interchange and the Reston Town Center Station;
- § Planned developments and highway construction in station areas;
- § The MIS evaluation of BRT Maintenance and Storage Facility and Metrorail S&I Yard sites; and
- § Current shuttle bus operations in the corridor.

11.2.1.2 Agency Pre-Scoping

Pre-scoping packets were sent to 54 federal, state, and local agencies in June 2000 and included a project schedule, preliminary scope of work, the FTA Notice of Intent, and an invitation list for the pre-scoping meeting.

The pre-scoping meeting was held July 11, 2000 and was attended by representatives from the 15 agencies listed in Table 11.2-1. Characteristics of the BRT and Metrorail alternatives to be analyzed in the EIS, including line, stations/stops, and ancillary facilities in each segment of the corridor were presented at the meeting. Attendees were encouraged to attend the formal agency scoping meeting on July 27, 2000.

Discussion among the attendees raised the following issues:

- § Locations of wide spots within the DAAR ("bubbles") to accommodate the proposed stations;
- § Design issues at Dulles Airport, including the integration of a separate planned people-mover project, subway station width and depth, and BRT stops not interfering with existing ground activity, wetlands and floodplains on the property, and the impacts of cut-and-cover versus tunneling;
- § Making the FAA a cooperating agency;
- § Location of the BRT Maintenance and Storage Facility and Metrorail S&I Yard;
- § Impacts of various alternatives on the local highway and roadway systems, including increased traffic on local roadways, which will require roadway improvements;
- § Tysons Corner loop alignment;
- § Protection of right-of-way for future use;
- § Locations of park-and-ride lots and pavilion entrances;
- § Elevated structures versus tunnels;
- § Trails and pedestrian access;
- § Public involvement;
- § Visual impacts; and
- § Impacts to Scotts Run Park.

11.2.1.3 Initial Agency Scoping

A formal agency scoping meeting was convened at the Center for Innovative Technology in Herndon on July 27, 2000. Representatives from ten agencies attended, as listed in Table 11.2-1. The project components and some of the comments received during the public scoping meetings held on the previous two evenings were reviewed. In addition, a report summarizing the concerns raised at the pre-scoping meeting was made available to all attendees.

Table 11.2-1: Agency Attendance at Pre-Scoping and Scoping Meetings

Agency Pre-Scoping Meeting July 11, 2000	Agency Scoping Meeting July 27, 2000
Federal Federal Aviation Administration (FAA) Regional Metropolitan Washington Airports Authority (MWAA) State Virginia Department of Conservation and Recreation Virginia Department of Environmental Quality (VDEQ) Virginia Department of Transportation (VDOT) Local City of Falls Church Fairfax County Department of Planning and Zoning Fairfax County Department of Transportation Fairfax County Park Authority Fairfax County Loudoun County Northern Virginia Regional Park Authority Northern Virginia Transportation Commission (NVTC) Town of Herndon Town of Vienna	Regional Metropolitan Washington Airports Authority (MWAA) Metropolitan Washington Council of Governments (MWCOG), Transportation Planning Board (TPB) State Virginia Department of Transportation (VDOT) Virginia Department of Forestry Local City of Falls Church Fairfax County Department of Planning and Zoning Fairfax County Department of Transportation Loudoun County Building and Development Northern Virginia Transportation Commission (NVTC) Town of Herndon

Discussion among the attendees raised the following issues:

- Including time for County Board of Supervisors' endorsement of project in the schedule;
- Evaluation of the travel time impacts of the various alignments;
- Additional alternatives and stations for evaluation;
- Travel demand modeling methods;
- Pedestrian access to stations; and
- Options for a light rail circulator in Tysons Corner.

11.2.1.4 Agency Data Requests

In January 2001, agencies were requested to provide information regarding natural and cultural resources in the Dulles Corridor, which were used to evaluate the environmental impacts of proposed alternatives (as documented in the Technical Reports and the Draft EIS). The following agencies were sent requests for information regarding the presence of resources in the corridor under their jurisdiction.

- Virginia Department of Agriculture and Consumer Services;
- Virginia Department of Conservation and Recreation;
- Virginia Department of Environmental Quality;
- Virginia Department of Game and Inland Fisheries;
- Virginia Department of Historic Resources; and
- United States Fish and Wildlife Service.

11.2.1.5 Agency Coordination Meetings

In May 2001, representatives from 72 agencies were invited to attend Agency Coordination Meetings. For convenience to the attendees, meetings were held on two dates (June 11 and 13, 2001) and in two locations (Herndon and Richmond). The meetings provided updated project information and information regarding data collection efforts and impact assessment methodologies. The meetings were followed by question and answer sessions. Table 11.2-2 lists the agencies that attended each meeting.

Table 11.2-2: Agency Coordination Meetings

Agency Coordination Meeting June 11, 2001	Agency Coordination Meeting June 13, 2001
Federal FTA National Park Service United Sates Environmental Protection Agency (EPA) USACE Regional MWCOG MWAA State Virginia Department of Transportation (VDOT) Virginia Department of Emergency Management Local Arlington County Department of Public Works City of Falls Church Fairfax County Department of Planning & Zoning Fairfax County Department of Transportation Fairfax County Economic Development Authority Fairfax County Water Authority Loudoun County Administrator Loudoun County Office of Transportation Services Northern Virginia Regional Park Authority Town of Herndon	Federal Federal Highway Administration (FHWA) State Virginia Department of Environmental Quality Virginia Marine Resources Commission Virginia Department of Conservation and Recreation Virginia Department of Transportation (VDOT) Virginia Department of General Services Virginia Department of Agriculture and Consumer Services Virginia Department of Labor and Industry

The issues raised by agency representatives at the Agency Coordination Meetings were as follow:

- § Consideration of the additional impervious surface of the third lane of the DIAAH in stormwater management and drainage plans;
- § Identification of parks, trail paths, proposed parks, and greenways in the project area;
- § Assessment of the value of station area development;
- § Utilization of BRT facilities after Metrorail is in place;
- § Landscaping stormwater facilities to use as community facilities;
- § Potential presence of rare mussels in streams in project area;
- § Diabase Glades located near project area, which support rare plants;
- § Wetlands near station areas;
- § Funding issues;
- § Noise barrier construction;
- § Traffic impacts;
- § Operation plan assumptions for feeder bus headways;
- § The location and historic status of the Sunset Hills Railroad Station along the W&OD Trail; and
- § Long-range plans for extending the project to Leesburg.

11.2.1.6 Supplemental Agency Scoping

In November 2001, the Steering Committee for the Dulles Corridor Rapid Transit Project asked DRPT and WMATA to consider alternatives to the Metrorail S&I Yard Site 7. In response, a Supplemental Rail Yard Study to examine different end-of-line locations for an S&I Yard was initiated. Pre-Scoping and Scoping meetings were held to solicit input on the initial list of yard sites to be considered.

A. Supplemental Agency Pre-Scoping Meetings

Pre-Scoping meetings were held on December 7 and 17, 2001, with MWAA, VDOT, and Loudoun County; and FAA and MWAA, respectively.

Discussion among the attendees raised the following issues:

- A request to eliminate the current S&I Yard Site 7 because of potential economic development plans on the site;
- The fact that the lease under which MWAA operates Dulles Airport requires 100 percent aeronautical use by the lease covenant; and
- Regulations on the use of land purchased with FAA grants.

B. Supplemental Agency Scoping Meetings

A Scoping Meeting was convened at the Dulles Hyatt on January 22, 2002. Representatives from 15 agencies attended as listed in Table 11.2-3. A brief project overview and a status report were presented, and input from agency representatives was solicited.

Table 11.2-3: Agency Attendance at Supplemental Rail Yard Study Pre-Scoping and Scoping Meetings

Agency Pre-Scoping Meeting December 7 and 17, 2001 (combined attendance)	**Agency Scoping Meeting January 22, 2001**
Federal	Federal
Federal Aviation Administration (FAA)	Federal Aviation Administration (FAA)
Regional	Federal Highway Administration (FHWA)
Metropolitan Washington Airports Authority (MWAA)	National Oceanic and Atmospheric Administration (NOAA)
State	National Weather Service
Virginia Department of Transportation (VDOT)	U.S. Army Corps of Engineers (USACE)
Local	Regional
Loudoun County	Metropolitan Washington Airports Authority (MWAA)
	State
	Virginia Department of Agriculture & Consumer Services
	Virginia Department of Business Assistance
	Virginia Department of Conservation and Recreation
	Virginia Department of Environmental Quality
	Virginia Department of Transportation (VDOT)
	Local
	Fairfax County Department of Transportation
	Loudoun County Department of Economic Development
	Loudoun County Office of Transportation Services
	Town of Herndon

Discussion among the attendees raised the following issues:

- FAA had possible concerns with releasing any Dulles Airport property;
- With regard to the evaluation of the use of NOAA property, about one-third of the proposed site is being transferred to MWAA, for use as a balloon launch and a weather station, with a need for clear space for these purposes;
- Potential for effects on a county planned road (Route 717);
- The MWAA Dulles Airport land use plan should be used as a point of reference in the screening of the supplemental yards;
- Development in the runway protection zone is not recommended;
- The need to place the shop facility and tower should be placed outside of any runway protection zone; and
- Structures for replacement parking might not be allowed in certain parts of the airport, unless the structures were at least partially underground.

11.2.1.7 Advance Technical Reports Review

Technical Reports were prepared in support of the Draft EIS, and include environmental, transportation, social and economic data and evaluation to be used as the basis for Draft EIS preparation. Draft copies of the Technical Reports were distributed to local agencies in February 2002 to inform the agencies of technical data related to the project and to seek comments.

11.2.2 AGENCY COORDINATION AND COMMENTS

Coordination to support the environmental review process and the preparation of the Draft EIS, the Supplemental Draft EIS, and the Final EIS is described below.

11.2.2.1 Dulles Corridor Working Groups and Steering Committee

Working groups were convened with appropriate agency representatives to facilitate technical, operations, and financial planning for the project. In addition, executives from the project's funding partners participated in the Dulles Corridor Steering Committee, which provided oversight and policy direction for several project issues, particularly financial issues. The working groups and steering committee are discussed below.

A. Dulles Corridor Technical Working Group

Agency representatives with technical expertise participated in the Technical Working Group. Jurisdictions and agencies represented in the Technical Working Group include the VDOT, MWAA, Fairfax County, Loudoun County, Arlington County, Town of Herndon, and TRIP II (the owner of the Dulles Greenway). Six Technical Working Group meetings were held during October and November 2000 to discuss alternatives for routes, stations, and Metrorail S&I Yard locations. A Project Status Briefing was held on April 23, 2001 to present the results of initial and intermediate screening process and solicit comments from the Technical Working Group. Representatives from five agencies attended: Arlington County, Fairfax County Department of Planning and Zoning, Fairfax County Department of Transportation, Loudoun County, and VDOT. In addition, a Technical Working Group Station Site Plan Review meeting was held on July 20, 2001, and Technical Working Group meetings were held to review the status of the Draft EIS on December 11, 2001 and February 6, 2002. Technical working group meetings continued throughout the development of the EIS.

B. Dulles Corridor Operations Working Group

Representatives from Fairfax County, Loudoun County, and the MWAA participated in the development of the Draft EIS as an Operations Planning Working Group. The Operations Planning Working Group met monthly between December 2000 and June 2001 to discuss issues related to the operations of the proposed transit improvements in the Dulles Corridor, including model inputs and assumptions, headways, fares, service variables, route patterns, and facilities. The group established the service assumptions for generating travel demand model forecasts for the project.

C. Dulles Corridor Financial Working Group

Representatives from Fairfax County, Loudoun County, and MWAA also participated in the project as a Financial Working Group. The group was established to discuss project funding sources, availability, timing, allocation, and possible creation of transportation improvement tax districts. Coordination with representatives in the Financial Working Group addressed the allocation of capital costs among the jurisdictions. The group coordination efforts also facilitated discussion of the distribution of operations and maintenance costs and subsidy allocation as well as discussion of the federal funding process.

D. Dulles Corridor Steering Committee

The Dulles Corridor Task Force was established in 1998 to help the Virginia Secretary of Transportation develop transit solutions for the Dulles Corridor. This group was instrumental in advancing the project into the environmental study phase. During the preliminary engineering and environmental review study phase, a new group called the Dulles Corridor Steering Committee was established to provide oversight and direction on issues related to the project's financing and policy. A subset of the original Dulles Corridor Task Force membership, the Steering Committee is composed of the executives from each of the project's funding partners:

- Northern Virginia District Representative of the Commonwealth Transportation Board (CTB) (Steering Committee Chairman);
- DRPT Director;
- WMATA Chief Executive Officer;
- MWAA General Manager;
- Fairfax County Executive;
- Loudoun County Administrator, and
- Herndon Town Manager.

Later, members of Landowners Economic Alliance for the Dulles Extension of Rail (LEADER), the landowners group formed to support the development of a transportation improvement district in Fairfax County, and Dulles Transit Partners were added to the Committee. The CTB representative also represents the Virginia Department of Transportation on the Steering Committee.

The Steering Committee met as needed throughout the development of the EIS to discuss policy, financial planning, and management issues. As a part of this effort, the Steering Committee reviewed and discussed the proposed project phasing and modifications to the LPA during the preparation of the Supplemental EIS. The committee also identified several options for providing the nonfederal share of capital funding, built on the efforts of the Financial Working Group to determine an equitable allocation of capital and operating costs among the funding partners, as well as develop a recommended implementation schedule for the project.

11.2.2.2 Draft EIS Coordination and Review

A. Additional Coordination During Draft EIS Preparation

Throughout the environmental review process, meetings were conducted with a variety of federal, state and local agencies to address environmental issues as they surfaced. A list of the meetings conducted is included in Table 11.2-4. Agency correspondence is in Appendix K.

Table 11.2-4: Summary of Agency Coordination Meetings

Date of Meetings	Agencies Attending
June 5, 2000	Fairfax County and VDOT
July 10, 2000	Loudoun County Transportation Committee
July 17, 2000	City of Falls Church Council
July 21, 2000	MWAA
August 2, 2000	Fairfax County Dulles Corridor Land Use Task Force
August 2, 2000	Fairfax County and Developer
August 7, 2000	Fairfax County Transportation Committee
August 15, 2000	DRPT and Capital Beltway Rail Feasibility Study Consultant
August 23, 2000	Town of Herndon
August 29, 2000	Arlington County

Date of Meetings	Agencies Attending
August 30, 2000	National Park Service and Wolf Trap Foundation
September 6, 2000	Town of Herndon and Consultant
September 12, 2000	MWAA
September 19, 2000	Loudoun County
September 23, 2000	Fairfax County Planning Commission
October 2, 2000	Loudoun County Transportation Committee
October 10, 2000	MWAA
October 11, 2000	VDOT Capital Beltway Study Team
October 12, 2000	Town of Herndon and Consultant
October 20, 2000	FHWA and VDOT
October 23, 2000	Capital Beltway Rail Feasibility Study Consultant
October 27, 2000	Fairfax County and Consultant
November 1, 2000	VDOT Capital Beltway Study Team
November 2, 2000	MWAA
November 7, 2000	MWAA
December 4, 2000	Loudoun County Transportation Committee
December 5, 2000	MWAA
December 15, 2000	VDOT Capital Beltway Study Team
December 18, 2000	VDOT Staff and Consultant
December 20, 2000	Fairfax County, Loudoun County, and MWAA
January, February, March 2001	Special series of meetings with VDOT on co-location in Tysons Corner
January 4, 2001	MWAA
January 9, 2001	MWAA
January 16, 2001	Fairfax County Dulles Corridor Land Use Task Force
January 17, 2001	All Operating Agencies
January 23, 2001	Fairfax County and VDOT
January 25, 2001	City of Falls Church
February 5, 2001	Fairfax County and VDOT
February 8, 2001	MWAA
February 14, 2001	Fairfax County and VDOT
February 21, 2001	Operating Agencies
February 27, 2001	Fairfax County and VDOT
February 28, 2001	Virginia State Historic Preservation Officer (SHPO) and MWAA
March 5, 2001	Fairfax County and VDOT
March 7, 2001	Loudoun County, TRIP II, and VDOT
March 8, 2001	MWAA
March 21, 2001	Operating Agencies
March 23, 2001	Fairfax County and VDOT
April 3, 2001	Fairfax County Park Authority
April 3, 2001	Loudoun County Department of Parks, Recreation, and Community Services
April 10, 2001	MWAA
April 18, 2001	Operating Agencies
April 20, 2001	Fairfax County and VDOT
April 23, 2001	Chairman Katherine K. Hanley and Supervisor Gerald E. Connolly (Providence District), Fairfax County Board of Supervisors
April 23, 2001	Supervisor Catherine M. Hudgins (Hunter Mill District), Fairfax County Board of Supervisors
April 24, 2001	National Park Service and Wolf Trap Foundation
April 27, 2001	Northern Virginia Regional Park Authority
May 2, 2001	Fairfax County Planning Commission
May 4, 2001	Supervisor Stuart Mendelsohn (Dranesville District), Fairfax County Board of Supervisors
May 7, 2001	Loudoun County Board of Transportation
May 21, 2001	Fairfax County Board of Supervisors
May 23, 2001	Operating Agencies

Date of Meetings	Agencies Attending
June 5, 2001	Town of Herndon Council
June 12, 2001	Town of Herndon Council Public Hearing
June 19, 2001	Supervisor Catherine M. Hudgins (Hunter Mill District), Fairfax County Board of Supervisors
July 11, 2001	National Park Service and Wolf Trap Foundation
July 12, 2001	Town of Herndon
July 20, 2001	Fairfax County
July 24, 2001	Loudoun County
July 26, 2001	MWAA Fire and Police staff
August 2, 2001	MWAA
August 8, 2001	National Park Service
August 30, 2001	MWAA
September 13, 2001	Loudoun County Board of Supervisors Transportation Committee
September 17, 2001	Fairfax County Economic Development Authority
September 26, 2001	MWAA
October 1, 2001	FAA
October 1, 2001	Fairfax County
October 15, 2001	Fairfax County
October 30, 2001	Supervisor Catherine M. Hudgins (Hunter Mill District), Fairfax County Board of Supervisors
November 15, 2001	Chairman Sean T. Connaughton, Prince William Board of County Supervisors
December 7, 2001	Supplemental Rail Yard Study Kick-Off Meeting—Loudoun County and MWAA
December 10, 2001	Loudoun County
December 17, 2001	FAA and MWAA
February 11, 2002	Fairfax County Board of Supervisors Transportation Committee
February 26, 2002	Town of Herndon
March 14, 2002	Loudoun County Transportation Committee
March 26, 2002	Chairman Katherine K. Hanley, Fairfax County Board of Supervisors
March 28, 2002	Chairman Chris Zimmerman, Arlington County Board
April 1, 2002	Supervisor Dana Kauffman, Fairfax County Board of Supervisors
April 1, 2002	Council Member William Euille, Alexandria City Council
April 22, 2002	Fairfax County Board of Supervisors Transportation Committee
February 14 , 2003	U.S. Army Corps of Engineers (USACE), Virginia Department of Environmental Quality (VDEQ), EPA
February 27, 2003	Virginia Department of Historic Resources (VDHR)
March 11, 2003	MWAA, Metropolitan Transit Police Department (MTPD), and Transportation Security Administration (TSA)
April 24, 2003	MWAA, Metropolitan Transit Police Department (MTPD), and Transportation Security Administration (TSA)
August 5, 2003	VDOT
August 8, 2003	Fairfax County
August 13, 2003	Fairfax County Non-Motorized Transportation Subcommittee
September 9, 2003	VDOT
October 10, 2003	VDOT and Fairfax County Department of Transportation
November 5, 2003	Supervisor Hudgins
November 5, 2003	Fairfax County Non-Motorized Transportation Subcommittee
November 5, 2003	Hunter Mill District Council
November 5, 2003	VDOT and Fairfax County
November 19, 2003	City of Falls Church
November 25, 2003	Town of Herndon
December 2, 2003	Town of Herndon
December 10, 2003	Agencies and Jurisdictions
December 12, 2003	VDOT NoVa and Fairfax County
December 15, 2003	Town of Vienna Council
January 6, 2004	Town of Herndon Council
January 22, 2004	Fairfax County Supervisor Hudgins

Date of Meetings	Agencies Attending
January 28, 2004	Fairfax County Supervisor Smyth
January 29, 2004	Fairfax County Supervisor Connolly
February 2, 2004	Fairfax County Supervisor DuBois
February, 2004	Northern Virginia Regional Park Authority
February 23, 2004	Fairfax County
February 25, 2004	Fairfax County Park Authority
May 3, 2004	Fairfax County
May 3, 2004	Fairfax County Non-Motorized Transportation Subcommittee
June 22, 2004	Transportation Committee of Fairfax County Planning Commission

B. Agency Review and Comments on the Draft EIS

The Draft EIS was distributed to 58 agencies for review and comment in June 2002 in advance of the July 2002 public hearings. Comments received from agencies on the Draft EIS and responses to those comments are provided in the *October 2002 Draft EIS Public Hearings Report* and the *November 2002 Draft EIS Public Hearings Report Supplement* and can be viewed in Appendix J. Agency correspondence is provided in Appendix K.

A total of 13 agencies commented on the Draft EIS. Agencies who commented are as follows:

- City of Falls Church;
- Virginia Department of Conservation and Recreation;
- Fairfax County Department of Transportation;
- Fairfax County Park Authority;
- Fairfax County;
- Federal Aviation Administration, Washington Airports District Office;
- Metropolitan Washington Airports Authority;
- U.S. Department of Agriculture, Natural Resources Conservation Service;
- Northern Virginia Regional Park Authority;
- Town of Herndon;
- U.S. Environmental Protection Agency;
- Virginia Department of Environmental Quality; and
- Virginia Department of Transportation.

Issues raised included the following:

- Air quality improvements;
- Support for Metrorail alternative;
- Service and inspection yard noise;
- Water quality;
- Wetland permitting;
- Safety concerns; and
- Parks and recreation impacts.

11.2.2.3 Supplemental Draft EIS Coordination and Review

A. Additional Coordination During Supplemental Draft EIS Preparation

Major coordination meetings with key resource, regulatory, and environmental agencies in support of the Supplemental Draft EIS are summarized below.

U.S. Army Corps of Engineers (USACE), Virginia Department of Environmental Quality (VDEQ), and the Environmental Protection Agency (EPA). The purpose of this coordination was to provide an update on the project, to discuss possible wetland mitigation measures, to review the historic and environmental impacts of construction at S&I Yard Site 15, and to introduce the Comstock Project. Discussions on wetland issues determined that impacts were minimal; therefore, mitigation at an approved wetland bank or in-lieu fee fund would be acceptable. For S&I Yard Site 15, it was agreed that further coordination with the Virginia Department of Historic Resources (VDHR) would be needed on possible archeological impacts. Further coordination was also arranged regarding responsibility for the mitigation of possible effects to the property offered for the proposed Loudoun Station development at the Route 772 Station.

Virginia Department of Historic Resources (VDHR). This coordination focused on the initiation of the Section 106 process and the Programmatic Agreement (PA), the possible historic value of S&I Yard Site 15, and the historic importance of Dulles Airport's "peekaboo" view sequence. It was determined that the Programmatic Agreement (PA) would be revised and submitted to VDHR and that the Advisory Council of Historic Preservation (ACHP) would be informed of DRPT's and WMATA's intent to enter into a PA. In addition, the peekaboo sequence along the DIAAH would be further evaluated and the limits of the airport historic district would be clarified. Ultimately, based on additional technical investigations and coordination, a Memorandum of Agreement was prepared and is available in Appendix F.

Metropolitan Washington Airports Authority (MWAA), Metropolitan Transit Police Department (MTPD), and Transportation Security Administration (TSA). A March 2003 meeting initiated discussions on security issues posed by the proposed Metrorail station at Dulles Airport. Discussions focused on a TSA sign-off on the NEPA documents as referenced by the FAA. Other topics included the need to secure the rail yard site and separate it from the airfield. TSA's primary concerns were related to security, with the focus on measures that should be taken to enhance safety at both the airport and Metrorail station. These issues were discussed further at an April 2003 meeting.

Virginia Department of Conservation and Recreation (VDCR). Correspondence from VDCR dated November 1, 2002 requested that the department's staff be provided with results of two diabase glade habitat surveys that were conducted as part of the analysis of rare, threatened, and endangered species for the Draft EIS for S&I Yard Site 15. The agency was concerned that the initial surveys were taken at a time when the seven state and globally rare plant species associated with diabase glade communities potentially located at S&I Yard Site 15 would not be flowering. In response to these concerns, two follow-up rare plant surveys were conducted in July and August 2002. The follow-up surveys were conducted at times when the rare plants would be flowering; however, no evidence of the seven rare plants was found. Both surveys indicated that there is absence of suitable habitat for the rare diabase plants at S&I Yard Site 15.

Virginia Department of Environmental Quality (VDEQ). After the publication of the Draft EIS, VDEQ requested that coordination take place in regards to 34 sites of potential concern that were not identified during the analysis of hazardous and contaminated materials for the Draft EIS. These sites are likely to contain Recognized Environmental Conditions (REC), as they include several gas stations, auto dealerships, and airport-related facilities.

Advisory Council on Historic Preservation (ACHP). Correspondence with ACHP dated June 19, 2003, included invitations to the council's staff to participate in further consultation to consider means to avoid or minimize project-related impacts to historic properties, under the requirements of Section 106 of

the National Historic Preservation Act, and request ACHP participation as a signatory to the Programmatic Agreement. After reviewing related project materials, ACHP responded in August 2003 that its participation would not be needed to resolve potential effects to historic resources.

B. Agency Review and Comments on the Supplemental Draft EIS

The Supplemental Draft EIS was distributed to 58 agencies for review and comment in October 2003 in advance of the December 2003 public hearings. Comments received from agencies on the Supplemental Draft EIS and responses to those comments are provided in the *February 2004 Supplemental Draft EIS Public Hearings Report* and the *March 2004 Supplemental Draft EIS Public Hearings Report Supplement* as well as in Appendix J of this Final EIS. Agency correspondence is provided in Appendix K.

A total of 12 agencies commented on the Supplemental Draft EIS, including:

- Northern Virginia Regional Commission;
- Commonwealth of Virginia;
- Fairfax County Non-Motorized Transportation Committee;
- Virginia Department of Environmental Quality;
- District of Columbia Department of Public Works;
- Loudoun County;
- U.S. Environmental Protection Agency;
- Northern Virginia Regional Park Authority;
- Virginia Department of Transportation;
- Fairfax County Department of Transportation;
- Metropolitan Washington Airports Authority;
- Town of Herndon; and
- Commonwealth of Virginia Department of Historic Resources.

Issues raised included bus service; roadway analysis methodology; traffic effects; parklands and recreation impacts; parking; operating costs; and project phasing.

11.2.2.4 Final EIS Coordination and Review

U.S. Army Corps of Engineers (USACE) and Virginia Department of Environmental Quality (VDEQ). As design of the project was refined, additional wetland impacts were identified with two stormwater management facilities, P-5 and P-15. A supplement to the March 2003 jurisdictional determination was obtained. Furthermore, a Federal Consistency Determination was reviewed by VDEQ (see Appendix L).

Virginia Department of Historic Resources. The primary focus of this coordination has been to obtain a determination of effect on historic resources within the Dulles Corridor and to finalize the Section 106 Memorandum of Agreement (MOA). Appendix K contains agency correspondence and Appendix F contains the Section 106 MOA.

Virginia Department of Conservation and Recreation (VDCR) and Northern Virginia Regional Park Authority (NVRPA). The primary focus of coordination with these agencies was to resolve potential effects of the W&OD Trail. The project was found not to impact the park in terms of resulting in a use under Section 4(f) or a conversion of use under Section 6(f). VDCR and NVRPA correspondence is provided in Appendix K.

11.2.2.5 Commonwealth Transportation Board and WMATA Board of Directors

As described in Chapter 1, several local deliberative bodies are responsible for making decisions during the preliminary engineering and environmental review phase of project development. One of these bodies, the CTB, is a 17-member board appointed by the Governor of Virginia. The board is primarily responsible for locating routes, approving construction contracts, creating traffic regulations, naming highways, and administering and allocating transportation funds in Virginia.

Another of these deliberative bodies is the WMATA Board of Directors, a six-member board consisting of two principal Directors from each signatory jurisdiction (Virginia, Maryland, and the District of Columbia). In addition, the board includes six alternate Directors who may act in the absence of the Principal Director. The WMATA Board is responsible for the mass transit plan for the Washington Metropolitan Area Transit Zone, which includes the Dulles Corridor.

On November 21, 2002 the WMATA Board of Directors amended the Adopted Regional System (ARS) to include the Metrorail Alternative (T6/Y15) contingent upon six conditions. On December 19, 2002, the Commonwealth Transportation Board (CTB) concurred with the WMATA Board and formally selected Metrorail Alternative (T6/Y15) as the LPA for the project. The Boards of Supervisors for Fairfax and Loudoun counties, the Town of Herndon, and MWAA also endorsed the selection. Subsequent to circulation of the Supplemental Draft EIS, the CTB in March 2004, revised the LPA to be constructed two phases – the Wiehle Avenue Extension and the full LPA. The WMATA Board in April 2004, amended its ARS for the revised LPA contingent upon seven conditions (the original six, plus a new condition), as outlined in Chapter 2 of this Final EIS.

11.3 COMMENTS AND RESPONSES

This section addresses comments received during the public and agency comment periods for the Draft EIS and the Supplemental Draft EIS. Issues raised were addressed through provision of a clarifying response or explanation, modification of the project design and configuration or incorporation of mitigation provisions, and are reflected in this Final EIS.

11.3.1 DRAFT EIS

Public agencies, elected officials, businesses, civic association representatives, interest groups, and the general public submitted 2,520 comments regarding the Dulles Corridor Rapid Transit Project during the formal public comment period that followed publication of the June 2002 Draft EIS. These comments were submitted through public hearing testimony, comment cards, letters, e-mails, written statements, or a combination thereof. Public and agency comments are provided in Appendix J. Agency correspondence is provided in Appendix K.

At the close of the comment period, statements had been received from 386 people. Each statement received was reviewed to identify the nature of the comment. Comments were entered into a comment database and tracked by both a unique number given to each commenter and by subject matter. Similar comments are grouped together and given a common response.

During the comment period for the Draft EIS, comments were received on the following issues:

Purpose and Need for the Project

- Need for rapid transit to Dulles Airport;
- Need to address traffic congestion and improve air quality;
- Regional connectivity; and
- Service to Tysons Corner Center.

Alternatives Considered

- Support for and opposition to aerial alignments;
- Support for and opposition to BRT service;
- Support for and opposition to combination Metrorail/BRT service;
- Support for and opposition to Monorail/Light Rail Transit; and
- Support for and opposition to Metrorail Alternative.

Community Impacts

- Land use planning and mixed-use development;
- Location of the Wiehle Avenue and Reston Parkway stations;
- Parking;
- Compatibility of a BRT Maintenance and Storage Facility and Metrorail S&I Yard with community land use;
- Induced development from existing employment centers;
- Impacts of connecting to the East Falls Church or West Falls Church Metrorail Station;
- Smart growth;
- Concern about the placement of parking garages;
- Adequate parking at the western terminus and the lack of parking at the proposed Route 772 Station;
- Visual effect of an aerial alignment through Tysons Corner;
- Maximizing transit oriented development and air rights development opportunities;
- Effects of increased land use densities triggered by transit improvements;
- Location of a proposed storm water management pond and a traction power substation;
- Adequacy of the analysis to determine neighborhood impacts (i.e. noise, existing residential water wells, increased traffic volumes on local streets and overflow parking);
- High density development;
- Opposition to the Hunter Mill Road Station; and
- Importance of “connectivity” to local neighborhoods and the expansion of transit within the county for those who prefer to use public transportation but cannot drive to access rapid transit.

Environmental Effects

- Noise, vibration, and visual impacts;
- Location of the Wolf Trap Farm Park Station and its designation as a special use station;
- Locations of the BRT Maintenance and Storage Facility and the Metrorail S&I Yard;
- Existing and project-related noise impacts at and near the West Falls Church Service and Inspection (S&I) Yard; and
- Proposed noise mitigation measures.

Economic Effects

- § Cost and funding;
- § Possibility of fare increases to fund an extension;
- § Possibility of increase in ad valorem taxes;
- § Need for innovative financing (i.e., through the PPTA) and concern about the adequacy and fairness of funding sources; and
- § Financial impacts of Loudoun County becoming an active member of the WMATA.

Transportation Effects

- § Congestion as a result of possible phased implementation at interim terminus;
- § Congestion as a result of construction;
- § Impact of the proposed widening of I-66 in Arlington;
- § Metrorail only through to Tysons Corner and implementing Express Bus Service to the west in Reston, Herndon and Loudoun County;
- § Impacts on the Metrorail Orange Line;
- § Traffic congestion resulting from the additional build-out of residential, retail, office and hotel uses around the station areas;
- § Support for congestion mitigation;
- § Potential traffic effects on adjacent local streets; and
- § Access to the Reston Parkway Station from all four quadrants of the interchange between Reston Parkway and the Toll Road.

General Comments

- § Coordination with other transit studies;
- § Operational flexibility;
- § Pedestrian and bicycle access to station locations;
- § Pedestrian access and overpasses;
- § Bus and pedestrian access;
- § Project schedule;
- § Enhanced bus service;
- § Feeder bus service;
- § The amount of time provided to the public for review of the Draft EIS and submission of comments;
- § Coordination with other transit studies and connectivity between the lines;
- § Support for the results of the scoping process;
- § Service design (prior to designing the tracks); and
- § Concern over Loudoun County's self-imposed prohibition to regional park-and-ride lots within transit oriented development areas, citing the need for adequate commuter parking facilities at the terminus of the system (Route 772) to maximize ridership opportunities.

Responses to comments on the Draft EIS are presented in Appendix J.

11.3.2 SUPPLEMENTAL DRAFT EIS

Public agencies, elected officials, business, civic association representatives, interest groups, and the general public submitted a total of 832 comments regarding the Dulles Corridor Rapid Transit Project during the formal public comment period that followed publication of the October 2003 Supplemental Draft EIS. These comments were submitted through public hearing testimony, comment card, letter, e-mail, written statements, or a combination thereof. Public and agency comments are provided in Appendix J. Agency correspondence is provided in Appendix K.

As of the close of the comment period, 133 people had submitted statements for the record. Each statement received was reviewed to identify the nature of the comment. Comments were entered into a comment database and tracked by both a unique number given to each commenter and by subject matter. Responses to comments have been summarized in the Public Hearings Report prepared after the hearings on the Supplemental Draft EIS. Similar comments were grouped together and answered by a single response.

During the comment period for the Supplemental Draft EIS, comments included the following issues:

Metrorail Alternative

- Support for and opposition to Metrorail Alternative;
- Support for and opposition to a No Build Alternative;
- Support for and opposition to Phased Implementation;
- Support for BRT;
- Security issues surrounding locating an emergency access shaft on airport property; and
- Immediate need for rail in Loudoun County.

Transportation Effects

- Traffic Congestion Mitigation;
- Possible traffic congestion effects of phased construction at Wiehle Avenue interim terminus;
- Impacts on the Metrorail Orange Line;
- Negative construction impacts (access to neighborhoods, and business);
- Importance of getting rail to Tysons Corner;
- Mode changes;
- Intersection improvements and traffic calming measures;
- Existing traffic congestion, particularly near Wiehle Avenue;
- Transit service from Herndon-Monroe; and
- Premium Bus Service replacing Express Bus Service.

Community Impacts

- Negative construction impacts;
- Delay of development in areas not included in the Wiehle Avenue Extension;
- Negative Effects to Tyson's Corner and Wiehle Ave.;
- Need for cooperative redevelopment;
- Traffic analysis needed on neighborhood streets;
- Negative effect on development at Tyson's East Station vicinity;
- Location and design of the station and Kiss & Ride at Tysons West; and

- Route 772 Station.

Environmental Effects

- Noise and vibration effects at S&I Yard 15;
- Noise mitigation needed around aerial segments;
- Possible locations of Traction Power Substations and Tie-Breaker Stations;
- Negative effective on Lake Anne drainage if Wiehle Ave. is widened; and
- Coordinating noise mitigation.

Economic Impacts

- Support for opposition to a possible toll increase to partially fund construction;
- Cost and funding;
- Possibility of fare increases to fund an extension;
- Possibility of increase in sales and ad valorem taxes;
- Tax assessment district for Fairfax County;
- Pedestrian, bike, and feeder bus access for transit oriented development; and
- Financial analyses in general.

General Comments

- Pedestrian and bicycle access to station locations;
- Pedestrian access and overpasses;
- Bus and pedestrian access;
- Project schedule;
- Coordination and accountability between agencies;
- Support for the public involvement process;
- Moving pedestrian access or extending platforms over roads;
- Need for two entrances at each station; and
- Modifying station/parking designs.

Responses to comments on the Supplemental Draft EIS are presented in Appendix J.

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APPENDIX A: LIST OF PREPARERS

FEDERAL TRANSIT ADMINISTRATION	Susan Borinsky, *Regional Administrator, Region 3* Patricia Kampf, *Transportation Program Specialist, Region 3* Brian Glenn, *Director, Washington D.C. Metropolitan Office* Deborah R. Burns, *Senior Planner, Washington D.C. Metropolitan Office* A. Joseph Ossi, *Environmental Planner, Office of the Human and Natural Environment* Sharon Pugh, *Senior Transportation Planner*
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WASHINGTON AIRPORTS DISTRICT OFFICE	Brad Mehaffy, *Environmental Specialist*
DMJM/DELEUW, a joint venture	Diana C. Mendes, AICP, *Project Manager* Oscar Gonzalez, *Deputy Project Manager* James G. Duncan, AICP, *EIS Manager* Chris Bell, AICP, *Transportation Planning and Operations Manager* Kenneth Mobley, AICP, *Land Use and Economic Development*

DMJM/DELEUW, a joint venture (continued)	Stephen Walter, AICP, *Senior Technical Advisor* Trent Ebersole, P.E., *Traffic Planning* Mark Niles, AICP, *Senior Transportation Planning* Clint Harbert, AICP, *Transportation Planning* Kevin Hammond, *Land Use/Socioeconomic Planning* Susan Anderson, *Natural Resources and Section 4(f) Statement* Robert Hertz, AICP, *Air Quality, Noise and Vibration, Energy* Peter Magaro, *Natural Resources* Elizabeth Federico, *Cultural Resources* Simone Moffett*, Cultural Resources* Kasey May, *Environmental Documentation* William B. Kerr Jr., AICP, *Environmental Justice* Doug Scrivener*, Limits of Disturbance and Impact Assessment* Lalaina Parsons*, Limits of Disturbance and Impact Assessment* David Nelson, *Graphics Design Manager* Nolen Strals, *Graphics Design* Christopher LaRue, *QA/QC Manager* Kimber Lee Green*, Production Manager* William Boothe, *FEIS Production/Technical Review* Harriett Dietz, *FEIS Production/Technical Review* Jason Mumford, P.E. AICP, *FEIS Production/Technical Review*
PARSONS BRINCKERHOFF QUADE & DOUGLAS	Hanan A. Kivett, AIA, *Deputy Project Manager, General Plans* Maria Kolena, *CADD, General Plans*
AECOM CONSULT	Jeffrey Bruggeman, *Patronage Estimation* Robert Peskin*, Finance*
KM CHNG ENVIRONMENTAL, INC	David Ernst, *Air Quality* Thomas Herzog, *Air Quality, Noise & Vibration* Mark Bolduc, *Noise & Vibration* Richard Letty, *Noise & Vibration*

COASTAL RESOURCES, INC.	Bridgette Grillo, *Natural Resources* David Smith, PWS*, Natural Resources*
EEE CONSULTING	Nadine Robertson*, Hazardous Materials*
MANUEL PADRON & ASSOCIATES	James Baker, *Operations Planning*
TRAVESKY & ASSOCIATES, LTD.	Marie B. Travesky, *Public Involvement Manager* Denise H. Nugent, *Public Involvement* Alvin Bates, *Public Involvement*

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Disclosure Statement on Conflicts of Interest

Preliminary Engineering/National Environmental Policy Act (PE/NEPA) Phase of the Dulles Corridor Rapid Transit Project

I, the undersigned, am an officer/representative of a Joint Venture of **Daniel, Mann, Johnson, & Mendenhall, Inc. (DMJM)**, and **DeLeuw, Cather & Co.**, now **Parsons Transportation Group, Inc. (PTG) (Joint Venture identified as "DMJM/PTG")**, which has a Joint Venture consultant on-call architectural/engineering contract with the Washington Metropolitan Area Transit Authority (WMATA) to provide professional services for the preparation of preliminary engineering (PE), an Environmental Impact Statement (EIS) and/or financial plans of the Dulles Corridor Rapid Transit Project (Rapid Transit Project). WMATA is the local joint lead agency for the Rapid Transit Project and receives grant monies from the Federal Transit Administration (FTA), as the lead federal agency, for the PE/NEPA phase of the Rapid Transit Project.

The Council on Environmental Quality (CEQ) issued the following regulation, 40 CFR §1506.5(c) for implementing the National Environmental Policy Act of 1969 (NEPA), as amended:

> Environmental impact statements. Except as provided in Secs. 1506.2 and 1506.3 any environmental impact statement prepared pursuant to the requirements of NEPA shall be prepared directly by or by a contractor selected by the lead agency or where appropriate under Sec. 1501.6(b), a cooperating agency. It is the intent of these regulations that the contractor be chosen solely by the lead agency, or by the lead agency in cooperation with cooperating agencies, or where appropriate by a cooperating agency to avoid any conflict of interest. Contractors shall execute a disclosure statement prepared by the lead agency, or where appropriate the cooperating agency, specifying that they have no financial or other interest in the outcome of the project. If the document is prepared by contract, the responsible Federal official shall furnish guidance and participate in the preparation and shall independently evaluate the statement prior to its approval and take responsibility for its scope and contents. Nothing in this section is intended to prohibit any agency from requesting any person to submit information to it or to prohibit any person from submitting information to any agency.

In response to this Federal CEQ regulation, DMJM/PTG states that it has no financial or other interests in the outcome of the Rapid Transit Project at this time. It further agrees and affirms that it will not have any such interest until after the

issuance date of the Record of Decision for the Dulles Transit Project by FTA ("PE/NEPA Phase Period"), except as may be authorized subsequently by either i) federal statute or regulation, and WMATA approval, or ii) an approval(s) in writing by the FTA, as the lead federal agency, and/or WMATA, as the local joint lead agency, consistent with present practice, and iii) being publicly disclosed. DMJM/PTG will not gain any direct benefit such as a promise of future construction or design work on the Rapid Transit Project, nor any indirect benefits of which DMJM/PTG is aware, such as if the Rapid Transit Project would aid proposals sponsored by DMJM/PTG's other clients. If DMJM/PTG has developed initial data and plans for the Rapid Transit Project, a disclosure statement in the draft EIS will clearly state the scope and extent of the firm's prior involvement in order to disclose any potential conflicts of interest that may exist. DMJM/PTG, upon learning of any potential conflict(s) of interest in the PE/NEPA Phase Period will timely advise the FTA and WMATA in writing, and will, in the same writing, fully inform those agencies of the steps taken to eliminate the potential conflict(s).

The foregoing responsibilities and affirmation, given in this Disclosure Statement, shall cease and terminate at the time of the issuance of the Record of Decision for the Dulles Transit Project by FTA ("PE/NEPA Phase Period").

DMJM/PTG, a Joint Venture

By: _____ December 13 2000

Its: Program Manager

ACKNOWLEDGMENT

Commonwealth of Virginia)
County of Arlington) SS:

I, Mary E. Sanders, a Notary Public in and for said Commonwealth of Virginia, DO HEREBY CERTIFY that , (title) James L. Palmer, of **DMJM/PTG, a Joint Venture**, personally known to me to be the same person whose name is subscribed to the foregoing instrument as such officer/representative, appeared before me this day in person and acknowledged that he/she signed and delivered the said instrument as his/her own free and voluntary act, and as the free and voluntary act of said **DMJM/PTG, a Joint Venture**, for the uses and purposes therein.

GIVEN under my hand and notarial seal this 13 day of December, 2000.

My Commission Expires December 31, 2004

Notary Public

My Commission expires

Disclosure Statement on Conflicts of Interest

Preliminary Engineering/National Environmental Policy Act (PE/NEPA) Phase of the Dulles Corridor Rapid Transit Project

I, the undersigned, am an officer/representative of **Parsons Brinckerhoff Quade and Douglas, Inc. (PBQD)**, a consulting firm which has an on-call architectural/engineering contract with the Washington Metropolitan Area Transit Authority (WMATA) to provide professional services for the preparation of preliminary engineering (PE), an Environmental Impact Statement (EIS) and/or financial plans of the Dulles Corridor Rapid Transit Project (Rapid Transit Project). WMATA is the local joint lead agency for the Rapid Transit Project and receives grant monies from the Federal Transit Administration (FTA), as the lead federal agency, for the PE/NEPA phase of the Rapid Transit Project.

The Council on Environmental Quality (CEQ) issued the following regulation, 40 CFR §1506.5(c), for implementing the National Environmental Policy Act of 1969 (NEPA), as amended:

> Environmental impact statements. Except as provided in Secs. 1506.2 and 1506.3 any environmental impact statement prepared pursuant to the requirements of NEPA shall be prepared directly by or by a contractor selected by the lead agency or where appropriate under Sec. 1501.6(b), a cooperating agency. It is the intent of these regulations that the contractor be chosen solely by the lead agency, or by the lead agency in cooperation with cooperating agencies, or where appropriate by a cooperating agency to avoid any conflict of interest. Contractors shall execute a disclosure statement prepared by the lead agency, or where appropriate the cooperating agency, specifying that they have no financial or other interest in the outcome of the project. If the document is prepared by contract, the responsible Federal official shall furnish guidance and participate in the preparation and shall independently evaluate the statement prior to its approval and take responsibility for its scope and contents. Nothing in this section is intended to prohibit any agency from requesting any person to submit

information to it or to prohibit any person from submitting information to any agency.

In response to this Federal CEQ regulation, PBQD states that it has no financial or other interests in the outcome of the Rapid Transit Project at this time. It further agrees and affirms that it will not have any such interest until after the issuance date of the Record of Decision for the Dulles Transit Project by FTA ("PE/NEPA Phase Period"), except as may be authorized subsequently by either i) federal statute or regulation, and WMATA approval, or ii) an approval(s) in writing by the FTA, as the lead federal agency, and/or WMATA, as the local joint lead agency, consistent with present practice, and iii) being publicly disclosed. PBQD will not gain any direct benefit such as a promise of future construction or design work on the Rapid Transit Project, nor any indirect benefits of which PBQD is aware, such as if the Rapid Transit Project would aid proposals sponsored by PBQD's other clients. If PBQD has developed initial data and plans for the Rapid Transit Project, a disclosure statement in the draft EIS will clearly state the scope and extent of the firm's prior involvement in order to disclose any potential conflicts of interest that may exist. PBQD, upon learning of any potential conflict(s) of interest in the PE/NEPA Phase Period will timely advise the FTA and WMATA in writing, and will, in the same writing, fully inform those agencies of the steps taken to eliminate the potential conflict(s).

The foregoing responsibilities and affirmation, given in this Disclosure Statement, shall cease and terminate at the time of the issuance of the Record of Decision for the Dulles Transit Project by FTA ("PE/NEPA Phase Period").

Parsons Brinckerhoff Quade and Douglas, Inc. (PBQD)

By: _____ December 8, 2000

Its: John N Rever

ACKNOWLEDGMENT

Commonwealth of Virginia)
County of _____) SS:

I, Mary E. Sanders, a Notary Public in and for said Commonwealth of Virginia, DO HEREBY CERTIFY that , (title) John N Rever, VP, of **Parsons Brinckerhoff Quade and Douglas, Inc. (PBQD)**, personally known to me to be the same person whose name is subscribed to the foregoing instrument as such officer/representative, appeared before me this day in person and acknowledged that he/she signed and delivered

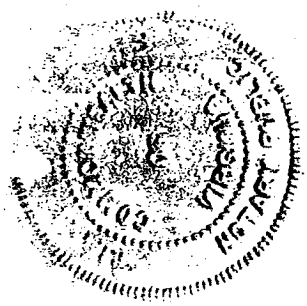
the said instrument as his/her own free and voluntary act, and as the free and voluntary act of said **Parsons Brinckerhoff Quade and Douglas, Inc.**, the uses and purposes therein.

GIVEN under my hand and notarial seal this 8 day of December, 2000.

My Commission Expires December 31, 2004

Notary Public
Mary Sanders

My Commission expires:



APPENDIX B: LIST OF RECIPIENTS - FINAL EIS, APPENDICES, GENERAL PLANS

First Name	Last Name	Title	Organization	Executive Summary*	Final EIS	Appendices A to I	Appendices J to L	General Plans
			Volume	+CD	1	2	3	4 & 5
Federal Elected Officials								
George	Allen	Senator	U.S. Senate	1	1	1	1	1
John	Warner	Senator	U.S. Senate	1	1	1	1	1
Thomas	Davis	11th District	U.S. House of Representatives	1	1	1	1	1
James	Moran	8th District	U.S. House of Representatives	1	1	1	1	1
Frank R.	Wolf	10th District	U.S. House of Representatives	1	1	1	1	1
Dan	Scandling	Chief of Staff	Office of Congressman Frank Wolf	1	1			
State Elected Officials								
Mark	Warner	Governor	Commonwealth of Virginia	1	1			
William	Leighty	Chief of Staff, Governor	Commonwealth of Virginia	1	1			
Robert	Ehrlich	Governor	State of Maryland	1	1			
Anthony	Williams	Mayor	District of Columbia	1	1			
Kenneth	Cuccinelli	37th District	Virginia State Senate	1	1			
Jeannemarie	Devolites	34th District	Virginia State Senate	1	1			
Janet	Howell	32nd District	Virginia State Senate	1	1			
William	Mims	33rd District	Virginia State Senate	1	1			
Richard	Saslaw	35th District	Virginia State Senate	1	1			
Mary Margaret	Whipple	31st District	Virginia State Senate	1	1			
Richard	Black	32nd District	Virginia House of Delegates	1	1			
Robert	Brink	48th District	Virginia House of Delegates	1	1			
Vincent F.	Callahan	34th District	Virginia House of Delegates	1	1			
Kenneth R.	Plum	36th District	Virginia House of Delegates	1	1			
Gary	Reese	67th District	Virginia House of Delegates	1	1			
Thomas	Rust	86th District	Virginia House of Delegates	1	1			
James M.	Scott	53rd District	Virginia House of Delegates	1	1			
Stephen	Shannon	35th District	Virginia House of Delegates	1	1			
Local Elected Officials								
Barbara	Favola	Chairman	Arlington County Board of Supervisors	1	1			
Gerald	Connolly	Chairman At-Large	Fairfax County Board of Supervisors	1	1	1	1	1
Sharon	Bulova	Braddock District	Fairfax County Board of Supervisors	1	1			
Joan	DuBois	Dranesville District	Fairfax County Board of Supervisors	1	3	1	1	1
Michael	Frey	Sully District	Fairfax County Board of Supervisors	1	1			
Penelope	Gross	Mason District	Fairfax County Board of Supervisors	1	1			
Catherine	Hudgins	Hunter Mill District	Fairfax County Board of Supervisors	1	3	1	1	1
Gerald	Hyland	Mount Vernon District	Fairfax County Board of Supervisors	1	1			
Dana	Kauffman	Lee District	Fairfax County Board of Supervisors	1	1			
Elaine	McConnell	Springfield District	Fairfax County Board of Supervisors	1	1			
Scott	York	Chairman At-Large	Loudoun County Board of Supervisors	1	1			

* The Executive Summary includes a CD that contains all five volumes of the Final EIS.

First Name	Last Name	Title	Organization	Executive Summary*	Final EIS	Appendices A to I	Appendices J to L	General Plans
Jim	Burton	Blue Ridge District	Loudoun County Board of Supervisors	1	1			
Jim	Clem	Leesburg District	Loudoun County Board of Supervisors	1	1			
Eugene	Delgaudio	Sterling District	Loudoun County Board of Supervisors	1	1			
Sally	Kurtz	Catoctin District	Loudoun County Board of Supervisors	1	1			
Steven	Snow	Dulles District	Loudoun County Board of Supervisors	1	1			
Mick	Staton	Sugarland Run District	Loudoun County Board of Supervisors	1	1			
Bruce	Tulloch	Potomac District	Loudoun County Board of Supervisors	1	1			
Lori	Waters	Broad Run District	Loudoun County Board of Supervisors	1	1			
Sean T.	Connaughton	Chairman At-Large	Prince Wm. Co. Board of Supervisors	1	1			
			Council of the District of Columbia	1	1			
Douglas	Duncan	County Executive	Montgomery County	1	1			
			Montgomery County Council	1	1			
Jack	Johnson	County Executive	Prince George's County	1	1			
			Prince George's County Council	1	1			
			Falls Church City Council	1	1			
			City of Alexandria	1	1			
			City of Fairfax	1	1			
Daniel	Gardner	Mayor	City of Falls Church	1	1			
David	Snyder	Council Member	City of Falls Church	1	1			
Richard	Thoesen	Mayor	Town of Herndon	1	1			
Kristen C.	Umstattd	Mayor	Town of Leesburg	1	1			
M. Jane	Seeman	Mayor	Town of Vienna	1	1			
Federal Agencies								
Don	Klima	Director	Advisory Council for Historic Preservation	1	1	1	1	1
William	Arguto	NEPA/Fed Fac Team Leader	Environmental Protection Agency	1	1	1	1	1
William	Hoffman		Environmental Protection Agency	1				
Peter	Stokely		Environmental Protection Agency	1				
William F.	Flanagan	Airports Division AEA Manager	Federal Aviation Administration	1				
Sandy	Lane	Regional Counsel	Federal Aviation Administration	1				
Catherine	Lang	Dep. Assoc. Administrator	Federal Aviation Administration	1				
Brad	Mehaffy	Environmental Specialist	Federal Aviation Administration	1	1	1	1	1
Terry	Page	Manager	Federal Aviation Administration	1				
Roberto	Fonseca-Martinez	Division Administrator	Federal Highway Administration	1				1
Tarsem	Lal	Area Engineer	Federal Highway Administration	1	1	1	1	1
Ed	Sundra	I-495 Beltway Manager	Federal Highway Administration	1				1
Susan	Borinsky	Regional Administrator	Federal Transit Administration	1				
Deborah	Burns	Senior Planner, Metropolitan Office	Federal Transit Administration	1	1	1	1	1
Brian	Glenn	Director, Metropolitan Office	Federal Transit Administration	1				1
Patricia	Kampf	Transportation Program Specialist	Federal Transit Administration	1	1	1	1	1
A. Joseph	Ossi	Environmental Planner	Federal Transit Administration	1	10	10	10	10

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First Name	Last Name	Title	Organization	Executive Summary*	Final EIS	Appendices A to I	Appendices J to L	General Plans
Dwayne	Weeks	Senior Transportation Planner	Federal Transit Administration	1				
Tony	Canuso	FTA PMO Consultant	Federal Transit Administration - PMOC	1	1	1	1	1
Thomas J.	Otto		General Services Administration	1	1	1	1	1
William	Dowd		National Capital Planning Comm.	1				1
Patricia E.	Gallagher	Executive Director	National Capital Planning Comm.	1	1	1	1	1
Patrick	Gregerson		National Park Service	1				
Susan	Hinton		National Park Service	1				
Bill	Crockett	Manager	National Park Service - Wolf Trap Park	1	1	1	1	1
Beverly	Cenname	Senior Policy Advisor	Transportation Security Administration	1	1	1	1	1
John	Lenihan	Federal Security Director	Transportation Security Administration	1				
Bruce F.	Williams	Chief, NOVA Regulatory Section	U.S. Army Corps of Engineers	1				
Cynthia	Wood		U.S. Army Corps of Engineers	1	1	1	1	1
Mary Ann	Wilson	Virginia State Coordinator	U.S. Department of Housing & UD	1	1	1	1	1
Willie	Taylor	Director, Environmental Compliance	U.S. Department of Interior	12	1	1	1	1
M. Denise	Doetzer	Virginia State Conservationist	U.S. Dept. of Agriculture	1	1	1	1	1
William	Hester	Virginia Field Office	U.S. Fish & Wildlife Service	1	1	1	1	1
Regional, State and Local Agencies								
Catherine	Harold		Chesapeake Bay Local Assistance Dept	1				
		Prince George's County	MD Nat'l Cap'l Park & Planning Comm.	1				
		Montgomery County	MD Nat'l Cap'l Park & Planning Comm.	1				
Charles	Baummer		Metro Washington Airports Authority	1				
James	Bennett	President & CEO	Metro Washington Airports Authority	1				
Jonathan	Gaffney	Manager of External Affairs	Metro Washington Airports Authority	1				
Mike	Hackett		Metro Washington Airports Authority	1	1	1	1	1
Frank	Holly		Metro Washington Airports Authority	1				
William	Lebegern		Metro Washington Airports Authority	1	1	1	1	1
Ronald	Kirby	Transportation Planning Director	Metro Washington Council of Gov't	1				
David	Robertson	Executive Director	Metro Washington Council of Gov't	1				
Daniel	Iglhaut	Land Admin. & Planning Specialist	No. Virginia Regional Park Authority	1	1	1	1	1
Katherine	Rudacille	Manager Land Admin & Planning	No. Virginia Regional Park Authority	1				
Diane	Hoffman	Administrator	No. Virginia Soil & Water Conser. Dist.	1				
Richard	Taube	Executive Director	No. Virginia Transportation Comm.	1				
G. Mark	Gibb	Executive Director	Northern Virgina Regional Comm.	1				
James	VanZee		Northern Virginia Regional Comm.	1				
Dale	Zehner	Chief Executive Officer	Virginia Railway Express	1				
			Washington Metro Area Transit Comm.	1				
Lou	Farber		Washington Suburban Transit Comm.	1				
Robert	Smith	Chairman	WMATA Board of Directors	1				
Dana	Kauffman	Vice Chairman	WMATA Board of Directors	1				

***** The Executive Summary includes a CD that contains all five volumes of the Final EIS.

First Name	Last Name	Title	Organization	Executive Summary*	Final EIS	Appendices A to I	Appendices J to L	General Plans
Gladys	Mack	Second Vice Chairman	WMATA Board of Directors	1				
David	Catania		WMATA Board of Directors	1				
Charles	Deegan		WMATA Board of Directors	1				
William	Euille		WMATA Board of Directors	1				
Jim	Graham		WMATA Board of Directors	1				
Catherine	Hudgins		WMATA Board of Directors	1				
Gordon	Linton		WMATA Board of Directors	1				
Calvin	Nophlin		WMATA Board of Directors	1				
Marcell	Solomon		WMATA Board of Directors	1				
Christopher	Zimmerman		WMATA Board of Directors	1				
Whittington	Clement	Secretary of Transportation	Commonwealth of Virginia	1				
Pierce	Homer	Deputy Secretary of Transportation	Commonwealth of Virginia	1				
Richard	Walton	Senior Assistant Attorney General	Commonwealth of Virginia	1				
Ambrose	Bailey	Fredericksburg District	Commonwealth Transportation Board	1				
Jim	Bowie	Bristol District	Commonwealth Transportation Board	1				
Julia	Connally	At-Large Urban	Commonwealth Transportation Board	1				
John	Davies, III	Culpeper District	Commonwealth Transportation Board	1				
Helen	Dragas	At-Large Urban	Commonwealth Transportation Board	1				
Katherine	Hanley	Northern Virginia District	Commonwealth Transportation Board	1	1	1	1	1
James	Keen	At-Large Rural	Commonwealth Transportation Board	1				
Harry	Lester	Hampton Roads District	Commonwealth Transportation Board	1				
Dana	Martin	Salem District	Commonwealth Transportation Board	1				
Gerald	McCarthy	Richmond District	Commonwealth Transportation Board	1				
Leonard	Mitchel	At-Large Urban	Commonwealth Transportation Board	1	1	1	1	1
Phillip	Stone	Staunton District	Commonwealth Transportation Board	1				
Hunter	Watson	At-Large Rural	Commonwealth Transportation Board	1				
Kenneth Spencer	White	Lynchburg District	Commonwealth Transportation Board	1				
Karen	Rae	Director	VA Dept. Rail & Public Transportation	2	2	2	2	2
Corey	Hill	Director of Admin & Capital Project	VA Dept. Rail & Public Transportation	1	1	1	1	1
Chip	Badger	Assist Director for Public Transport.	VA Dept. Rail & Public Transportation	1				
Sam	Carnaggio	Project Director	VA Dept. Rail & Public Transportation	1	1	1	1	1
Jon	Christensen	Manager, Quality Assurance	VA Dept. Rail & Public Transportation	1				
Jeffrey	Cimbalo	Manager, Intergovt'l Agreements	VA Dept. Rail & Public Transportation	1	1	1	1	1
Jennifer	Clinger	Manager, Finance	VA Dept. Rail & Public Transportation	1	1	1	1	1
Karen	Consiglio	Manager, Right of Way	VA Dept. Rail & Public Transportation	1	1	1	1	1
Paul	Elman	Deputy Project Director	VA Dept. Rail & Public Transportation	1	1	1	1	1
Karl	Rohrer	Deputy Project Director	VA Dept. Rail & Public Transportation	30	3	3	3	3
Josh	Sawislak	Deputy Project Director	VA Dept. Rail & Public Transportation	1	1	1	1	1
TBD		Manager, Communications	VA Dept. Rail & Public Transportation	1	1	1	1	1
Philip	Shucet	Commissioner	VA Dept. of Transportation	1				

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First Name	Last Name	Title	Organization	Executive Summary*	Final EIS	Appendices A to I	Appendices J to L	General Plans
Jeff	Southard		VA Dept. of Transportation	1				
Katherine	Tracy	Asst. Secretary to the CTB	VA Dept. of Transportation	1				
Ken	Wilkinson	Environmental Division	VA Dept. of Transportation	1				
			VA Dept. of Transportation	1				
Marsha	Fiol		VA Dept. of Transportation - Env'l	1				
Fatemeh	Allahdoust	Senior Transportation Planner	VA Dept. of Transportation - NOVA	1				
Tina	Curtis	Transportation Planning	VA Dept. of Transportation - NOVA	1				
Loren	Epton	Traffic Engineering Manager	VA Dept. of Transportation - NOVA	1				
Dave	Evans	Permit	VA Dept. of Transportation - NOVA	1				
Tim	Hartzell	Location and Design	VA Dept. of Transportation - NOVA	1	1	1	1	1
Paul	Kraucunas	Land Development Manager	VA Dept. of Transportation - NOVA	1				
John	Lynch	Location and Design	VA Dept. of Transportation - NOVA	1	1	1	1	1
Robert	McDonald	Transportation Planning	VA Dept. of Transportation - NOVA	1	1	1	1	1
Debra	Moore	Right of Way	VA Dept. of Transportation - NOVA	1				
Dennis	Morrison	District Administrator	VA Dept. of Transportation - NOVA	1				
Dorothy	Purvis	Permit Manager	VA Dept. of Transportation - NOVA	1				
Bud	Siegal	Right of Way, Acting Manager	VA Dept. of Transportation - NOVA	1				
JoAnne	Sorenson	Environmental Quality	VA Dept. of Transportation - NOVA	1				
Hari	Sripathi	Traffic Engineering	VA Dept. of Transportation - NOVA	1				
Paul	St. Andre		Springfield Interchange Information Ctr.	1				
Rusty	Harrington	Senior Aviation Planner	VA Dept. of Aviation	1				
Lawrence	Gavan	Environmental Engineer	VA Dept. of Conservation & Recreation	1				
Derral	Jones	Environmental Program Manager	VA Dept. of Conservation & Recreation	1				
John	Bowden	Northern Regional	VA Dept. of Environmental Quality	1				
Joan	Crowther	Resources Development Supervisor	VA Dept. of Environmental Quality	1				
Charles	Ellis	Environmental Review Coordinator	VA Dept. of Environmental Quality	1				
Martin	Ferguson		VA Dept. of Environmental Quality	1				
John	Fisher	Environmental Impact Review	VA Dept. of Environmental Quality	1				
Charles	Forbes	Regional Permit Manager	VA Dept. of Environmental Quality	1				
Ellen	Gilinsky	Division of Water	VA Dept. of Environmental Quality	1				
Ellie	Irons	EIR Program Manager	VA Dept. of Environmental Quality	1				
Wendy	Kederzierski		VA Dept. of Environmental Quality	1				
Tom	Modena	Division of Waste	VA Dept. of Environmental Quality	1				
James	Monticello		VA Dept. of Environmental Quality	1				
Kotur	Narasimhan	Division of Air	VA Dept. of Environmental Quality	1				
Anne	Newsom	Environmental Impact Review	VA Dept. of Environmental Quality	1				
Michael	Foreman		VA Dept. of Forestry	1				
Brian	Moyer		VA Dept. of Game & Inland Fisheries	1				
Alan	Weber		VA Dept. of Health	1				
Ethel	Eaton	Office of Review and Compliance	VA Dept. of Historic Resources	1				

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First Name	Last Name	Title	Organization	Executive Summary*	Final EIS	Appendices A to I	Appendices J to L	General Plans
David	Edwards	Direct, No.Regional Preservation	VA Dept. of Historic Resources	1				
Marc	Holma	Office of Review and Compliance	VA Dept. of Historic Resources	1				
Kathleen S.	Kilpatrick	Director	VA Dept. of Historic Resources	1				
Gerald	Wilkes	Senior Geologist	VA Dept. of Mines, Minerals & Energy	1				
Keith	Tignor	Office of Plant & Pest Services	VA Dept.of Agriculture & Consumer Serv.	1				
Rob	McClintock	Research Director	VA Economic Development Partnership	1				
Ben	McGinnis	Habitat Management	VA Marine Resources Comm.	1				
Tony	Watkinson	Habitat Management	VA Marine Resources Comm.	1				
Robert	Flanagan	Secretary	Maryland Department of Transportation	1				
			Maryland State Planning Department	1				
Lisa	Dickerson	Acting Administrator	Maryland Transit Administration	1				
			State Highway Administration	1				
William	Howland	Director	DC Department of Public Works	1				
Dan	Tangherlini	Director	DC Department of Transportation	1				
Richard	White	Chief Executive Officer	WMATA	1				
Leona	Agouridis	Assistant General Manager	WMATA .COM 7D16	1				
Glenn	Millis	Director	WMATA ADAP 7A10E	1				
Jim	Ashe	Manager, Environmental Compliance	WMATA ADMT 403B	1	1	1	1	1
Nancy	Grzesik	Director	WMATA ADMT 4G06	1				
Pamela	Wilkins	Director	WMATA BEMR 215	1	1	1	1	1
Tom	Harrington	Business Analyst	WMATA BPPD 6F12	1	1	1	1	1
Joel	Washington	Acting Director	WMATA BPPD 804	1				
Jack	Requa	Chief Operating Officer, Bus	WMATA BUS 3G06	1				
P. Takis	Salpeas	Assistant General Manager	WMATA CAPM 4G20	1	1	1	1	1
Frank	McCarron	Director	WMATA CAPR 6F	1				
Patrick	Porzillo	Chief Engineer	WMATA CENG 5F	1				
Joan	LeLacheur	Manager, Environmental Services	WMATA CENG CTF	1				
Peter	Benjamin	Chief Financial Officer	WMATA CFO 605	1				
John	Dittmeier	Acting NEPA Manager	WMATA CONS 4A09	1	1	1	1	1
Jim	Haggins	Director	WMATA CONS 4A17	1	1	1	1	1
Tom	Crone	Project Manager, Project Controls	WMATA CONS Tysons	1				
Ramen	De	Design Coordinator, Stations	WMATA CONS Tysons	1				
Al	Kolodne	Project Manager, Line	WMATA CONS Tysons	1	1	1	1	1
Dan	Korzym	Senior Project Manager	WMATA CONS Tysons	1	1	1	1	1
Neil	Nott	Project Manager, Stations	WMATA CONS Tysons	1	1	1	1	1
Errol	Taylor	Project Manager, Systems	WMATA CONS Tysons	1				
William	Caldwell	Assistant General Counsel	WMATA COUN 2C08	1				
Carol	O'Keeffe	Acting General Counsel	WMATA COUN 2C09	1				
James	Gallagher	Deputy General Manager	WMATA DMGR 204	1				
Lee Roy	Padgett	Manager, Civil/Right-of-Way	WMATA ENGA 4C06	1				

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First Name	Last Name	Title	Organization	Executive Summary*	Final EIS	Appendices A to I	Appendices J to L	General Plans
Ed	Riley	Manager, Architecture	WMATA ENGA 4D06	1				
Ron	Williams	Assistant Director	WMATA ENGA 4E14	1				
Harry	Lupia	Director	WMATA ENGA 4F14	1				
Don	Falken	Chief, Surveys and Mapping	WMATA ENGA Navy Yard	1				
Burton	Bouldry	Director	WMATA FIMA 6D22	1				
Shiva	Pant	Government Relations Officer	WMATA GOVR 2A08	1	1	1	1	1
Debbie	Lipman	Director	WMATA GOVR 2A14	1				
Ronald	Edwards	Director	WMATA ICES 2A	1				
Mark	Meister	Manager, Asset Management	WMATA LAND 5A18	1				
K-P	Heinemeyer	Acting Director	WMATA LAND 5B20	1	1	1	1	1
Lisa	Farbstein	Acting Director	WMATA MREL 2G04	1	1	1	1	1
Polly	Hanson	Chief	WMATA MTPD 5D23	1				
Donna	Tisdale	Lieutenant	WMATA MTPD BLAD2	1				
Bea	Hicks	Chief Operations Liason	WMATA OLIA 406	1				
David	Robinson	Program Manager	WMATA OLIA 4F01	1	1	1	1	1
James	Hughes	Director	WMATA OPAS 7A18	1				
Robert	Orr	Manager, Schedules and Traffic	WMATA OPAS 7C08	1				
Juanita	Freeburger	Manager, Rail Transit Route	WMATA OPAS 7C10	1				
Debra	Johnson	Director	WMATA PCOM 7E15	1				
Paul	Gillum	Director	WMATA PLNT CTF	1				
Edward	Thomas	Assistant General Manager	WMATA PLSP 8F04A	1	1	1	1	1
John	Christodoulakis	Manager, CAPM	WMATA PRMT 3A16	1				
Kevin	Lyons	Director	WMATA PVLF 2A	1				
Steve	Feil	Chief Operating Officer, Rail	WMATA RAIL 5G14	1				
Fred	Goodine	Assistant General Manager	WMATA SARP 2A05	1				
Harold	Bartlett	Secretary & Chief of Staff	WMATA SCOS 202	1				
Ray	Feldmann	Office of Secretary	WMATA SCOS 202	1				
Anthony	Griffin	County Executive	Fairfax County	1				
Fred	Selden	Planning Division Director	Fairfax County Dept. of Planning and Zoning	1				
Sterling	Wheeler	Branch Chief, Policy Planning	Fairfax County Dept. of Planning and Zoning	1	1	1	1	1
John Wesley	White	Director	Fairfax County Dept. of Public Works	1				
Young Ho	Chang	Director	Fairfax County Dept. of Transportation	1	1	1	1	1
Richard	Stevens	Project Manager, Dulles Rail	Fairfax County Dept. of Transportation	1	1	1	1	1
Leonard	Wolfenstein	Chief, Transportation Planning	Fairfax County Dept. of Transportation	1				
Gerald	Gordon	Council President	Fairfax County Economic Development	1				
Susan	Herbert	Planner	Fairfax County Fire & Rescue Dept.	1				
Michael	Neuhard	Chief	Fairfax County Fire & Rescue Dept.	1				
Merni	Fitzgerald	Director	Fairfax County Office of Public Affairs	1				
Elizabeth	Crowell	Manager, Cultural Resources	Fairfax County Park Authority	1				
Michael	Kane	Director	Fairfax County Park Authority	1				

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Karen	Lanham		Fairfax County Park Authority	1				
J. Rex	Peters	Engineer II, Land Acquisition	Fairfax County Park Authority	1				
Kay	Rutledge	Manager, Land Acquisition	Fairfax County Park Authority	1				
Frank	de la Fe		Fairfax County Planning Comm.	1				
J. Thomas	Manger	Chief of Police	Fairfax County Police Department	1				
Jack	Dale	Superintendent	Fairfax County Public Schools	1				
Steven	Weisberger	Manager, Planning Branch	Fairfax County Water Authority	1				
Catherine	Bennett		Fairfax Co. Non-Motorized Transp Com	1				
Rebecca	Cate		Fairfax Co. Non-Motorized Transp Com	1				
Donald	Emerson		Fairfax Co. Non-Motorized Transp Com	1				
Wade	Smith		Fairfax Co. Non-Motorized Transp Com	1				
Bruce	Wright		Fairfax Co. Non-Motorized Transp Com	1				
Kirby	Bowers	County Administrator	Loudoun Co.	1				
Terrance	Wharton	Director	Loudoun Co. Building and Development	1				
Jana	Lynott		Loudoun Co. Dept. of Planning	1				
Julie	Pastor	Director	Loudoun Co. Dept. of Planning	1	1	1	1	1
Lawrence	Rosenstrauch	Director, Economic Development	Loudoun Co. Economic Development	1				
Terri	Laycock	Assistant	Loudoun Co. Office of Administrator	1				
Cynthia	Welsh	Director	Loudoun Co. Parks and Recreation	1				
John	Clark	Director	Loudoun Co. Transportation Services	1	1	1	1	1
Chip	Taylor		Loudoun Co. Transportation Services	1				
Albert	Genetti		Montgomery Co. Dept. Public Works	1				
Thomas	Sines		Toll Road Investors Partnership II, LP	1	1	1	1	1
Ron	Carlee	County Manager	Arlington County	1				
James	Hamre	Transit Coordinator	Arlington County Planning Division	1				
Brenda	Creel		City of Falls Church	1				
Dan	McKeever		City of Falls Church	1				
Wyatt	Shields		City of Falls Church	1				
Robert	Etris	Public Utilities Manager	City of Falls Church	1				
Henry	Bibber	Director	Town of Herndon	1	1	1	1	1
Robert	Noe		Town of Leesburg	1				
Calvin	Grow		Town of Leesburg Engineering	1				
Brent	Wilkinson	Senior Planner	Town of Vienna	1				
Libraries and Community Centers								
Denise	Kelleher		Arlington Central Library	1	1	1	1	1
Susan	Bell		Ashburn Farm Association	1	1	1	1	1
Connie	Thorpe		Broadlands Visitor Ctr	1	1	1	1	1
Carolyn	Heyer		Dolley Madison Community Library	1	1	1	1	1
Carolyn	Watson		Eastern Loudoun Regional Library	1	1	1	1	1
Tina	Cunningham		Fairfax City Regional Library	1	1	1	1	1

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Howard	Hermum		Falls Church Community Ctr	1	1	1	1	1
Mary	McMahon		Falls Church Library	1	1	1	1	1
Mary	Ellis		Great Falls Community Library	1	1	1	1	1
Tracey	White	President & CEO	Greater Reston Chamber of Commerce	1	1	1	1	1
Art	Aneslene		Herndon Community Ctr	1	1	1	1	1
Linda	Renner		Herndon Fortnightly Library	1	1	1	1	1
Chuck	Wood		Lovettsville Library	1	1	1	1	1
William	Bersie		McLean Community Ctr	1	1	1	1	1
Sheila	Whetzel		Middleburg Library	1	1	1	1	1
Diane	Pruett		Patrick Henry Community Library	1	1	1	1	1
Leah	Bromser-Kloeden		Purcellville Library	1	1	1	1	1
Dennis	Kern	Executive Director	Reston Community Ctr	1	1	1	1	1
Nadia	Taran		Reston Regional Library	1	1	1	1	1
Ellen	Henry		Rust Library	1	1	1	1	1
Mary	Lynch		Sterling Library	1	1	1	1	1
Jane	Sullivan		Thomas Balch Library for Local History	1	1	1	1	1
Rita	Toscano		Tysons-Pimmit Regional Library	1	1	1	1	1
Cathy	Salgado		Vienna Community Ctr	1	1	1	1	1
Parties in the record of the public hearings and post-hearing conference, plus property owners of the Acquistion List, plus interest parties, civic associations, developments and businesses.								
Ernie	Lee		Dulles Transit Partners	1	1	1	1	1
Jorge	Martinez		Dulles Transit Partners	5	5	5	5	5
Roger	Picard		Dulles Transit Partners	5	5	5	5	5
James	Clarke		Action Committee for Transit	1				
Donna	Reynolds		American Lung Assn. of Virginia	1				
Alan	Muten		ARC Corporation	1				
William	Vincent	General Counsel	Breakthrough Technologies Institute	1				
Clarence	Bishop		Chesapeake Region 2012 Coalition	1				
Laura	Olsen	Assistant Director	Coalition for Smarter Growth	1				
Stewart	Schwartz	Director	Coalition for Smarter Growth	1				
Nicola	Wood		Coalition for Smarter Growth	1				
Mary Gayle	Holden	President	Committee for Dulles	1				
Patricia	Nicoson	President	Dulles Corridor Rail Association	1				
Joe	Stowers		Dulles Corridor Rail Association	1				
Doris	Ray		ENDependence Ctr of No. Virginia	1				
Michael	Replogle	Transportation Director	Environmental Defense	1				
			Equal Metro Access Tysons Corner	1				
Sally	Ormsby	Chair, Legislation	Fairfax Co. Federation of Citizen Assn.	1				
Jean	Packard	Secretary	Fairfax Co. Federation of Citizen Assn.	1				

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George	Smith	Transportation	Fairfax Co. Federation of Citizen Assn.	1				
William	Lecos	President/CEO	Fairfax County Chamber of Commerce	1				
Arthur	Purves	President	Fairfax County Taxpayers Alliance	1				
			Federal Republic of Germany	1				
Robert	Day	Executive Director	Greater Falls Church Cham of Commerce	1				
Bob	Grow		Greater Washington Board of Trade	1				
Robert	Pinkard	Transportation	Greater Washington Board of Trade	1				
Alexander	Thomas		Greater Washington Board of Trade	1				
Eileen	Curtis	Executive Director	Herndon Dulles Chamber of Commerce	1				
Jeannette	Twomey		Hunter Mill Defense League	1				
Jack	Herrity		Jack Herrity & Associates	1				
Randy	Collins	President	Loudoun County Chamber of Commerce	1				
Ken	Reid		LOWER	1				
Christopher	Walker		LOWER	1				
Elise Neil	Bengtson	Executive Director	McLean Chamber of Commerce	1				
Beth	Cogswell		National Capital League of Women Vote	1				
Mike	McGuire		National Motorists Association	1				
Robert	Chase		No. Virginia Transportation Alliance	1				
James	Dyke	Chairman	Northern Virginia Roundtable	1				
Elliot	Eder		Rapid Transit Action Committee	1				
Steve	Wright	General Manager	Rotonda Condo Unit Owners Assn	1				
Roger	Diedrich	Land Use Chair	Sierra Club, Virginia Chapter	1				
Lars	Liebeler	Counsel, Thaler Liebeler LLP	Tuckahoe Recreation Club	1				
Hamilton	Loving		Tuckahoe Recreation Club	1				
Paul	Van Lieshout		Tuckahoe Recreation Group	1				
			Tysons Transportation Association	1				
Kathleen	Jackson		TYTRAN	1				
Carli	Flippen		Urban Transportation Solutions	1				
Robin	Burke		USAA Realty Co., LP	1				
Francis	Powers, Jr.	President	Vienna-Tysons Region Cham of Comme	1				
Allen	Muchnick	President	Virginia Bicycling Association	1				
Mark	McGregor	Chief Executive Officer	Virginia Regional Transportation Assoc	1				
Leo	Schefer		Washington Airports Task Force	1				
Carol	Welti		Washington Airports Task Force	1				
Andrew	Cherner		1568 Spring Hill Road LLC	1				
Robert	Marsteller		8350 Leesburg Pike LLC	1				
		Attn: Tax Department	Alamo Rent A Car	1				
Joseph	Henderson		Alder Branch Lincoln LLC	1				
			Alexander Sims & Templeton Partnership	1				
George	Andreas Trust		and Ursula Andreas Trust	1				

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Michael	Bartscherer		AOL Time Warner	1				
David	Ross	President	Atlantic Realty Companies, Inc.	1				
			Austin Dulles Equities, LP	1				
			Avis Rent A Car System, Inc.	1				
Bryon	Barlow		B F Saul Co	1				
			BMI Associates	1				
Jack	Burkart		Boston Properties, Inc.	1				
Peter	Johnston	Senior Vice President	Boston Properties, Inc.	1				
			BP Reston Eastgate LLC	1				
Patrick	Dulany		Bracewell & Patterson, LLP	1				
		Ref: Dulles Airport	Budget Rent-A-Car	1				
Harold	Rauner		Business Bank United Fin'l Banking Co's, Inc.	1				
John	Sherwood, et al		c/o Ralph G. Louk TR	1				
Henry A.	Long Trust		Calais Corporation	1				
Vieth	Duane		Care Trimark Corporation	1				
		Property Tax Services	Carr Realty LP	1				
			Carrington Community Association Inc.	1				
			Carrington Community Association Inc.	1				
			Cars DB1 LLC	1				
			Cassiday P R TR et al	1				
Rich	Benton		Centennial Contractors Enterprises	1				
Charles	Smith		CESC Commerce Executive Park LLC	1				
Frank	Poli		CESC Tysons Dulles Plaza	1				
			Chain Bridge Hospitality Corporation	1				
Scott	Sterling	Vice President	Charles E. Smith Commercial Realty LP	1				
Jonathan	Cherner		Cherner Family LLC	1				
			Church Road LTD et al T/C	1				
J. Hamilton	Lambert		Claude Moore Charitable Foundation	1				
Edward	Daniels	President	Clover Management Corporation	1				
John	Motz	President	Commercial Condo Management Co.	1				
Bruce	Pitts		Comstock Homes, Inc.	1				
Christopher	Clemente		Comstock Partners LC	1				
			Comstock Partners LC	1				
			Connecticut General Life Insurance Co.	1				
Mark	Looney		Cooley Godward LLP	1				
Hillary	Zahm, AICP	Planner	Cooley Godward LLP	1				
R. Kevin	Dougherty	Partner	Crimson Partners	1				
Gregory	Hamm		Crimson Partners	1				
Anne	Armstrong	Director	Ctr for Innovative Technology	1				
Brian	McVay	Senior Managing Director	Cushman & Wakefield of Virginia, Inc.	1				

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			Dollar Rent-A-Car	1				
			Dollar Thrifty Automotive Group, Inc.	1				
Chris	Antigone		Dulles Gateway Associates, LLC	1				
			Dulles Overlook, LLC	1				
			Dulles Rockhill Partners, LP	1				
Paul	Lombardi	President and CEO	DynCorp	1				
Yvonne	Jeziorski	General Manager	Embassy Suites Hotel Tysons Corner	1				
			Enterprise Leasing	1				
Robert	Salerno		Eurasian Service Ctr	1				
			Fairbrook Business Park Associates	1				
Verlin	Smith	President	Farms & Acreage, Inc. Realtors	1				
Mary	Kenny		FR Pike 7 LP	1				
William	Menda	Admin & Corp Properties	Freddie Mac	1				
Nancy	Houser	Director, Corporate Admin	Gannett Co., Inc.	1				
			Greensboro Ctr LP	1				
Chris	Tacinelli		Grove Slade Associates, Inc.	1				
			Hertz Reatly Corporation	1				
W. Edward	Walter	Chief Operating Officer	Host Marriott Corporation	1				
			Hunter Mill East LLC	1				
John	Thoburn		Hunter Mill East, LLC	1				
James	Deuel	General Manager	Hyatt Dulles	1				
Jeffrey	Fairfield		J. Harold Launders Trust	1				
Ilan	Scharfstein		JBG Companies	1				
Norman	Jemal		Jemals Tysons Westwood LLC	1				
			Koons Plaza Development Co.	1				
Bob	Farlow		Koons Tysons Toyota	1				
Peter	Rosen	Sr Development Director	Lerner Enterprises Dev.	1				
John	Lebeau		Lincoln Property Company	1				
Nancy	Willson		Long & Foster	1				
P. Wesley	Foster		Long & Foster Companies, Inc.	1				
Kin-Sing	Au		Loudoun Station, LLC	1				
		Prop Tax Dept., #924.13	Marriott Motor Hotels	1				
Thomson	Hirst	President	Mason Hirst Companies	1				
Tracy	Baynard	Director, Bus & Govt Rel	McGuireWoods, LLP	1				
			McLean Self Storage LLC	1				
John	Grimsley		Merchant's Tire and Auto Ctr	1				
Bob	Hughes	General Manager	Moore Cadillac Co	1				
Robert	Gordon		Mountain View Invest & Consulting, L	1				
Phillip	Brady	President	National Automobile Dealers Assn.	1				
			National Car Rental System, Inc.	1				

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Sheldon	Petersen	Governor & CEO	Nat'l Rural Utilities Coop Finance Corp.	1				
Joseph	Siekierski		Nat'l Rural Utilities Coop Finance Corp.	1				
Tim	Donahue	President	Nextel Communications, Inc.	1				
Eric	McComas		Northwestern Invest Management Co.	1				
			Nugget Joint Venture, LLC	1				
Jack	Suchland	Facility Manager	Oracle Corporation	1				
			Parkview Exec Ctr Joint Venture RLLP	1				
Douglas	Kennedy		Patton, Harris, Rust & Associates, PC	1				
George	Steiner		Peacock Buick & Suzuki	1				
Robert	Kullman		Peacock Buick, Inc.	1				
Michael	Peacock		Peacock Buick, Inc.	1				
Lynn	Minnici		Prentiss Properties	1				
Bob	Wilberg		Prentiss Properties	1				
Michael	Cooper		Prentiss Properties Acquisition Partners	1				
			Q R Spring Hill LLC	1				
Mark	Brungart		Quadrangle Development Corporation	1				
			Realty Assoc. Fund III LP	1				
Don	Bachenberg	General Manager	Regency at McLean	1				
Michael	McGuire		Reliance Development Group	1				
Steven	Stahl		Reliance Insurance Company	1				
			Reliance Insurance Company	1				
			Reston VA 939 LLC	1				
			Richard Stohlman Family LP	1				
Ronald	Rinaldi		RMC-Tyco, LLC	1				
Jerry	Griffin	General Counsel	Rosenthal Honda	1				
Robert	Hisoka	Owner & General Manager	Rosenthal Honda	1				
Jeff	Mariani		Rosenthal Nissan	1				
Albert	Lord		Sallie Mae	1				
Dennis	Greene		Security Storage Co of Washington	1				
Eric	Hietala		Signature Flight Support	1				
			Signature Flight Support	1				
Eddie	Dempster		Sunbelt Rentals, Inc.	1				
Mike	Gervasini		Sunbelt Rentals, Inc.	1				
Barbara	Heim	General Counsel	Sunbelt Rentals, Inc.	1				
Thomas	Williamson	Vice President	Terrabrook, Reston	1				
Charles	Veatch		The Charles A. Veatch Company	1				
Martin	Fage	Executive Vice President	The Mitre Corporation	1				
Robert	Young		The Young Group	1				
G. Cory	DeSpain		Toll Brothers	1				
		Attn: Tax Department	Toys R Us, Inc.	1				

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		Portfolio Mgr VA Region	TRC Pinnacle Towers LLC	1				
Brian	Coulter		TrizecHahn Reston	1				
			Trulie Investment Corp. et al	1				
			Trulie Investment Corp. et al	1				
W. James	Green		TRW Systems Info & Technology	1				
Philip	Odeen	President	TRW, Inc.	1				
			Tuckahoe Recreation Club	1				
Richard	Ziegler		Tysons 3 LLC	1				
Ken	Peduzzi		Tysons Corner Hotel Co. Inc.	1				
			Tysons Corner Hotel Company	1				
Rod	Renner	General Manager	Tysons Galleria	1				
Robert	Tanenbaum		Tysons II Land Co. LLC	1				
Tom	Sims	General Manager	Tysons Westpark Hotel	1				
Charles	Poulson		Walker and Company	1				
Elizabeth	Baker		Walsh, Colucci, Lubeley, Emrich & Terpak	1				
William	Keefe		Walsh, Colucci, Lubeley, Emrich & Terpak	1				
Randall	Minchew		Walsh, Colucci, Lubeley, Emrich & Terpak	1				
Martin	Walsh		Walsh, Colucci, Lubeley, Emrich & Terpak	1				
Brian	Moran	Asset Manager	Washington Real Estate Invest Trust	1				
Robert	Howard		Wellborn Management Co., Inc., Realtors	1				
Robert	Abt		West*Group	1				
Thomas	Fleury		West*Group	1				
G.	Halpin		West*Group	1				
Kathryn	MacLane	Executive Vice President	West*Group	1				
Stan	Voudrie		West*Group	1				
Lee	Goodman	Counsel, HBL	Wiley, Rein, and Fielding	1				
Sarah	Montgomery		Wiley, Rein, and Fielding	1				
Mark	Foerster	Executive Vice President	Wilmorite Property Management, LLC	1				
Kathy	Hannon		Wilmorite Property Management, LLC	1				
Charles	Walters, Jr.	Executive Vice President	Wolf Trap Foundation Performing Arts	1				
Chuck	Harris			1				
Candace	Smith		Associated Press	1				
Ming	Leong		Channel 7/Newschannel 8	1				
Drew	Bush		Journal Newspapers	1				
Susan	Mills		MacNeil/Lehrer Productions	1				
Paul	Bradley		Richmond-Times Dispatch	1				
Scott	McCaffrey	Managing Editor	Sun Gazette Newspapers	1				
Lyndsey	Layton	Transportation Reporter	Washington Post	1				
Jon	Ward		Washington Times	1				
Ede	Jermin		WRC-TV4	1				

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Steve	Eldridge		WTOP-AM	1				
Natalie	Joost		WTTG-Fox 5	1				
Ira	Jacoby		Fountains at McLean Condo. Assn.	1				
James	Evans	President	Greater Hillwood Citizens Association	1				
Clark	Tyler	President	Hallcrest Heights Associates, Inc.	1				
James	Moske		Hallcrest Heights Association	1				
Jim	Stevens	President	Hill Road Civic Association	1				
Marcia	McDevitt	President	Inlet Cluster	1				
Michael	Wright	President	Lemon Road CA	1				
Gail	Hunt		Lillian Court Condominium Association	1				
William	Byrnes		McLean Citizens Assoc. Transp. Comm.	1				
Adrienne	Whyte	Chairman	McLean Citizens Association	1				
Jeff	Wiese		Polo Fields Association	1				
Susan	Jones		Reston Association	1				
Gerald	Volloy	Executive Vice President	Reston Association	1				
			Reston Association	1				
Chad	Davis		Reston Citizens Association	1				
Arthur&Joe	Hill & Stowers		Reston Citizens Association	1				
Jim	Traylor		Reston Citizens Association	1				
			Symphony Meadows LC	1				
Peter	Davey	President	West Falls Village HOA	1				
JoAnn	Ward		Westhampton Civic Association	1				
			Wolftrap Meadows HOA	1				
			Amalgamated Transit Union	1				
			International Brotherhood of Teamsters	1				
			International Brotherhood of Teamsters	1				
Craig	Simpson		Metro Washington Council AFL-CIO	1				
			United Motor Coach Assoc.	1				
J. Kenneth	Klinge			1	1	1	1	1
Mr.	Cleary		Airline Tariff Publishing Company	1				
Steven	Jones		Audubon Tree Experts	1				
			BF Real Estate US I LP	1				
			Bilene International	1				
Ralph	Shrader	Chairman & CEO	Booz-Allen & Hamilton	1				
Robert	Buchanan		Buchanan Partners, LLC	1				
Lisa	Lapane		Cambridge Management	1				
Carlton	Sickles		Carday Associates	1				
Douglas	Carter	President	Douglas Carter Scott, Ltd.	1				
			DSV Dulles Fox Mill, LP	1				
Dale	Ginevan		Edgemoore Jarrett LP	1				

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Joe	May		EIT Corporation	1				
			Equal Metro Access for All of Tysons	1				
Patricia	Blackburn		Gates & Hudson	1				
Steve	Braesch		Greenebaum & Rose Associates	1				
			Heirs of Ilse Sanderson	1				
Francis	McDermott		Hunton & Williams	1				
Benjamin	Comm	Regional Director of Operations	Jones, Lang & LaSalle Americas, Inc.	1				
Randy	Atkins	Managing Director	Julien J. Studley, Inc.	1				
Manuel	Fernandez		K and F, LC	1				
Donald	Fisher		Kaiser Fndn Health Plan Mid-Atlantic	1				
Brian	Cullen		Keane Enterprises	1				
Jorge	Kfoury	Managing Partner	Kfoury Construction Group, Inc.	1				
Clarice	Dieter		Loudoun ARC	1				
James	Luehrs		Luehrs Corporation	1				
William	Nussbaum		Mark Winkler Company	1				
Carr	Whitener		Maryland-Virginia Monorail Initiative	1				
Randolph	Sutliff		McCandish & Lillard, P.C.	1				
Chuck	Williams		Metro Networks	1				
Cary	Euwer, Jr.	President & CEO	Metropolitan Partnership, Ltd.	1				
Michael	Horwatt	President	Michael Horwatt & Associates P.C.	1				
John	Conrad		Miller & Smith, Inc.	1				
			Monument One LLC	1				
Kristopher	Hoover		Peter Lawrence Company	1				
Joseph	Ritchey		Prospective, Inc	1				
Attn: Scott	Silvestain		RBP & M LLC	1				
Robert L.	Calhoun		Redmon Boykin & Braswell	1				
Samuel	Rocks		Rocks Engineering Company	1				
			Sprint Communications Company LP	1				
Susan	Falck-Muten		Susan Falck-Muten & Associates	1				
Gladys	Mack	Deputy Executive Director	United Planning Organization	1				
Anna	Roderiques		Vastera Solutions for Global Trade	1				
			V-Dulles West LLC & V-DW Remainder	1				
			Village Commons LLC	1				
			Walker FLP Limited Partnership	1				
Jeni	Hornback		Walter L. Phillips, Inc.	1				
Cheryl	Cort		Washington Regional Network	1				
Bill	Byrnes			1				
John	Emory			1				
James	Tomlinson			1				
Howard	Wallach			1				

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First Name	Last Name	Title	Organization	Executive Summary*	Final EIS	Appendices A to I	Appendices J to L	General Plans
Clinton	Young			1				
Mark	Zetts			1				
Faila	Alan			1				
Daniel	Alcorn			1				
Gloria	Allender			1				
Grace	Alpert	and Laurence Alpert		1				
Russell	Babington			1				
Alfio	Bado	and Helena Bado		1				
John	Baker			1				
Naela	Barakat			1				
Dennis	Barletta	and Tina Barletta		1				
Teresa	Barresi			1				
Jim	Barrett			1				
David	Barry			1				
Robert	Bell			1				
Luisa	Bell			1				
Robert	Bender	and Laurada Bender		1				
Jody	Bennett	and E. Bruce Bennett		1				
Maria	Bensimon	and Hector Bensimon		1				
Susan	Berger			1				
Mary	Berry			1				
Robert	Bishop			1				
Elizabeth	Bles			1				
Leonard	Block			1				
Richard	Bochner			1				
Francesca	Bravo	and Antonio Bravo		1				
Kim	Brevell			1				
Germaine	Broussard			1				
Garnett	Brown	and Theresa Brown		1				
Edith	Brown	and Judith Brown		1				
Julianna	Brown			1				
Ruth	Brown			1				
Catherine	Bryan			1				
Richard	Bryant	and Bonnie Bryant, RS		1				
Carol	Burroughs			1				
Roy Parrish	Byrd			1				
John	Byrne			1				
Donald	Cackler	and Joyce Cackler		1				
Glenn	Cain			1				
Velma	Cameron			1				

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Francis	Carlson			1				
Soon Young	Carroll			1				
Linda	Caruso			1				
Michiko	Casey			1				
Warren	Clarke			1				
Kathey	Cleal			1				
John	Coffin			1				
Shirley	Connolly			1				
Barbara	Coplon			1				
Elizabeth	Corish			1				
Mike	Corrigan			1				
Michael	Corry	and Deborah Corry		1				
Frederick	Costello			1				
Alice	Courtillet			1				
Cami	Creason			1				
Dorothy	Crissey	and Eugene Crissey		1				
Manuel	Cunha	and Carolyn Cunha		1				
Robert	Dagitz	and Constance Dagitz		1				
Cecilia	Daniels			1				
John	Deam			1				
Luzana	Deveic			1				
Karen	Diamond			1				
Beth	Dublin			1				
Donald	Dusenbury	and Angela Dusenbury		1				
Mohtaram	Erfani			1				
Harold	Erickson	and Phyllis Erickson		1				
Marjorie	Eubank			1				
Jean	Evans			1				
Julian	Fernandez Tr.	Helen Fernandez, Tr.		1				
Kate	Fisher			1				
John	Foust			1				
G. Don	Fowler	and Diane Hopkins		1				
Al	Francese			1				
Dorothy	Freedman Tr.	c/o Mitchel Freedman		1				
Janet	Freudenberger			1				
Elsa	Friedlander			1				
Charles	Funderburg			1				
Shirley	Gamache			1				
Malin	Gebraili			1				
Mahmoud	Ghannam			1				

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Kim	Gibson	and Dale Gibson		1				
Ronald	Goldman	and Roberta Goldman		1				
Jacqueline	Goodnight			1				
Greg	Gorham			1				
Julia	Goss			1				
Greg	Griswold			1				
Rosemary	Gustin			1				
Walter	Hadlock			1				
Steven	Hamberg	and Nicole Yakatan		1				
Colleen	Hannas			1				
Martha	Harris			1				
Carroll	Harvey			1				
James	Hawkins			1				
Peter	Heimsath			1				
Dorothy	Hennick			1				
Patrick	Henretty			1				
A.	Hickerson			1				
Arthur	Hill			1				
Harry	Hilton			1				
William	Holmes			1				
Bea	Holway			1				
Jewel	Holz			1				
Mary	Howard			1				
Geraldine	Huddle			1				
Michelle	Humasiecki			1				
Karen	Hunt			1				
Nancy	Husch			1				
C.	Hylton			1				
Karl	Ingebritsen			1				
Mark	Jafree			1				
Olivia	Jenney	and Ralph Jenney		1				
Thomas	Johanneck			1				
Bruce	Johnson			1				
Stephen	Jones	and Sandra Jones		1				
Louise	Jones			1				
Kathleen	Kadane			1				
Joseph	Kalet	and Margaret Kalet		1				
Peter	Kalish			1				
Batoul	Kamkar-Parsi			1				
Patrick	Kane			1				

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George	Kang	and Yung Kang		1				
Paul	Kelly	and Allison Kelly		1				
Yoshiko	Kendig			1				
John	Kenney			1				
Jinho	Kim	and Jessica Kim		1				
Joan	Kindle	and Jim Kindle		1				
Philipp	Klein			1				
Hilda	Kreeger			1				
Mahesh	Krishnan	and Raehna Krishnan		1				
Andy	Kunz			1				
Caroline	Laikin			1				
Chuck	Lapinski			1				
Jim	Larson			1				
Paul	Leisz			1				
Antoinette	Lenard			1				
Michael	Leslie			1				
Sally	Liff			1				
Lorinda	Lionberger			1				
Thomas	Luce	and Ellen M. Luce		1				
Eric	Maier			1				
Bonita	Mampe			1				
Arthur	Manfredi			1				
Howard	Marks			1				
Scott	May			1				
Juanita	Mays			1				
Mason	McAllister			1				
Michael	McCormick			1				
David	McCracken			1				
Andrea	McGimsey			1				
Patrick	McGrath	and Donna McGrath		1				
Charles	McGuire			1				
Howard	Melton	and Catherine E. Rettie		1				
Daniel	Michael	and Martha P. Michael		1				
Kathleen	Millnick			1				
Felice	Mills			1				
Minerva	Mismas			1				
Norma	Moles			1				
Chang Whan	Moon	and Tae Park		1				
Douglas	Morris			1				
Michael	Morstein			1				

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Ahmad	Moshaveghzadeh	and Mahrokh Moshavegzadeh		1				
Nan	Mueller			1				
Elizabeth	Nagley			1				
Judith	Naiman			1				
Khadija	Nazeer	and John Nazeer		1				
Ian	Nehrbakhski			1				
Cynthia	Neu			1				
Arlene	Newman			1				
Hung	Nguyen	and Sesil Nguyen		1				
John	Nicolais	and Susan Nicolais		1				
Hipolito	Nino			1				
Hassan	Nouri	and Jean Nouri		1				
Ronald	Nowak	and Thu Nowak		1				
Eric	Nusbaum			1				
Thomas	O'Connor			1				
Ed	Olechna	and Lydia Olechna		1				
Nancy	Oler			1				
Ferne	Ostheim	and Jerhim Ostheim		1				
Ronald	Ouellet	and Michelle Ouellet		1				
Ann	Paduda			1				
Sandra	Pagano			1				
Mae Sparger	Paine			1				
Mike	Panetta			1				
Jeffrey	Parnes			1				
Mahrokh Kamkar	Parsi			1				
Hashemine	Parvin	and Tabriz Parvin		1				
Richard	Peacock			1				
Heath	Pemberton			1				
Niels	Pemberton			1				
Thomas	Pender			1				
David	Pendleton			1				
Robert	Phelps	and Carol Phelps		1				
Jim	Policaro			1				
Sanjiv	Prakash	and Sharmila Prakash		1				
Syed	Quayum			1				
Ezzatollah	Rassekh	and Monavar Rassekh		1				
Francis	Rebhun	Carmen R. Sanclemente, Tr.		1				
Lillian	Reger			1				
Lynn	Reid			1				
Douglas	Reimel			1				

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William	Reinhart			1				
Janice	Roberts			1				
Richard	Robertson			1				
William	Romano			1				
John	Roop			1				
Randy	Rosenfeld			1				
Dan	Rosenthal			1				
Pauline	Rubin			1				
David	Rybak	and Judith Rybak		1				
Anthony	Sabo			1				
Farzin	Sadjadi			1				
Nancy	Schindler			1				
Wayne	Schmidt			1				
Elizabeth	Seiler			1				
Judy	Sherbe			1				
Paul	Shirey			1				
John	Shumadine			1				
Arthur	Siegel	and Vivian Siegel		1				
Helen	Silverman	Robert I. Silverman, Tr.		1				
Robert	Simon			1				
Dina	Simone			1				
Olga	Sivit			1				
Audrey	Speacht			1				
Elizabeth	Stallings			1				
Alice	Starr			1				
Donald	Stephens			1				
Stacie	Stetson			1				
Richard	Stevens	and Norma Stevens		1				
Paul	Stevenson			1				
John	Stroik			1				
Mark	Sublette			1				
Mehdi	Tabrizi	and Parvindokhat Hasheminejad		1				
Millicent	Taylor	and Simeon Taylor		1				
Edson	Tennyson, P.E.			1				
Joshua	Tenuta			1				
John	Thiumann			1				
William	Thomson			1				
Jeannette	Tillotson			1				
Christeen	Tolle			1				
Martin	Topper	and Margaret Topper		1				

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Kathleen	Trainor			1				
Keith	Turner			1				
Clay	Tyeryar	and Barbara Tyeryar		1				
William	Tyrrell	and Jennifer Tyrrell		1				
Jay	Ulrich			1				
James	Vecchiarelli			1				
Carlos	Viera	Judith L. Viera, Tr.		1				
Isaiah	Von	and Bernice Von		1				
John	Walker			1				
Richard	Wallace	and Alice Wallace		1				
John	Walsh			1				
James	Wang			1				
Warren	Weimer			1				
Ulysses	White			1				
Ruth	Willis			1				
Sean	Willson	and Nancy Willson		1				
Daniel	Wyman	and Gloria Wyman		1				
Daniel	Zugris			1				
Frederick	Janney	Pamela Noe	Cinnamon Creek Homeownders Assoc.	1				
Thomas	Barksdale		Fairfax Co. Coalition for Smarter Growth	1				
Michael	Malak		Kings Park Civic Association	1				
Edmund	Bowles		Loudoun County Administrator	1				
Otto	Sonefeld		Pavillion Condominium Association	1				
Jennifer	Blackwell		Reston Association	1				
W. Davis	Coale		Reston Interfaith Board of Directors	1				
Shahla	Batmanghelidj		Rotonda	1				
Joe	Apple		Sierra Club, Great Falls Group	1				
Ernest	Barber		Union Local 689	1				
Jacques	Mathieu		Union Local 689 Amalagamated Transit	1				
James	Roewer		USWAG Executive Director	1				
John	Anderson		Wilmorite Properties	1				
Laurence	Aronson			1				
Robin	Augustine			1				
Nora	Belt			1				
Bruce	Bennett			1				
Sue	Bethke			1				
Garth	Bhilar			1				
William	Bogard			1				
Donald	Brachner			1				
D.E.	Brown			1				

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Mike	Cavin			1				
Steve	Cerny			1				
Gay	Cima			1				
Karen	Connolly			1				
Hugh	Davis			1				
John	Davis, J.			1				
Doug	DelPorto			1				
James	Doane			1				
Bob	Douglas			1				
Kimberly	Driscoll			1				
Donal	Elliot			1				
Alan	Fiala			1				
David	Flemer			1				
Raymond	Fletcher			1				
Daniel	Fontaine			1				
B.	Freeman			1				
Richard	Gear			1				
Dale	Gibson			1				
Donella	Gibson			1				
Jerold	Gilbert			1				
John	Gilmartin			1				
Grace	Gorenflo			1				
Heidi	Guillot			1				
Herbert	Hackney			1				
Kayleen	Hadd	and Harry Hadd		1				
B.	Halway			1				
M.	Hamberger			1				
Vera	Hannigan			1				
Glen	Harris			1				
Warren	Harvey			1				
Parvin	Hashemine			1				
Christopher	Herman			1				
Sue	Iwanski			1				
Rhonda	Jordan			1				
Lauren	Kennedy			1				
Nancy	Kessler			1				
Jamaleddin	Larijanii			1				
Ching	Lee			1				
Bernard	Leland			1				
Dave	Levy			1				

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Robert	Lincoln			1				
Richard	Lowry			1				
Dani	Lutz			1				
Peggy	Maio			1				
Sylvia	Malamud			1				
Arthur	Marfred			1				
Therese	Martin			1				
Julie	McCollough			1				
Gloria	Michau			1				
Susan	Mills			1				
John	Mitchell			1				
Jose	Molina			1				
Robert	Moore			1				
Scott	Moore			1				
Colleen	Morehead							
Barbara	Naef			1				
Jim	Nagle			1				
Re	Nguyen			1				
Rayehah	Nobarian			1				
Dennis	O'Connor			1				
Yao	Oppong			1				
Paul	Pattana			1				
S.	Peterson			1				
Douglas	Pew			1				
Carol	Phelps			1				
Alexandra	Popa			1				
Gregory	Prelewicz			1				
Judy	Prescott			1				
Kurt	Pronske			1				
David	Ralston			1				
Baldwin Drive	Resident			1				
Rotonda	Resident			1				
Rotonda	Resident			1				
R.	Rogan			1				
Anna	Sanderson			1				
Caroline	Schor-MacDicken			1				
Alan	Seabright			1				
Davood	Sedaghatfar			1				
Don	Skidmore			1				
Nancy	Spannaus			1				

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John	Steg			1				
Kevin	Stern			1				
Forrest	Stieg			1				
Brian	Sullivan			1				
Ellen	Todres			1				
Maureen	Tredway			1				
James	Vaughn			1				
John	Verna			1				
Shane	Vile			1				
Alice	Wallace			1				
Doris	Webb			1				
George	White			1				
Doyle	Whittaker	and Junaita Whittaker		1				
Joseph	Wright			1				
Stephen	Young			1				
Eric	Zicht			1				

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APPENDIX C: GLOSSARY OF TERMS

100-year floodplain – The areas along or adjacent to a stream or body of water that are capable of storing or conveying floodwaters during a 100-year frequency storm event.

A-Weighted Sound Level (A-Weighted Scale) – Decibel measurements in the "A" scale; a method of representing the human ear's interpretations of the loudness of an equal sound level throughout the audible frequency range.

Adopted Regional System (ARS) - WMATA's approved transit system.

Active park – A park where the primary focus is active recreation such as organized sports or other non-noise sensitive uses, such as playgrounds and recreation centers.

Alight – to depart a transit vehicle.

Ambient background noise – The existing cumulative noise that is characteristic of an area based on current activity levels.

Americans with Disabilities Act of 1990 (ADA) – Federal legislation that proscribes standards to meet the needs of individuals with disabilities in public accommodations, employment, transportation, state and local government services, and telecommunications.

Area of Potential Effects (APE) – For purposes of complying with Section 106 of the National Historic Preservation Act, a geographic area or areas where an undertaking (e.g., the Dulles Corridor Rapid Transit Project) may directly or indirectly cause alterations in the character or use of historic properties, if any such properties are located in the area of the project.

Arterial – A roadway designed to connect two distant areas at higher speeds and higher capacity travel than a local road.

At-grade – Level with the ground surface.

Backwater – A section of a stream where water accumulates behind a blockage.

Baseline Alternative – See No Build Alternative.

Benthic macro-invertebrate – An aquatic animal lacking a backbone that inhabits the bottom of an aquatic environment.

Bent – A structure with an upside-down U-shape used to support an aerial transit guideway or an aerial roadway when ground conditions preclude the use of regular supports, such as when there is a roadway below.

Best available control technologies (BACT) – Mitigation measures utilizing the best available equipment to minimize noise and vibration impacts at nearby receptors, typically used during construction activities.

Best management practices (BMPs) – Specific standards utilized during construction to minimize the impact on surrounding resources.

Business Professional and Occupancy License revenues (BPOL revenues) - Revenues that typically form part of a county's General Fund.

Build Alternative(s) – The alternative(s) being evaluated as the proposed action during the EIS process.

Building attenuation – The reduction in the energy of a sound field (i.e. noise) resulting from its passage through a building's structural elements.

Bus Rapid Transit (BRT) – An emerging technology in which buses are used to provide high-quality transit service akin to a rapid rail system.

BRT maintenance and storage facility – Facility with multiple buildings for the maintenance and storage of out-of-service BRT vehicles. Also includes exterior parking spaces for storing buses and surface parking for employees as well.

Central business district (CBD) – The main concentration of office and commercial development in a city. Typically corresponds to the main financial district. Also called the "core" or "downtown."

Champion tree - The largest tree of its species that occurs within a given jurisdiction.

Channel morphology – The dimension, pattern, and profile of the stream channel.

Channel substrate – Particles on the streambed, both organic and inorganic.

Clean Air Act of 1970 – Legislation mandating the U.S. EPA to set national air quality standards to protect the public against common pollutants. State governments are required to devise clean-up plans to meet these U.S. EPA standards.

Congestion Mitigation and Air Quality (CMAQ) – authorized under the Intermodal Surface Transportation Equity Act (ISTEA), this law provided $6.0 billion in funding for surface transportation and other related projects that contribute to improvements in air-quality and reduce congestion.

Commonwealth Transportation Board (CTB) – A seventeen-member board appointed by the Governor of Virginia that is primarily responsible for locating routes, approving construction contracts, creating traffic regulations, naming highways, and administering and allocating transportation funds in Virginia.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) – Commonly known as Superfund, this law was passed in 1980 to create a tax on the chemical and petroleum industries and provide broad federal authority to respond directly to releases or hazardous substances that may endanger public health or the environment.

Comprehensive Plan – Each jurisdiction in the Commonwealth of Virginia is required by state law to institute a comprehensive plan to be used as a guide to decision-making about the natural and built environment.

Conformity – A designation given to transportation plans, programs, and projects that conform to federally mandated state air-quality plans.

Constrained Long-Range Plan (CLRP) – A long-term plan for transportation projects in the Washington metropolitan region with a 25-year horizon from 2001 to 2025. It is constrained to include only those projects that can be funded by revenues that are "reasonably expected to be available" as required by federal law and regulations. It includes both transit and highway projects, and meets federal planning and air-quality conformity requirements.

Council on Environmental Quality (CEQ) - Established in the Executive Office as part of the National Environmental Policy Act of 1969 (NEPA), the council coordinates federal environmental efforts, policies, and initiatives, and ensures that federal agencies meet NEPA requirements.

Cut-through traffic impacts – Impacts caused by traffic using residential streets rather than the local street system intended for through traffic.

Decibel (dBA) – A unit of measure of sound pressure used to describe the loudness of sound on the A-weighted scale (see A-Weighted Sound Level) .

Decision-makers – The Virginia Commonwealth Transportation Board and the Board of Directors of the Washington Metropolitan Area Transit Authority, which, in similar actions, selected and revised the Locally Preferred Alternative.

Diabase – A hard dark-colored igneous rock, found primarily in northern Virginia counties. The bedrock supports a distinctive community type of drought-tolerant plants.

Easement – A right afforded by a property owner for another to make limited use of his or her property.

Environmental Impact Statement (EIS) – A comprehensive study of potential environmental impacts related to federally assisted projects. Projects for which an EIS is required are defined in the National Environmental Policy Act of 1969, as amended.

Federal Transit Administration (FTA) – The agency of the U.S. Department of Transportation responsible for regulation and funding of public transportation.

Fixed-guideway – A track or other riding surface that supports and physically guides transit vehicles designed to travel exclusively on that surface.

Flex – Flexible, able to be used for many purposes. For example, "flex industrial building" may be used to house several uses such as light industrial, office space, audio stores, etc.

Floor-area-ratio (FAR) – The ratio of a building's floor area to the area of the parcel the building is located on used as a measure of the density of building on a parcel and is used to regulate development.

Flyover bridge – A highway ramp that passes above and across traffic lanes.

Federal Reimbursement Anticipation Note (FRAN) - the Virginia Transportation Act of 2000 created the Priority Transportation Fund and authorized the Commonwealth Transportation Board (CTB) to issue Federal Reimbursement Anticipation Notes (FRANs) in the maximum aggregate principal amount of $1.2

billion outstanding at any one time. FRANs are a revolving line of credit used by the Commonwealth to fund construction of transportation improvements.

Full Funding Grant Agreement (FFGA) - funding mechanism established by Congress to support the multi-year capital needs of transit project construction. These funding commitments are made after costs, benefits, and impacts are most accurately known and project sponsors have demonstrated the technical and financial capacity to build and operate the project. By law, the FTA negotiates the details of FFGAs with project sponsors, including an annual schedule of when funds will be provided. Once FFGAs are executed, Congress appropriates funding for the project on an annual basis.

General Plan – The term used for a county's comprehensive plan. See Comprehensive Plan for additional information.

Geographic Information Systems (GIS) – A system of computer software and hardware, data, and personnel to manipulate, analyze and present geographically referenced information or data that is identified according to their locations.

General Obligation Bond (GO Bonds) – A type of Municipal Bond for which principal and interest are secured by the full faith and credit of the issuer and usually supported by either the issuer's unlimited or limited taxing power.

Grade-separated – Used to describe an alignment that is elevated or below ground, or crossings that use an overpass or an underpass. Grade separation allows traffic or transit vehicles to pass through intersections without stopping for opposing traffic. Heavy rail transit such as the Metrorail system must be grade-separated because it uses a high-voltage third rail.

Ground-borne vibration and noise– The vibration-induced levels that propagate over ground between the source and a receptor such as a building; typically assessed indoors.

Groundwater recharge – A process of replenishment (recharge) of water to an aquifer (a rock formation that has properties favorable for storage of water).

Headway – The time interval between vehicles moving in the same direction on a particular route; also called service frequency.

High-Occupancy Vehicle (HOV) – A vehicle occupied by more than one person; used to distinguish between vehicles that only have a single-occupant (the driver) and vehicles that include passengers as well.

Hertz (Hz) – Frequency measured in cycles per second

Inches per second (ips) – Vibration velocity levels are typically expressed in terms of inches per second.

Indefinite association – Used to describe the relationship between an archeological artifact and the location in which it is found when the location may not be the same location where the artifact was last used.

Infill development – Development of vacant or under-used parcels within existing urban areas that are already largely developed.

Jurisdictional determination (JD) – Regulatory review of previously identified wetlands and waters of the U.S. by the Army Corps of Engineers in compliance with Section 404 of the Clean Water Act.

Keynote Employment Centers – A designation in the Loudoun County General Plan for office or research-and-development centers supported by ancillary services for employees.

Kiss & Ride – Drop off/pick up areas at transit stations in the Metro system.

L10 noise level – The level of noise at which the A-weighted sound pressure level in decibels is exceeded 10 percent of the time.

L90 noise level – The level of noise at which the A-weighted sound pressure level in decibels is exceeded 90 percent of the time.

Layover facility – Facility used for short-term storage of revenue vehicles between scheduled trips.

Ldn – The day-night noise level, represents the average noise level evaluated over a 24-hour period. A 10-decibel penalty is added to events that occur during the nighttime hours (10:00 P.M. to 7:00 A.M.) to account for people's increased sensitivity to noise while they are sleeping.

Lmax – The maximum noise level that occurs during an event or train passby and is the noise level actually heard during the event or passby.

Leq noise level – The level of constant noise which contains the same amount of acoustic energy as time-varying noise levels (e.g. traffic noise) during a given time interval.

Land use – Classification providing information on land cover and the types of human activity occuring on a parcel of land, such as "commercial," "industrial," "residential," or "open space."

Level of Service (LOS) – A letter grade designation used to describe given roadway conditions with "A" being at or close to free-flow conditions and "F" being at or close to over-saturation of the roadway; usually based on the progression of vehicles through the green phase of a signal, driver discomfort/frustration, lost travel time, and fuel consumption.

Light Rail Transit (LRT) – A rail technology that can operate in rights-of-way that are not grade-separated usually powered electrically by overhead catenary lines.

Locally Preferred Alternative (LPA) – The alternative selected by local decision-makers as the preferred solution to the corridor's identified needs. The full LPA is the 23.1-mile Metrorail extension in the Dulles Corridor.

Magnetic levitation – An emerging technology in which magnetic forces are used to lift or levitate a vehicle and then propel and guide it along a track with cruising speeds up to 300 miles per hour; also called maglev.

Mainline – The revenue service tracks on a rail line (the main service line), rather than auxiliary tracks (such as pocket tracks, crossovers, or maintenance tracks) or tracks providing a connection to a maintenance and storage facility.

Major Investment Study (MIS) – An alternatives analysis study process for proposed transportation investments in which a wide range of alternatives is examined to produce a smaller set of alternatives that

best meet project area transportation needs. The purpose of the study is to provide a framework for developing a package of potential solutions that can then be further analyzed during an Environmental Impact Statement (EIS) process.

Memorandum of Agreement (MOA) – A document that describes the terms and conditions agreed upon to resolve the potential adverse effects of a federal agency program, under Section 106 of the National Historic Preservation Act.

Metropolitan Washington Airports Authority (MWAA) – The Authority responsible for operating and maintaining Washington Dulles International and Ronald Reagan Washington National airports.

Metrorail Service and Inspection Yard (S&I Yard) – Yard that includes multiple buildings for light and heavy-duty maintenance of rail cars and for storage of out-of-service rail cars. Includes multiple tracks for moving and storing rail cars and parking for employees.

Mitigation banking - The restoration, creation, enhancement, and preservation of wetlands and/or other aquatic resources, for the purpose of providing compensatory mitigation in advance of authorized impacts to similar resources.

Mixed-use – Combination of land uses, such as residential uses combined with office, retail, public, entertainment, or even manufacturing uses.

Monorail – A transit mode consisting of automated transit vehicles that operate on or are suspended from a single rail, beam, or tube.

Monumentation – A type of signage for a development or business.

National Environmental Policy Act of 1969 (NEPA) - requires federal agencies to consider the environmental impacts of major federal projects or decisions, to share information with the public; to identify and assess reasonable alternatives; and to coordinate efforts with other planning and environmental reviews taking place.

National Historic Landmark (NHL) – A designation denoting a historic properties on the National Register that are of particular significance.

National Register of Historic Places (NRHP) – The official list of the nation’s cultural resources worthy of preservation.

New Starts – A category of federal funding for major transit “fixed guideway” capital investments.

No Build Alternative - For the Dulles Corridor Rapid Transit Project, the No Build Alternative was consistent with the "no-action alternative" required by the Council of Environmental Quality's regulations for implementing the National Environmental Policy Act of 1969, as amended, and provided a baseline for comparison against which the other alternatives were evaluated in the EIS. The No Build Alternative included existing highway and public transportation infrastructure in the Dulles Corridor, and transportation system improvements that were included in the Washington metropolitan region's constrained long-range transportation plan and committed to be implemented by 2025, aside from the Dulles Corridor Rapid Transit Project.

Noise Abatement Criteria (NAC) – Noise levels established by FHWA for various activities. When predicted noise levels approach or exceeds the NAC level, mitigation must be considered.

Non-revenue service hours – The time during which buses run between the storage facility and the beginning of the route and vice versa.

Off-peak travel hour – An hour of a 24-hour day when traffic is less than the maximum observed for the same 24-hour period.

Operating and maintenance (O&M) costs – Costs associated with operating and maintaining transit service, including vehicle operators, fuel, vehicle maintenance, and infrastructure (stations, tracks, right-of-way) maintenance.

Order of magnitude cost – A general cost figure used for comparative purposes.

Paratransit service – Demand-responsive service geared toward physically impaired passengers such as elderly and handicapped.

Park-and-ride facility – A parking facility that is part of a transit facility; an access mode for patrons to drive private vehicles to a transit facility.

Passive park – A park where the primary focus is low-impact, quiet recreation, including hiking, meditation, and nature study.

Peak particle velocity (PPV) – Expressed in units of ips, PPV represents the maximum instantaneous vibration velocity observed during an event. Typically used to evaluate the potential for damage to buildings.

"Peekaboo" sequence – Used to characterize the approach to Washington Dulles International Airport as designed by airport architect Eero Saarinen. Designed to provide a variety of views at different points of the approach to create a sense of dramatic expectation.

People-mover system – Typically automated rail systems that use passenger vehicles operating singly or in multi-car trains. The guideway for this mode must be grade-separated.

Personal Rapid Transit (PRT) – Typically envisioned as a fixed-guideway transit mode using small, low-capacity vehicles (one to four persons) designed to function like an automobile in an urban setting.

Platform hours – The daily total of the time a vehicle is in operation. This total includes a vehicle's revenue service hours and non-revenue service hours.

Platoon – In reference to BRT vehicles, two-vehicle "bus trains" in which the two vehicles run in tandem, though not physically connected like rail cars.

Pocket track – Track that is located between the main tracks and are used to store out-of-service trains and equipment.

Portal – Entrance into a Metrorail tunnel segment.

Preliminary Information Form (PIF) – A form that can precede the completion of a National Register Nomination Form to determine whether a property or district warrants more detailed documentation for nomination.

Proffer – A voluntary fee (or the provision of capital improvements in lieu of a fee) paid by a developer to a jurisdiction in return for a change in the zoning of an parcel of land.

Profile – The vertical alignment of a transit alignment, which typically shows the elevation of the alignment as it relates to ground level.

Project Team – The staffs of the Virginia Department of Rail and Public Transportation and of the Washington Metropolitan Area Transit Authority, which together made recommendations to the decision-makers, the Commonwealth Transportation Board and WMATA Board of Directors.

Public-private partnership – An innovative procurement process for private organizations to partner with public agencies to design, build, finance, and possibly own transportation infrastructure established under Virginia's 1995 Public-Private Transportation Act.

Record of Decision (ROD) –The final step in the EIS process under NEPA. Documentation of the lead federal agency's formal decision on the proposed action. This document constitutes the basis for the federal agency's environmental finding on the project.

Regolith – The layer of loose rock resting on bedrock, constituting the surface of most land.

Resource Protection Area(s) (RPA) – Land(s) at or near the shoreline that have an intrinsic water quality value due to the ecological and biological processes they perform or are sensitive to impacts that may result in significant degradation to the quality of state waters.

Revenue service hours – The time during which buses pick up and transport passengers.

Right-of-way – Land available for operation of transportation facilities (roadways or transit lines). The land is typically government-owned (local, state, or federal). A transportation facility may occupy all or a portion of the right-of-way. Rights-of-way can be grade-separated or at-grade.

Root mean square (RMS) – The square root of the average of the squares of a set of numbers. To more accurately describe the human response to vibration, the root mean square (RMS) amplitude is used to assess impacts.

Schist – A medium- to coarse-grained, foliated metamorphic rock composed of laminated, often flaky parallel layers. Compositional layering may or may not be present.

Scoping – An early public discussion of the scope of issues related to a proposed federal action.

Secondary containment systems – Best Management Practices designed to enhance water quality. Examples include stormwater management ponds and oil/water separators.

Shovel test pit – A hole, typically round and one foot in diameter, excavated with a shovel through soil layers. Archaeologists use shovel test pits spaced at regular intervals to identify the presence of archaeological deposits or sites.

Single-Occupant Vehicle (SOV) – Privately operated vehicles whose only occupant is the driver.

Slip ramp – At-grade ramps that allow access to a barrier-restricted facility. For example, in the Dulles Corridor, there are several short, at-grade ramps that allow access between the Dulles Toll Road and the Dulles Airport Access Road.

Soft costs – In a project budget, allowances for engineering and management, project insurance, and agency costs.

Sound exposure level (SEL) – An indicator of the cumulative exposure to noise from a single sound event. SEL normalizes the time period of the Leq to one second allowing for the direct comparison of events or passbys with different time durations.

State Historic Preservation Officer (SHPO) – A person designated and appointed by the state governor to administer the State Historic Preservation Program, and the office of professional staff supporting the program.

Stormwater management pond(s) (SWMP) – A best BMP designed to enhance stormwater quality by slowing the velocity of runoff, thereby settling sediment and potential contaminants.

Tabular aquifer – An aquifer that is more or less continuous, but hydraulic connection across confining units and between individual aquifers is poor.

Tail track - Track (typically at end of line) used for storage of trains during operating hours. Sometimes used for reversing the direction of trains at the end of the line.

Tie-breaker stations – Facilities that break the rail power line into sections, allowing power in one or more sections to be shut down for maintenance without affecting the power supply to the rest of the system.

Topography – The surface features of a place or region.

Traction Power Substations – Facilities that convert alternating current power supplied by the power company into direct current power for the rail system.

Traffic Analysis Zone (TAZ) – The smallest geographically designated area for analysis of transportation activity.

Transit-Oriented Development (TOD) – A land use designation intended to encourage the use of transit. Measures employed in areas with TOD designations include increased densities, clustered development, pedestrian amenities, parking restrictions, and urban design enhancements.

Transit-related employment center (TREC) –The transit node designated near Route 606 by the Loudoun County Revised General Plan in which increased development is permitted based on the implementation of BRT or Metrorail. Because of its proximity to Dulles International Airport, the TREC does not permit residential development.

The Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA) - Established a new federal credit program under which the U.S. Department of Transportation may provide three forms of credit assistance – secured (direct) loans, loan guarantees, and standby lines of credit – for surface transportation projects of national or regional significance.

Transportation management agency (TMA) – Nonprofit, public-private partnership that works to improve transportation mobility in a region.

Transportation system management (TSM) – Low-cost, operationally oriented transit improvements. The TSM Alternative provides the baseline against which the cost-effectiveness of capital investments in the Build Alternatives can be evaluated.

Vehicle passby – an event whereby a vehicle passes a reference point.

Vehicle miles traveled (VMT) – on highways, the measurement of the total miles traveled by all vehicles in an area for a specified time period.

Vibration decibel (VdB) – The RMS velocity is expressed in inches per second (ips) or vibration decibels (VdB). Vibration levels in VdB are referenced to 1 micro inch per second (mips).

Virginia Department of Rail and Public Transportation (DRPT) – The agency that supports rail and public transportation systems in the Commonwealth of Virginia through funding programs, advocacy and technical support. DRPT is the owner and sponsor of the Dulles Corridor Rapid Transit Project.

Virginia Public-Private Transportation Act of 1995 (PPTA) – The legislative framework enabling the Commonwealth of Virginia, qualifying local governments and certain other political entities to enter into agreements authorizing private entities to acquire, construct, improve, maintain, and/or operate qualifying transportation facilities. The public entities may either solicit or accept unsolicited proposals from private sources.

Washington & Old Dominion (W&OD) Railroad Regional Park – A 45 mile-long, 100-foot wide recreational trail and parkland stretching from Arlington County to Loudoun County, Virginia.

Washington Metropolitan Area Transit Authority (WMATA) – The agency that plans, builds, operates, and maintains the Washington D.C. metropolitan region's Metrorail and Metrobus transit systems.

Wiehle Avenue Extension – Formerly known as LPA Phase 1, the Wiehle Avenue Extension connects to the existing Metrorail Orange Line between West Falls Church and East Falls Church Stations and would extend to Wiehle Avenue. It is anticipated that it will begin operations in 2011.

Welfare facility – Support facilities for operators of revenue vehicles. Typically includes one or more of the following: kitchen/lunchrooms, locker rooms, rest rooms, quiet rooms.

Yard lead - Track that connects the mainline to the service and inspection yard.

APPENDIX D: ACRONYMS

ACHP	Advisory Council for Historic Preservation
ADAAG	Americans with Disabilities Act Accessibility Guidelines
APE	Areas of Potential Effect
ARS	Adopted Regional System
BACT	Best Available Control Technologies
Bbl	Barrel of Fuel/Oil
BMPs	Best Management Practices
BPOL	Business Professional and Occupancy License revenues
BRT	Bus Rapid Transit
BTU	British Thermal Unit
CBD	Central Business District
CBPA	Chesapeake Bay Preservation Areas (Fairfax County)
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CLRP	Constrained Long-Range Plan
CMAQ	Congestion Mitigation and Air Quality
CO	Carbon Monoxide
CTB	Commonwealth Transportation Board
DIAAH	Dulles International Airport Access Highway
DAAR	Dulles Airport Access Road
dBA	A-Weighted Decibels

DRPT	Virginia Department of Rail and Public Transportation
EDR	Environmental Data Report
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
EQC	Environmental Quality Corridors
FAA	Federal Aviation Administration
FBI	Federal Bureau of Investigation
FFGA	Full Funding Grant Agreement
FHWA	Federal Highway Administration
FINDS	Facility Index System/Facility Identification Initiative
FRAN	Federal Reimbursement Anticipation Note
FTA	Federal Transit Administration
FY	Fiscal Year
GIS	Geographic Information Systems
HOV	High-Occupancy Vehicle
IDA	Intensely Developed Areas
LOS	Level of Service
LPA	Locally Preferred Alternative
LRT	Light Rail Transit
LUST	Leaking Underground Storage Tank
MIS	Major Investment Study
MOA	Memorandum of Agreement
MTPD	Metropolitan Transit Police Department
MWAA	Metropolitan Washington Airports Authority
MWCOG	Metropolitan Washington Council of Governments
NAAQS	National Ambient Air Quality Standards

NAC	Noise Abatement Criteria
NEPA	National Environmental Policy Act of 1969, as amended
NFPA	National Fire Protection Association
NHL	National Historic Landmark
NOAA	National Oceanic and Atmospheric Administration (NOAA)
NRHP	National Register of Historic Places
NVRPA	Northern Virginia Regional Park Authority
NVTC	Northern Virginia Transportation Commission
O/D	Origin/Destination Pair(s)
O&M	Operations and Maintenance
PA	Programmatic Agreement
PDC	Planned Development Commercial
PPTA	Public-Private Transportation Act of 1995
PRC	Planned Residential Community
RECs	Recognized Environmental Conditions
RPA	Resource Protection Area
ROD	Record of Decision
RSCOD	River and Stream Corridor Overlay Districts (Loudoun County)
RTE	Rare, Threatened, and Endangered (species)
S&I	Service and Inspection
SAP	System Access Program
SEP	System Expansion Program
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SOV	Single-Occupant Vehicle
TDM	Transportation Demand Management

TEA-21	Transportation Equity Act for the 21st Century
TIFIA	Transportation Infrastructure Finance and Innovation Act
TIP	Transportation Improvement Program
TMA	Transportation Management Association
TOD	Transit-Oriented Design
TREC	Transit Related Employment Center
TRIP II	Toll Road Investors Partnership II
TSA	Transportation Security Administration
TSM	Transportation System Management
USACE	U.S. Army Corps of Engineers
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
UST	Underground Storage Tank
VdB	Decibels of Vibration Velocity
VDCR	Virginia Department of Conservation and Recreation
VDEQ	Virginia Department of Environmental Quality
VDHR	Virginia Department of Historic Resources
VDOT	Virginia Department of Transportation
VMT	Vehicle Miles Traveled
VPDES	Virginia Pollutant Discharge Elimination System
VRE	Virginia Railway Express
W&OD	Washington and Old Dominion (Trail)
WMATA	Washington Metropolitan Area Transit Authority
YOE	Year of Expenditure

APPENDIX E: REFERENCES

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MEMORANDUM OF AGREEMENT

**AMONG THE FEDERAL TRANSIT ADMINISTRATION,
VIRGINIA DEPARTMENT OF HISTORIC RESOURCES, AND
VIRGINIA DEPARTMENT OF RAIL AND PUBLIC TRANSPORTATION,**

**CONCERNING THE EFFECTS OF
THE DULLES CORRIDOR METRORAIL PROJECT ON
HISTORIC AND ARCHAEOLOGICAL RESOURCES**

WHEREAS, the Virginia Department of Rail and Public Transportation (DRPT) proposes to construct, in phases, the Dulles Corridor Metrorail Project (Project) in Fairfax and Loudoun Counties, Virginia, a 23.1 mile extension of the existing regional Metrorail system as shown in Exhibit A. Project elements will include an electrically-powered rapid rail transit line operating in an exclusive right-of-way with at-grade, aerial, and subway sections, stations and parking facilities, new and improved yard and shop facilities, and ancillary facilities for the distribution of electrical power and stormwater management; and

WHEREAS, DRPT has applied to the Federal Transit Administration (FTA) for financial assistance in designing and constructing the first phase of the Project (*Extension to Wiehle Avenue*), which will extend from the existing Metrorail Orange Line near the West Falls Church Station and terminate at Wiehle Avenue in Reston, and plans to apply for separate FTA funding for the subsequent extension west of Wiehle Avenue to Dulles International Airport and eastern Loudoun County (*Extension to Dulles Airport/Route 772*). FTA has determined that the Project will constitute a federal undertaking pursuant to 36 CFR 800.3(a) if FTA financial assistance is provided; and

FTA is the lead federal agency pursuant to the National Environmental Policy Act of 1969 (NEPA, 42 USC §§4321 et seq.) and is responsible for compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966 (Section 106, 16 USC §470f).

WHEREAS, FTA and the Federal Aviation Administration (FAA), whose approval is required for any change in the use of land at Washington Dulles International Airport for the Project, have agreed that the FTA will serve as the lead Agency Official who shall act in cooperation with the FAA in fulfilling their collective responsibilities under Section 106; and

WHEREAS, FTA and the Metropolitan Washington Airports Authority (MWAA), as the lessee and operator of Washington Dulles International Airport, have agreed that the FTA will serve as the lead Agency Official who shall act in cooperation with MWAA in fulfilling their collective responsibilities under Section 106; and

WHEREAS, FTA has consulted on the Project with DRPT and the Virginia Department of Historic Resources, which is the State Historic Preservation Office (SHPO) for Virginia, pursuant to Section 106 and its implementing regulations at 36 CFR 800 (FTA, DRPT and the SHPO are the “required signatories”); and

WHEREAS, FTA, in consultation with the SHPO, has determined the Area of Potential Effects (APE) for the Project, as defined in 36 CFR 800.16(d), as shown in Exhibit B and has completed the identification and evaluation of historic resources within the APE; and

WHEREAS, the FTA, in consultation with the SHPO, has determined that the *Extension to Wiehle Avenue* phase of the Project will not adversely affect historic properties; and

WHEREAS, the FTA, in consultation with the SHPO, has determined that the *Extension to Dulles Airport/Route 772* phase of the Project will have an adverse effect, as defined in 36 CFR 800.5(a), on the Washington Dulles International Airport historic district shown in Exhibit C, which is eligible for the National Register of Historic Places (National Register), by altering the remaining historic "peekaboo" views of the main terminal control tower for approaching travelers from the Dulles International Airport Access Highway (DIAAH); and

WHEREAS, the FTA, in consultation with the SHPO, has determined that the Project will not affect archaeological properties; and

WHEREAS, FTA and DRPT have informed and involved the public in Section 106 review through public NEPA scoping meetings held in July 2000, public information meetings held in January 2001, public hearings on the Draft Environmental Impact Statement (EIS) held in July 2002 and on the Supplemental Draft EIS held in December 2003, and through additional informal meetings and outreach materials, pursuant to 36 CFR 800.2(d), and has specifically invited comments on the Section 106 process; and

WHEREAS, the FAA has been invited to concur in this Agreement; and

WHEREAS, MWAA has been invited to concur in this Agreement; and

WHEREAS, the Washington Metropolitan Area Transit Authority (WMATA), as the operator and future owner of the Project's facilities, has been invited to concur in this Agreement; and

WHEREAS, Fairfax and Loudoun counties, have participated in the Section 106 consultation and have been invited to concur in this Agreement; and

WHEREAS, the Advisory Council on Historic Preservation has been invited to participate in the Section 106 process for this Project and has declined; and

WHEREAS, the Virginia Council on Indians has been invited to participate in the Section 106 process for this Project and has declined; and

WHEREAS, FTA's decision to fund each phase of the Project for design and construction will be made independently in accordance with its regulations on major capital investment projects (49 CFR 611) and any stipulations specific to a particular Project phase are not applicable until FTA financial assistance is provided; and

NOW, THEREFORE, the FTA and the SHPO agree that upon FTA's decision to proceed with a particular phase of the undertaking, the FTA shall ensure that the following stipulations are implemented in order to take into account the effects of the undertaking on historic properties and that these stipulations shall govern the Project and all of its parts until this Agreement expires or is terminated.

STIPULATIONS

1. Unanticipated Discovery

A. Historic Properties

In the event that unanticipated effects on historic properties are found during the implementation of this Agreement, DRPT will stop any work that may adversely affect the historic property or that may foreclose opportunities to avoid such adverse effects. FTA shall consult with the SHPO and with the other required and concurring signatories to this Agreement, as appropriate, to determine the appropriate course of action to comply with Section 106. If necessary, the required signatories shall review the terms of this Agreement and determine whether revisions are needed. Any revisions to the Agreement shall be made in accordance with Stipulation 5 below.

B. Archaeological Resources

1. In the event that a previously unidentified archaeological resource is discovered during ground disturbing activities, DRPT will halt all construction work involving subsurface disturbance in the area of the resource and in the surrounding area where further subsurface deposits may reasonably be expected to occur. An archaeologist meeting the Secretary of the Interior's *Professional Qualifications Standards* (36 CFR 61) will immediately inspect the work site and determine the extent and the nature of the affected archaeological property. The archaeologist may consult the SHPO and other parties as deemed appropriate by the archaeologist in setting the boundaries of the archaeological resource. Construction work may then proceed in the Project area outside of the site area.

2. Within two (2) working days of the discovery, DRPT shall notify FTA and the SHPO. The notification shall describe DRPT's assessment of the National Register eligibility of the property and proposed actions to resolve the adverse effect (if any). The SHPO shall respond within two (2) working days of notification and construction may resume when the SHPO agrees. DRPT shall take into account the SHPO's recommendations regarding National Register eligibility and proposed actions, and then carry out appropriate actions. DRPT shall provide SHPO with a report of these actions once they are complete.

3. If the resource is determined to meet the National Register Criteria (36 CFR Part 60.6), FTA shall ensure compliance with Section 800.13 of the Council's regulations.

C. Human Remains

DRPT will ensure that human remains and associated funerary objects encountered during the course of actions taken as a result of this Agreement shall be treated in a manner consistent with the provisions of the *Virginia Antiquities Act*, Section 10.1-2305 of the *Code of Virginia*, final regulations adopted by the Virginia Board of Historic Resources and published in the Virginia Register on July 15, 1991. In addition, human remains and associated funerary objects that may be of Native American origin, encountered on Federal land, including but not limited to the land of the Washington Dulles International Airport and the Dulles International Airport Access Highway, shall be treated in a manner consistent with the provisions of the *Native American Graves Protection and Repatriation Act* (25 U.S.C. 3001).

2. Washington Dulles International Airport Historic District

A. At the extant Saarinen "peekaboo" view locations shown in Exhibit D, the vertical profile of the Metrorail tracks and the concrete safety barrier will be constructed as low as practicable given site conditions to minimize any obstruction of these views of the main terminal control tower.

B. The design of the Dulles Airport Metrorail station and terminal connections will consider, and incorporate where appropriate, established airport design themes and finishes within the context of the WMATA design criteria, approved system-wide facility requirements and operational practices in effect at the time of the design. The design of aerial structures and portals located within the historic district boundaries will consider, and incorporate where appropriate, concepts and materials that are mutually agreed to be compatible with the historic terminal and other contributing elements of the historic district. No later than the completion of Preliminary Engineering for the *Extension to Dulles Airport/Route 772* phase of the Project, DRPT shall submit the proposed designs to the SHPO for review and approval and to the other required and concurring signatories for review and comment.

C. No later than the completion of Preliminary Engineering for the *Extension to Dulles Airport/Route 772* phase of the Project, DRPT will submit a treatment plan to the SHPO for review and approval and to the other required and concurring signatories for review and comment. This treatment plan will identify specific treatments that would provide users of the Metrorail station and airport travelers with an appreciation for the airport's unique historic characteristics. Several potential measures will be considered, including, but not limited to: interpretive exhibits or artwork within the station facilities, connecting walkways, or terminal buildings; photo or video documentation of the view sequence; and removal of non-historic vegetation on airport property to enhance the historic views. DRPT will ensure that all measures in the approved treatment plan are completed or installed prior to the beginning of revenue service for this phase of the Project.

D. The SHPO shall, within 30 calendar days of receipt, review any treatment recommendations and designs submitted pursuant to this Agreement and either approve or provide comments. If no response is provided by the SHPO within 30 calendar days of receipt, DRPT may assume SHPO concurrence and approval. DRPT will review any comments and take them into account in the continued development of Project design. Should the SHPO object to any plans submitted pursuant to this Agreement, the provisions of Stipulation 4 will apply.

3. Annual Report

DRPT, in consultation with MWAA, will prepare an annual report summarizing the activities carried out in accordance with this Agreement. This report will be transmitted to all required and concurring signatories by January 15th of each year this Agreement is in effect, beginning in the year following the execution of the Agreement and continuing until the year following completion of construction activities associated with the Project. The DRPT shall also ensure that this annual report is made available for public review and that members of the public are invited to provide comments to the SHPO and other required and concurring signatories to the Agreement.

The required signatories to this Agreement shall review the annual report and provide any comments to the DRPT. Concurring signatories to this Agreement may review and

comment on the annual report at their discretion. Based on this review, the required signatories to this Agreement shall determine whether this Agreement shall continue in force, be amended, or be terminated. If requested by any required or concurring signatory to this Agreement, the FTA shall ensure that a meeting is held to facilitate review and comment, to resolve questions, or to resolve adverse comments.

4. Dispute Resolution

A. If any required or concurring signatory should object in writing regarding any action specified in the Agreement, then FTA shall consult with the objecting party to resolve this objection. If after such consultation, FTA determines that the objection cannot be resolved through consultation, then DRPT shall prepare documentation relevant to the objection in accordance with 36 CFR 800.11, and FTA shall forward such documentation to the Council, including FTA's proposed response to the objection. Within 30 days after receipt of all pertinent documentation, the Council is expected to exercise one of the following options:

- Provide FTA with a staff-level recommendation, which FTA shall take into account in reaching a final decision regarding its response to the objection; or
- Notify FTA that the objection will be referred for formal comment pursuant to 36 C.F.R. Section 800.7(c), and proceed to refer the objection and comment. FTA shall take into account the Council's comments in reaching a final decision regarding its response to the objection.

B. The responsibility of each required signatory to this Agreement to carry out all actions under the Agreement not affected by the dispute shall remain unchanged.

C. If the dispute cannot be resolved upon involvement of the Council, FTA, DRPT, or the SHPO may terminate the Agreement in accordance with Stipulation 6.B below.

5. Amendments

Any required signatory to this Agreement may request that it be amended, whereupon the required and concurring signatories shall consult to consider the proposed amendment in accordance with 36 CFR 800.6(c)(7). Any amendment shall be in writing and signed by all required signatories of this Agreement.

6. Termination

A. This Agreement shall terminate on January 15th of the year following completion of construction activities associated with the Project.

B. Any required signatory to this Agreement may terminate it by providing a 30 day written notice to the other required and concurring signatories, provided that these parties consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination. In the event of termination, work on the Project in the area(s) with affected historic properties will cease until FTA has fulfilled its Section 106 responsibility in accordance with 36 CFR 800.3 through 800.13.

Execution of this Agreement by the FTA and the SHPO and its submission to the Advisory Council on Historic Preservation in accordance with 36 CFR 800.6(b)(1)(iv), shall, pursuant to 36 CFR 800.6(c), be considered to be an Agreement with the Council for the purposes of Section 110(l) of NHPA. Execution and submission of this Agreement, and implementation of its terms evidences that FTA has afforded the Council an opportunity to comment on the Project and its effects on historic properties and has taken into account the effects of the Project on historic properties.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be signed intending thereby to be bound by its provisions.

FEDERAL TRANSIT ADMINISTRATION

By: Herman Shipman **Date:** 10/5/04

Herman Shipman
Acting Regional Administrator

VIRGINIA DEPARTMENT OF RAIL AND PUBLIC TRANSPORTATION

By: Karen J. Rae **Date:** 9/14/04

Karen J. Rae
Director

VIRGINIA DEPARTMENT OF HISTORIC RESOURCES

By: _____ **Date:** 9/23/04

Kathleen S. Kilpatrick
Director

CONCUR:

FEDERAL AVIATION ADMINISTRATION

By: _____ **Date:** 10/25/04

Terry Page
Manager, Washington Airports District Office

CONCUR:

METROPOLITAN WASHINGTON AIRPORTS AUTHORITY

By: _____ **Date:** 11/5/04

Margaret E. McKeough
Executive Vice President and
Chief Operating Officer

CONCUR:

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

By: Richard A White **Date:** 11/10/04

Richard A. White
General Manager and Chief Executive Officer

CONCUR:

FAIRFAX COUNTY

By: _____ **Date:** 11-03-04

Michael Kane
Director, Fairfax County Park Authority

CONCUR:

LOUDOUN COUNTY

By: _____ Date: _____

John Clark
Director, Office of Transportation Services



LEGEND

- Major Arterials
- Limited Access Highway
- U.S. Highways

Proposed Metrorail Alignment

- At-grade/Retained Fill
- Aerial
- Underground
- Aerial Yard Lead

- Existing Metrorail Orange Line and Stations
- Proposed Station
- Proposed Underground Station
- Future Station
- Rail Yard
- Dulles Corridor Limits

0 1 2 3 MILES

Note: Short bridge crossings for highway and culvert overpasses/underpasses not shown.

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

Exhibit A

Locally Preferred Alternative
March 2004

Dulles Corridor Rapid Transit Project



LEGEND

- Area of Potential Effect, Archaeology
- Area of Potential Effect, Architecture

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

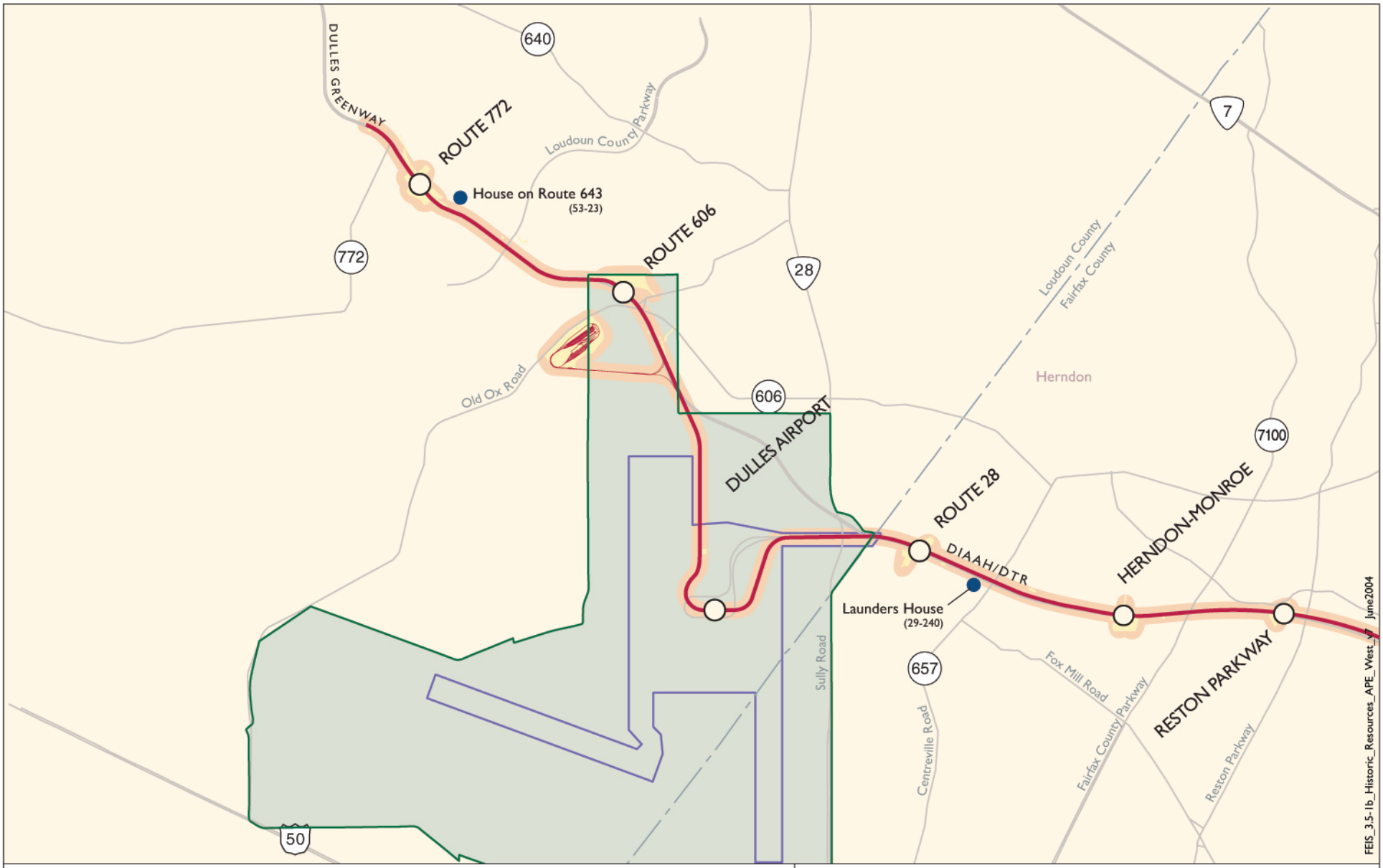
- Existing Metrorail Orange Line and Stations
- Proposed Station
- Future Station
- Historic Architectural Resources
- Proposed Metrorail Alignment
- County Boundary

0 3000 6000 FEET

Exhibit B (1 of 2)

Area of Potential Effect and Known Historic Resources

Dulles Corridor Rapid Transit Project



LEGEND

- Area of Potential Effect, Archaeology
- Area of Potential Effect, Architecture
- Historic Architectural Resources

DIAAH/DTR is the Dulles International Airport Access Highway/Dulles Toll Road

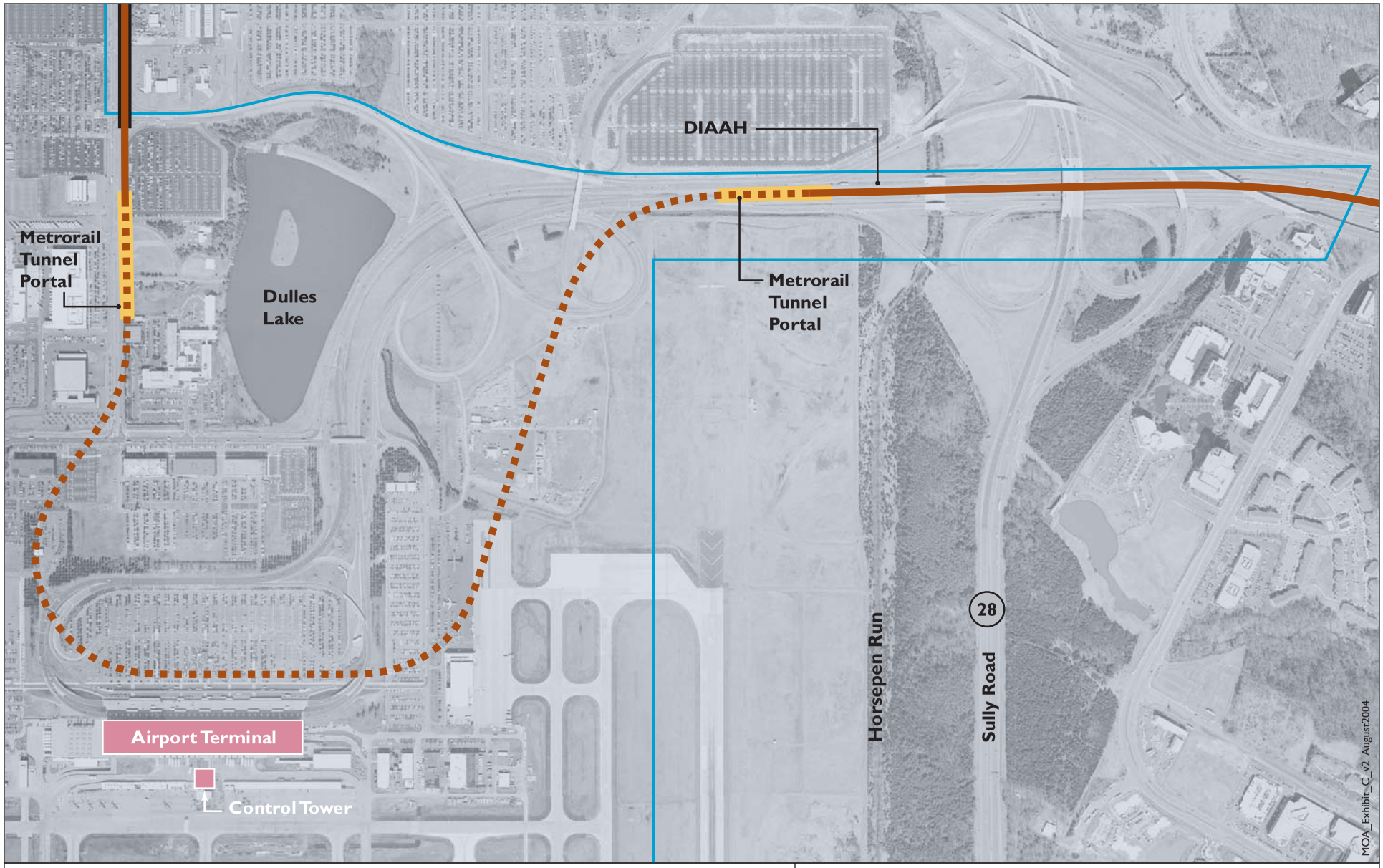
- Dulles Property Boundary
- Boundary of NRHP-Eligible Dulles Airport Historic District (2004)
- Proposed Metrorail Alignment
- County Boundary

0 3000 6000 FEET

Exhibit B (2 of 2)

Area of Potential Effect and Known Historic Resources

Dulles Corridor Rapid Transit Project



LEGEND

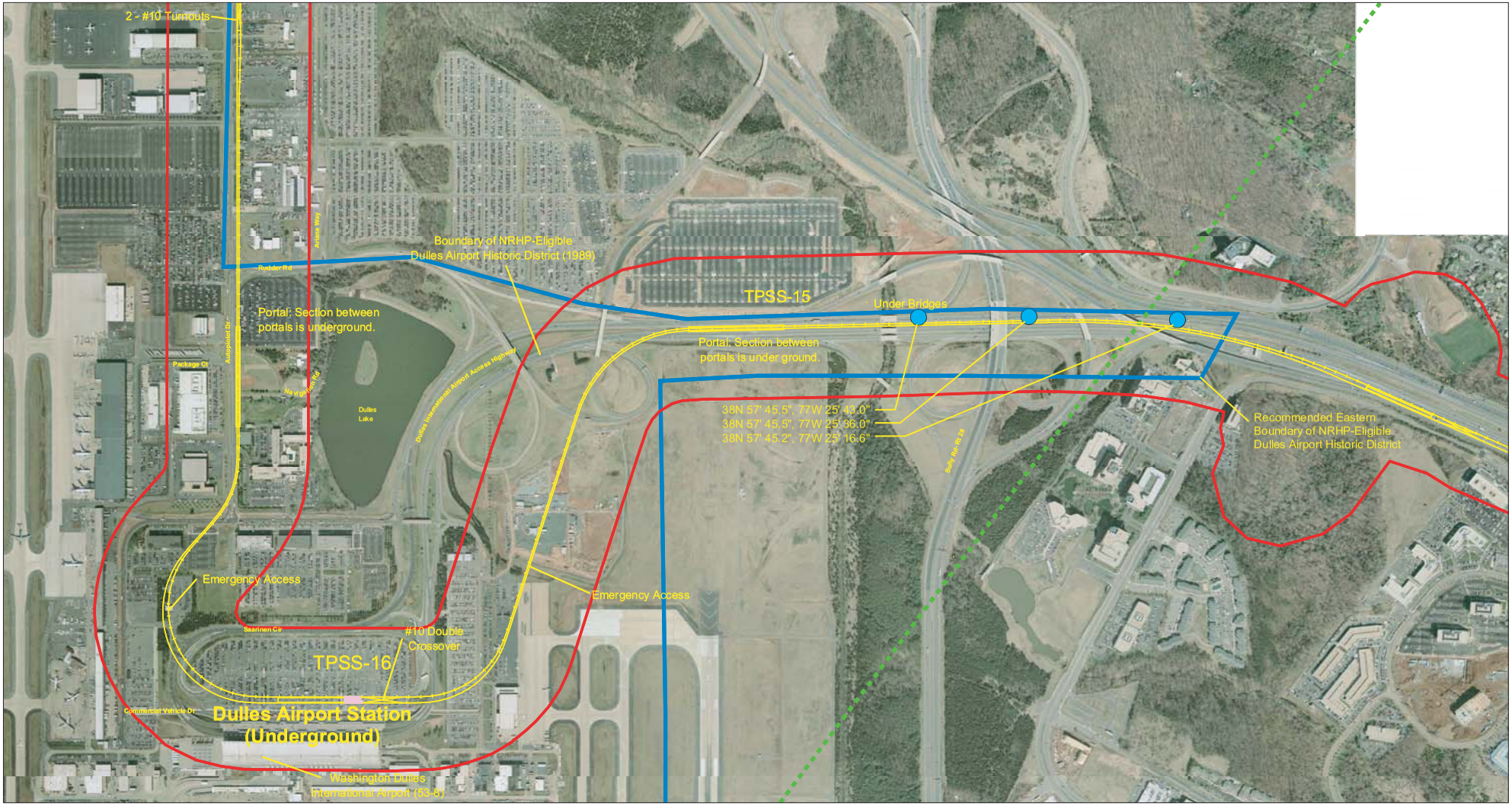
- Rail Alignment at Grade
- Metrorail Tunnel Portal
- Rail Alignment Underground
- Aerial
- Dulles Historic District

0 700 1400 FEET

Exhibit C

LPA Alignment within Dulles Airport Historic District

Dulles Corridor Rapid Transit Project



ALIGNMENT

- Stationing
- Alignment
- Station
- Station Facilities

- Traction Power Substations (TPSS-#) & Tie-Breakers (TB-#)
- Proposed Stormwater Facilities/Ponds
- County Boundary

- Peekaboo View
- Architectural Sites
- Area of Potential Effect
- Historic District

0 400 800 Feet

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Exhibit D

Recommended Eastern Boundary of the NRHP-Eligible Dulles Airport Historic District

Dulles Corridor Rapid Transit Project



Alignment
- Stationing
- Alignment
- Station
- Station Facilities

Limits of Disturbance
- Typical
- Cut & Cover
- Tunnel
- Contractor Work Area

- Substations (TP-#) & Tie Breakers (B-#)
- Proposed Stormwater Facilities/Ponds

Environmental Constraints
- Cultural (Historic) Sites
- Community Facilities
- Parklands
- Resource Protection Areas
- Wetland (Jurisdictional Determination in process by US COE)
- Wetland Delineated by MWAA
- Tributary Streams
- Major Streams
- FEMA 100-Year Floodplain

0 400 800 Feet

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Environmental Conditions (Sheet 1) Locally Preferred Alternative

Revision Date: 12-07-04

Dulles Corridor Rapid Transit Project



Alignment
- Stationing
- Alignment
- Station
- Station Facilities

Limits of Disturbance
- Typical
- Cut & Cover
- Tunnel
- Contractor Work Area

- Substations (TP-#) & Tie Breakers (B-#)
- Proposed Stormwater Facilities/Ponds

Environmental Constraints
- Cultural (Historic) Sites
- Community Facilities
- Parklands
- Resource Protection Areas

- Wetlands (Jurisdictional Determination in process by US COE)
- Wetlands Delineated by MWAA
- Tributary Streams
- Major Streams
- FEMA 100-Year Floodplain

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Environmental Conditions (Sheet 2) Locally Preferred Alternative

Revision Date: 12-07-04

Dulles Corridor Rapid Transit Project



Alignment
- Stationing
- Alignment
- Station
- Station Facilities

Limits of Disturbance
- Typical
- Cut & Cover
- Tunnel
- Contractor Work Area

Substations (TP-#) & Tie Breakers (B-#)

Proposed Stormwater Facilities/Ponds

Environmental Constraints
- Cultural (Historic) Sites
- Community Facilities
- Parklands
- Resource Protection Areas

Wetlands (Jurisdictional Determination in process by US COE)
Wetlands Delineated by MWAA
Tributary Streams
Major Streams
FEMA 100-Year Floodplain

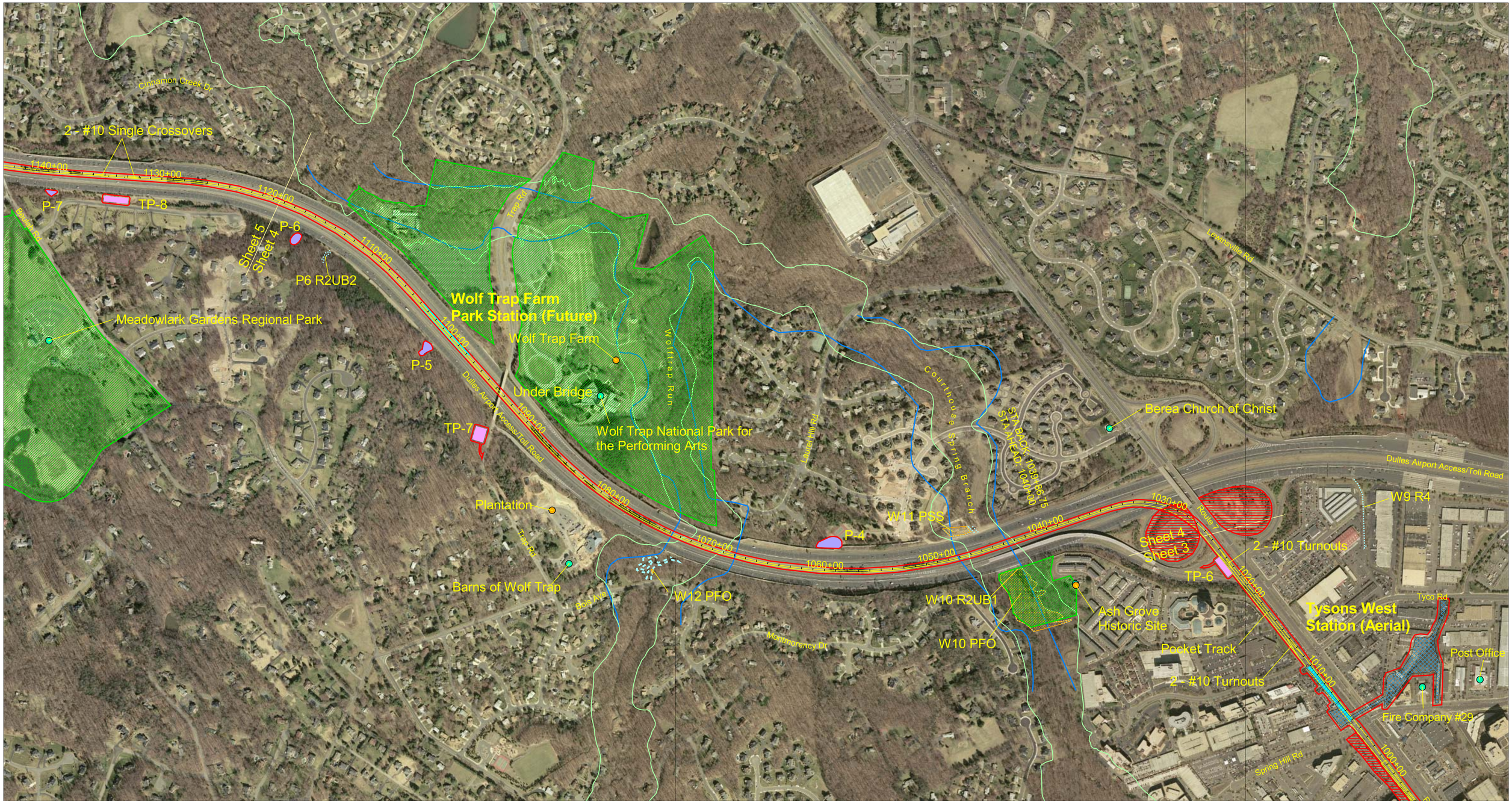
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Environmental Conditions (Sheet 3) Locally Preferred Alternative

Revision Date: 12-09-04

Dulles Corridor Rapid Transit Project



Alignment
- Stationing
- Alignment
- Station
- Station Facilities

Limits of Disturbance
- Typical
- Cut & Cover
- Tunnel
- Contractor Work Area

- Substations (TP-#) & Tie Breakers (B-#)
- Proposed Stormwater Facilities/Ponds

Environmental Constraints
- Cultural (Historic) Sites
- Community Facilities
- Parklands
- Resource Protection Areas

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- Major Streams
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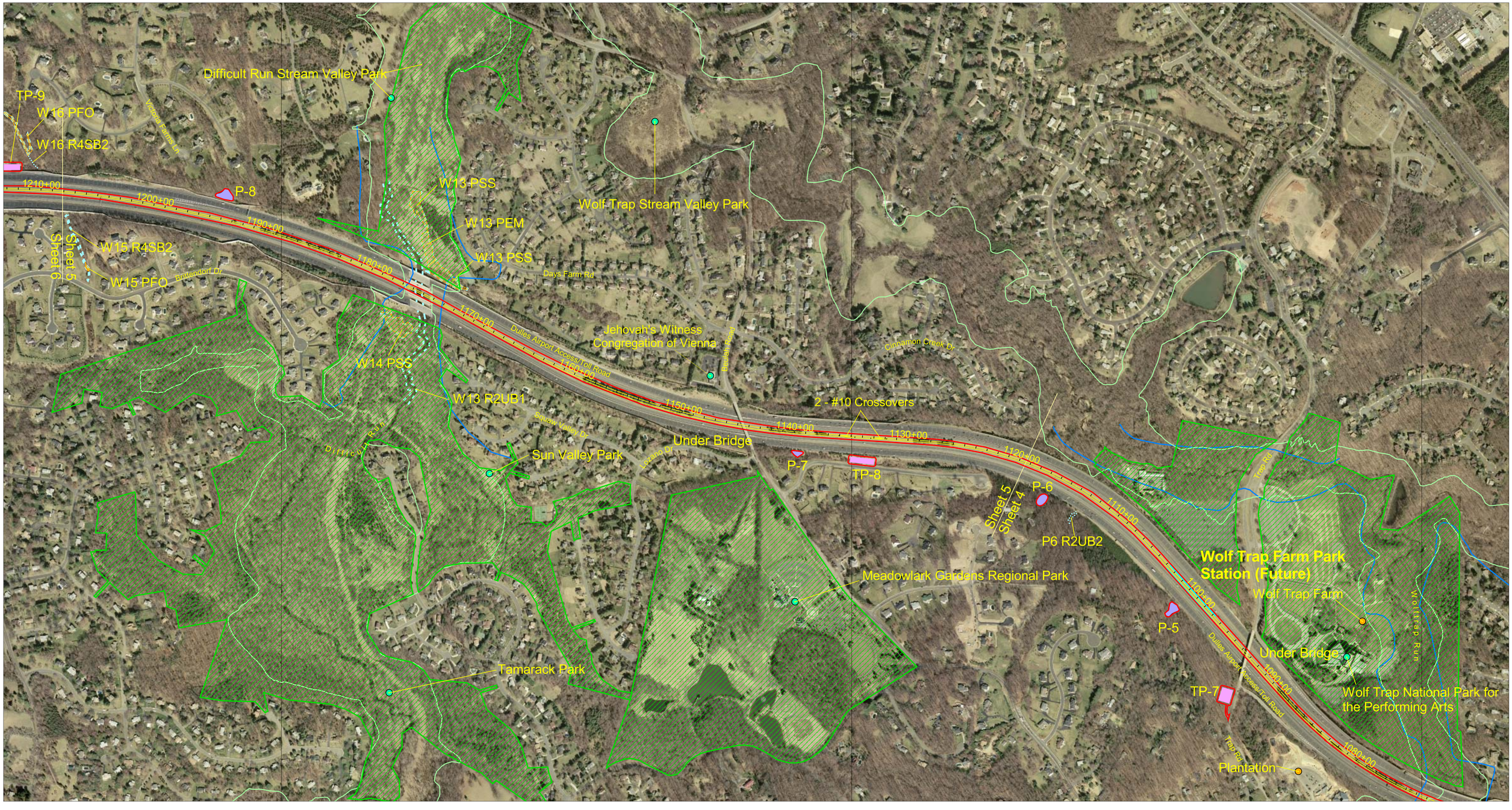
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Environmental Conditions (Sheet 4) Locally Preferred Alternative

Revision Date: 12-09-04

Dulles Corridor Rapid Transit Project



Alignment
- Stationing
- Alignment
- Station
- Station Facilities

Limits of Disturbance
- Typical
- Cut & Cover
- Tunnel
- Contractor Work Area

- Substations (TP-#) & Tie Breakers (B-#)
- Proposed Stormwater Facilities/Ponds

Environmental Constraints
- Cultural (Historic) Sites
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- Major Streams
- FEMA 100-Year Floodplain

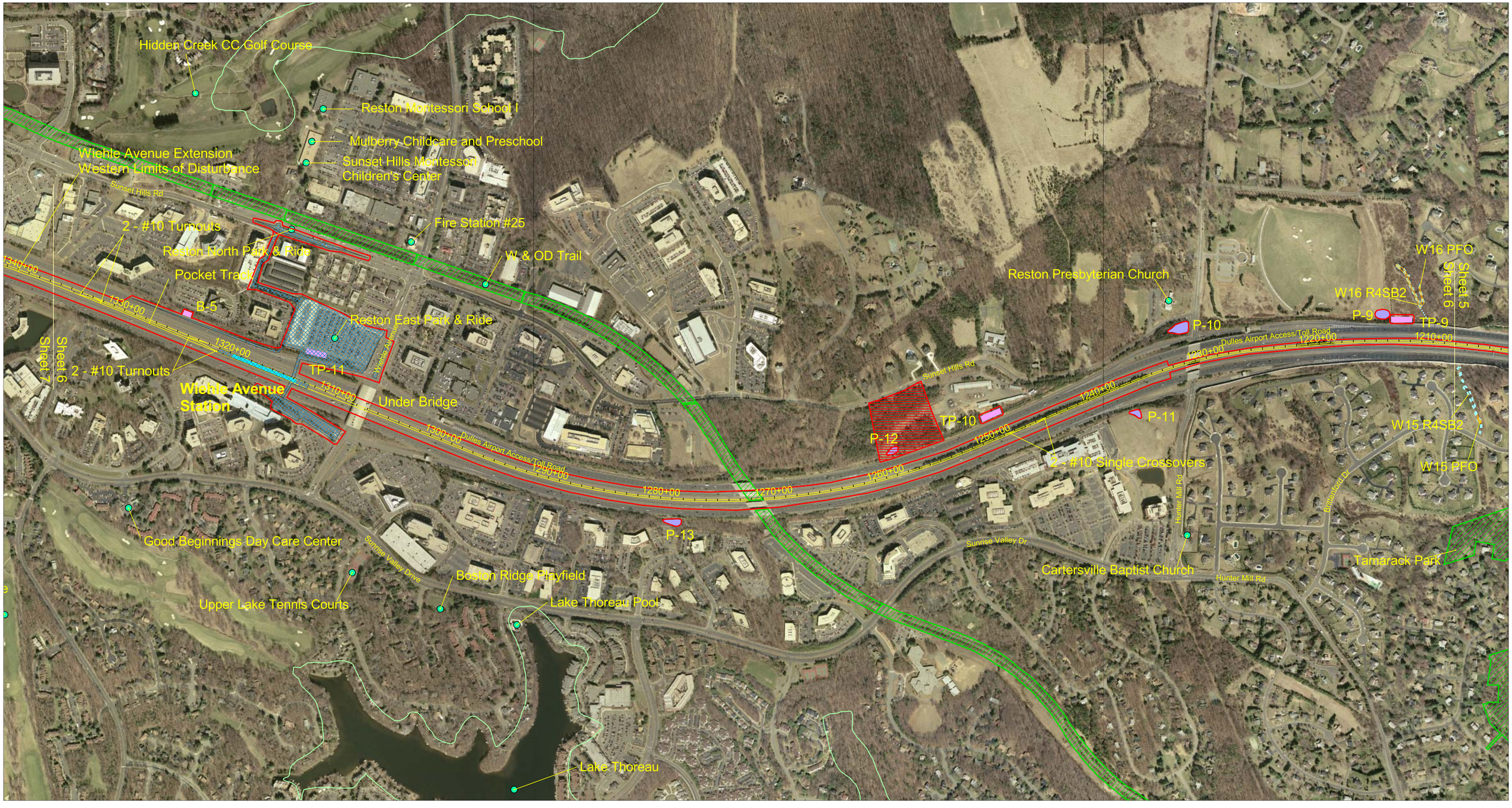
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Environmental Conditions (Sheet 5) Locally Preferred Alternative

Revision Date: 12-09-04

Dulles Corridor Rapid Transit Project



Alignment
- Stationing
- Alignment
- Station
- Station Facilities

Limits of Disturbance
- Typical
- Cut & Cover
- Tunnel
- Contractor Work Area

- Substations (TP-#) & Tie Breakers (B-#)
- Proposed Stormwater Facilities/Ponds

Environmental Constraints
- Cultural (Historic) Sites
- Community Facilities
- Parklands
- Resource Protection Areas

- Wetlands (Jurisdictional Determination in process by US COE)
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- Major Streams
- FEMA 100-Year Floodplain

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Environmental Conditions (Sheet 6) Locally Preferred Alternative

Revision Date: 12-08-04

Dulles Corridor Rapid Transit Project



Alignment
- Stationing
- Alignment
- Station
- Station Facilities

Limits of Disturbance
- Typical
- Cut & Cover
- Tunnel
- Contractor Work Area

- Substations (TP-#) & Tie Breakers (B-#)
- Proposed Stormwater Facilities/Ponds

Environmental Constraints
- Cultural (Historic) Sites
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- Major Streams
- FEMA 100-Year Floodplain

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Environmental Conditions (Sheet 7) Locally Preferred Alternative

Revision Date: 12-09-04

Dulles Corridor Rapid Transit Project



Alignment
- Stationing
- Alignment
- Station
- Station Facilities

Limits of Disturbance
- Typical
- Cut & Cover
- Tunnel
- Contractor Work Area

- Substations (TP-#) & Tie Breakers (B-#)
- Proposed Stormwater Facilities/Ponds

Environmental Constraints
- Cultural (Historic) Sites
- Community Facilities
- Parklands
- Resource Protection Areas

- Wetlands (Jurisdictional Determination in process by US COE)
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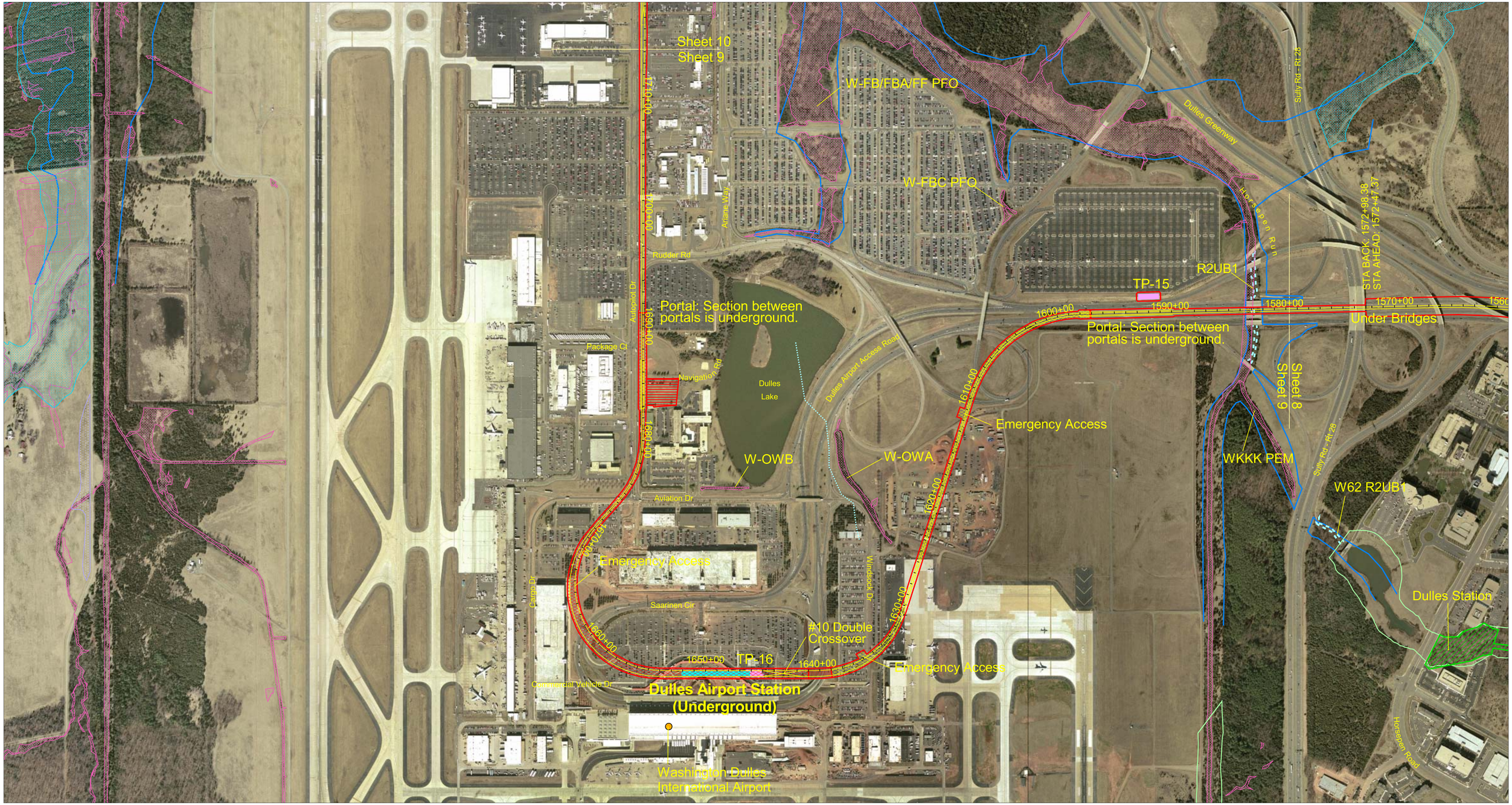
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Environmental Conditions (Sheet 8) Locally Preferred Alternative

Revision Date: 12-09-04

Dulles Corridor Rapid Transit Project



Alignment
- Stationing
- Alignment
- Station
- Station Facilities

Limits of Disturbance
- Typical
- Cut & Cover
- Tunnel
- Contractor Work Area

- Substations (TP-#) & Tie Breakers (B-#)
- Proposed Stormwater Facilities/Ponds

Environmental Constraints
- Cultural (Historic) Sites
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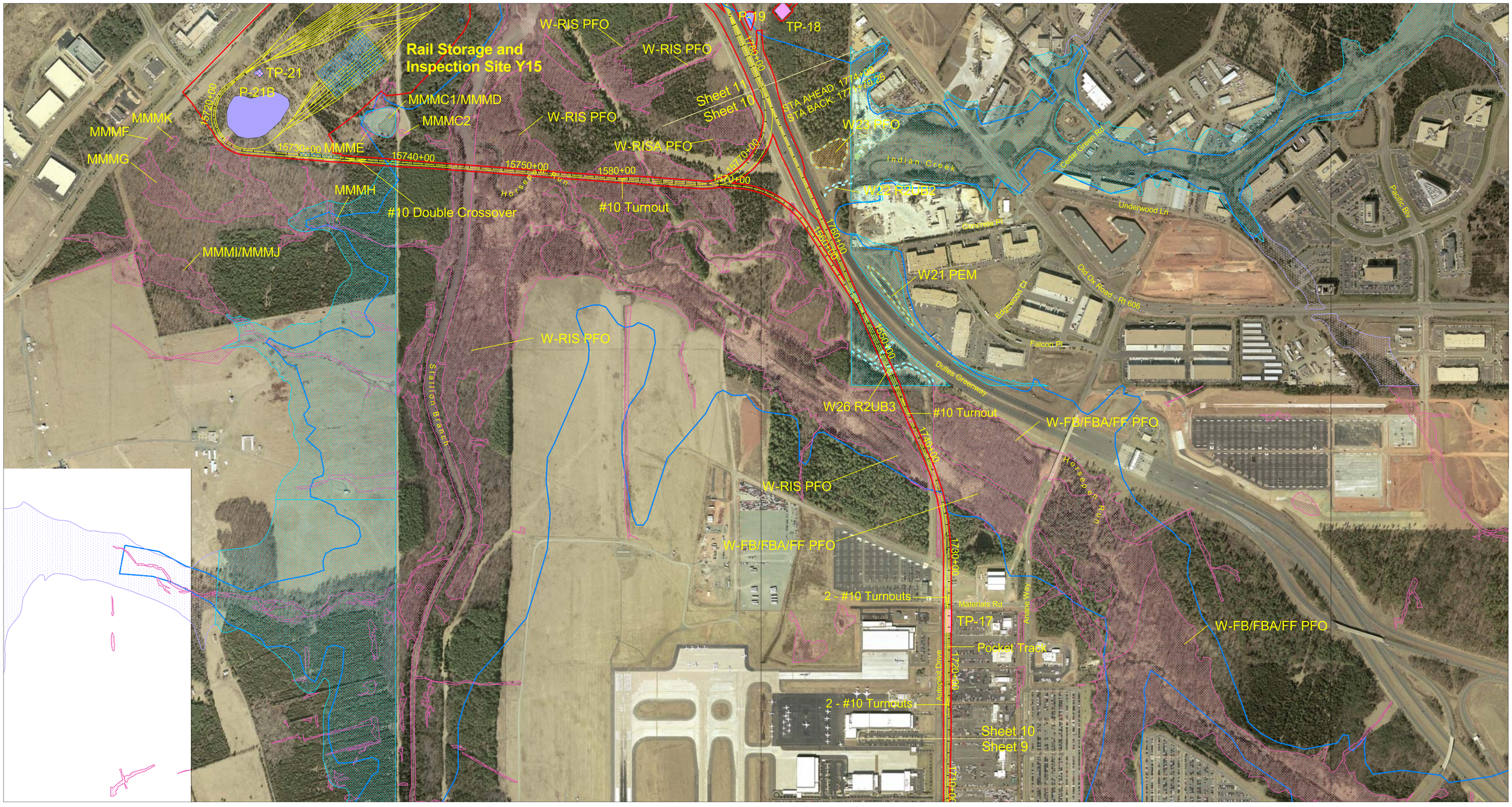
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Environmental Conditions (Sheet 9) Locally Preferred Alternative

Revision Date: 12-08-04

Dulles Corridor Rapid Transit Project



Alignment
- Stationing
- Alignment
- Station
- Station Facilities

Limits of Disturbance
- Typical
- Cut & Cover
- Tunnel
- Contractor Work Area

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- Major Streams
- FEMA 100-Year Floodplain

0 400 800 Feet

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Environmental Conditions (Sheet 10) Locally Preferred Alternative

Revision Date: 12-08-04

Dulles Corridor Rapid Transit Project

Environmental Conditions (Sheet 11) Locally Preferred Alternative

Revision Date: 12-08-04

Dulles Corridor Rapid Transit Project

Sheet 12
Sheet 11
Sheet 11
Sheet 10

Y1 R2UB1/2
Y1 R2UB1/2
Y1 PFO
Y1 PEM
Y2 PFO
Y2 PEM
Y3 PSS
Y3 R2UB2
W25 R2UB2
W25
W25 R4SB2
W24 PEM
W-RIS PFO
W-RIS PFO
W-RIS PFO
W-RIS PFO
W-RISA PFO
W23 PFO
W23 PEMB

P-23
P-22
P-21
P-20
P-19
P-21B
TP-19
TP-21
TP-18

Under Bridge
Under Bridge
Cockerille House
Route 606 Station
Horsepen Lake
Rail Storage and Inspection Site Y15
#10 Double Crossover
#10 Turnout
2 - #10 Single Crossovers

MMMA
MMMB
MMMC1/MMMD
MMMC2
MMME
MMMF
MMMG
MMMH
MMMK

Loudoun County Parkway
Broad Run
Bleade Run
Horsepen Run
Dulles Greenway
Old Ox Road - Rt 606
Randolph Dr
Moran Rd
Moran Rd
Indian Creek
Cedar Creek Road

1860+00
1870+00
1860+00
1850+00
1840+00
1820+00
1810+00
1800+00
1790+00
1790+00
1780+00
1770+00
1580+00
15720+00
15730+00
15740+00
15750+00

STA AHEAD: 1774+00.25
STA BACK: 1774+00.25

Alignment
- Stationing
- Alignment
- Station
- Station Facilities

Limits of Disturbance
- Typical
- Cut & Cover
- Tunnel
- Contractor Work Area

- Substations (TP-#) & Tie Breakers (B-#)
- Proposed Stormwater Facilities/Ponds

Environmental Constraints
- Cultural (Historic) Sites
- Community Facilities
- Parklands
- Resource Protection Areas

- Wetlands (Jurisdictional Determination in process by US COE)
- Wetlands Delineated by MWAA
- Tributary Streams
- Major Streams
- FEMA 100-Year Floodplain

0 400 800 Feet

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Alignment
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0 400 800 Feet

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Environmental Conditions (Sheet 12) Locally Preferred Alternative

Revision Date: 12-08-04

Dulles Corridor Rapid Transit Project

APPENDIX H- ALTERNATIVES PREVIOUSLY CONSIDERED

APPENDIX H: ALTERNATIVES PREVIOUSLY CONSIDERED

This appendix provides an overview of the process that led to the selection of the Locally Preferred Alternative (LPA) for the Dulles Corridor Rapid Transit Project, and includes a summary of the reasons why particular alternatives were eliminated from further consideration. This provides a record that all reasonable alternatives for the project were examined and presented to the public during the preliminary engineering and environmental review process.

Section H.1 outlines the process used to identify and evaluate the initial list of alternatives for the Dulles Corridor Rapid Transit Project. A more comprehensive description of the evaluation methodology and the screening evaluation conducted in the early stages of the Draft Environmental Impact Statement (EIS) process can be found in the *Evaluation Methodology Report* (November 2000) and the *Final Alternatives Analysis Report* (May 2001).

Section H.2 addresses alternatives considered during the development of the Draft EIS. Detailed information on the continued evolution and evaluation of alternatives prior to publication of the Draft EIS can be found in the *Addendum to the Final Alternatives Analysis Report* (August 2003).

Section H.3 focuses on the evaluation of alternatives considered as a result of public comment on the Draft EIS following its publication. Additional detail is included in the *Addendum to the Final Alternatives Analysis Report*.

Section H.4 includes a summary of the reasons particular alternatives considered in the Draft EIS were not recommended as the LPA. The Project Team recommendations for the LPA are included as Attachment A to the *Public Hearings Report Supplement* (November 2002).

H.1 ALTERNATIVES CONSIDERED DURING INITIAL ALTERNATIVES ANALYSIS PROCESS BUT NOT CARRIED FORWARD

Numerous alternatives were evaluated during the early stages of the Dulles Corridor Rapid Transit Project. These alternatives were subjected to a two-phase screening process that applied increasingly detailed and comprehensive measures of effectiveness to a decreasing number of alternatives. This process allowed decision makers to identify similarities, differences, and trade-offs between each alternative, and carry forward those alternatives that performed better in meeting the transportation needs of the corridor for further evaluation in the Draft EIS. This screening process is described in more detail in the following sections, and the reasons for eliminating specific alternatives are presented.

H.1.1 INITIAL NEPA ALTERNATIVES

As shown in Table H-1.1 and in Figures H.1-1, H.1-2, H.1-3, H.1-4, the initial set of alternatives included various rapid transit modes, alignments, station locations, and ancillary facilities. These alternatives were developed based on recommendations from the MIS and MIS Supplement (see Section 2.1 of the Final EIS) and the scoping process for the Draft EIS.

Table H-1.1: Initial NEPA Alternatives

Modes	BRT Metrorail * Light rail transit (LRT) * Personal rapid transit * Monorail * Feeder system to Metrorail stations in Tysons Corner (LRT, people mover) BRT or express buses in a dedicated lane on the DIAAH
Alignments	BRT Alignment. Alignment recommended in MIS Supplement. Serves Tysons Corner via DIAAH with station at Spring Hill Road. Line O1. Orange Line through Tysons Corner via Dulles Connector Road. Line O2. MIS Alignment with western leg that provides service to West Falls Church Station. Line T1. Tysons Corner via Route 123 and Route 7. Line T2. Tysons Corner aerial loop via Route 123, Route 7, and Westpark Drive. Line T3. Alignment that connects the Dulles Corridor Rapid Transit Project to a possible rail line in the Capital Beltway Corridor. Line T4. Alignment T2 with pocket tracks instead of loop connectors. Line T5. Underground loop alignment. Line T6. Alignment T1 with an additional station. Line T7. Alignment from the Orange Line through Tysons Corner via Route 7. * Line T8. Station in DIAAH near Spring Hill Road that connects to a feeder system to serve Tysons Corner. Line T9. Alignment T1 with a completely aerial structure. Line T10. Alignment T2 with an additional track on the southern leg of the loop. Line T11. Large aerial loop that would include a station adjacent to the Capital Beltway. This alignment could connect to Alignment B1 as well as a possible future transit line in the Beltway Corridor. (This alignment was developed by WMATA subsequent to the scoping process.) Line B1. Orange Line connection via the Capital Beltway. Line D1. Tysons Corner to Washington Dulles International Airport via DIAAH or DIAAH median. * Line D2. Direct service to Reston Town Center via the Washington & Old Dominion Railroad Regional Park. Line A1. Dulles Airport via service roads for BRT and underground alignment for Metrorail. Line L1. Dulles Airport to Route 772 in Loudoun County via Dulles Greenway. Line S1. Combined rail alignments in Dulles, I-66, Route 50, and Route 28 corridors.
Stations	Spring Hill Road (BRT) Tysons East (Metrorail) Tysons Central (Metrorail, T1) Tysons Central Alternative. Shift of Tysons Central Station for T1 to the east. (Metrorail) Tysons Central A, B, C, and D (Metrorail, T2) Tysons West (Metrorail) Tysons East and West with third tracks and second platform (comparable to configuration at National Airport). (Metrorail) BRT/Metrorail Transfer Station (location to be determined) * Wolf Trap Farm Park. Determine whether station is viable. (Metrorail) Addition of Hunter Mill Road Station (Metrorail) Wiehle Avenue (BRT to Metrorail) * Removal of Wiehle Avenue Station (BRT to Metrorail) Reston Parkway (BRT to Metrorail) Relocate Wiehle Avenue and Reston Parkway stations near or under the highway overpasses (BRT to Metrorail) Herndon-Monroe (BRT to Metrorail) Route 28 BRT Station. Addition of a BRT station in DIAAH median (BRT to Metrorail) Route 28 (Metrorail) Accommodate a future LRT station at Route 28 (Metrorail) Dulles Airport (BRT, Metrorail) Route 606 (BRT, Metrorail) Route 772 (BRT, Metrorail)

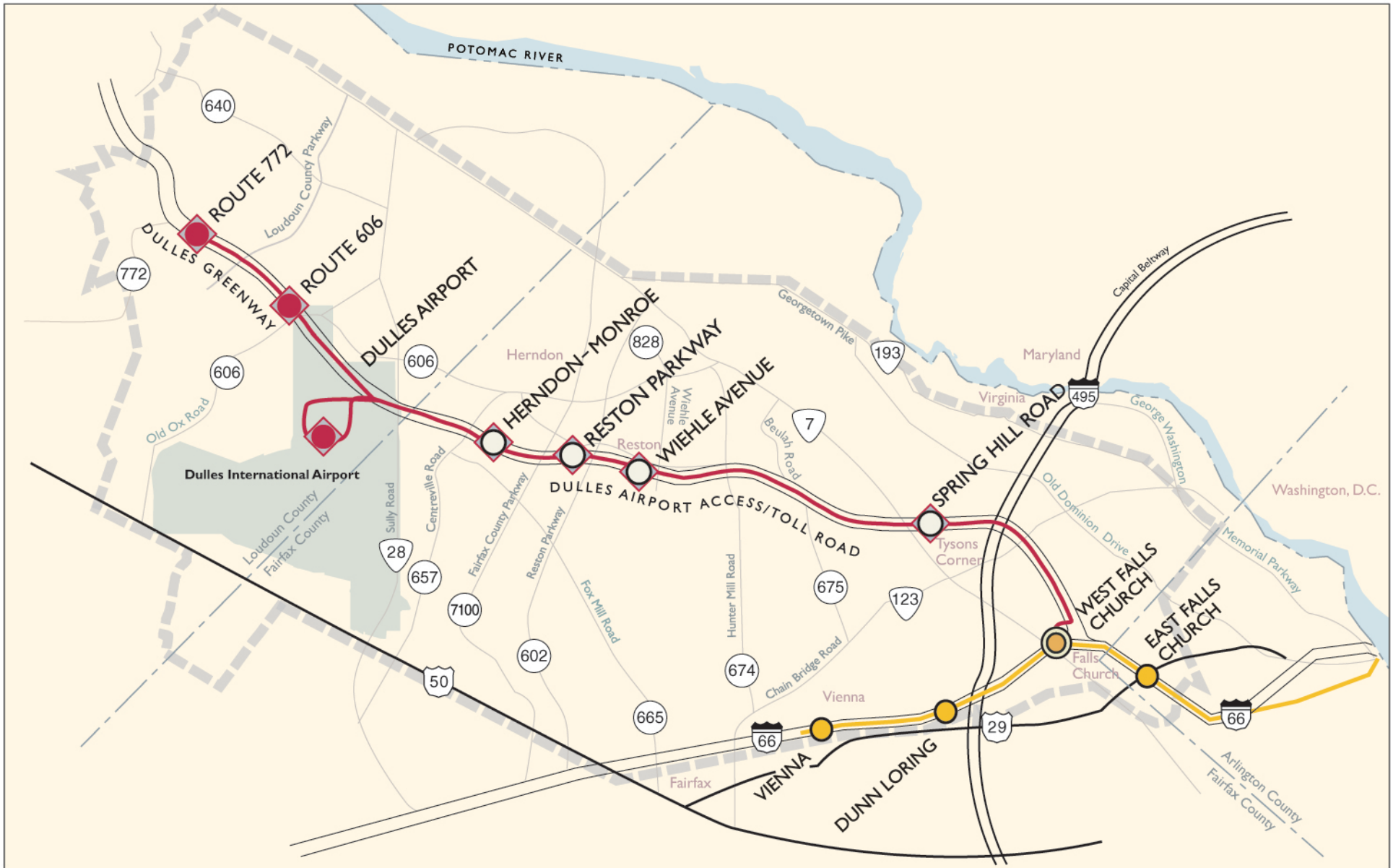
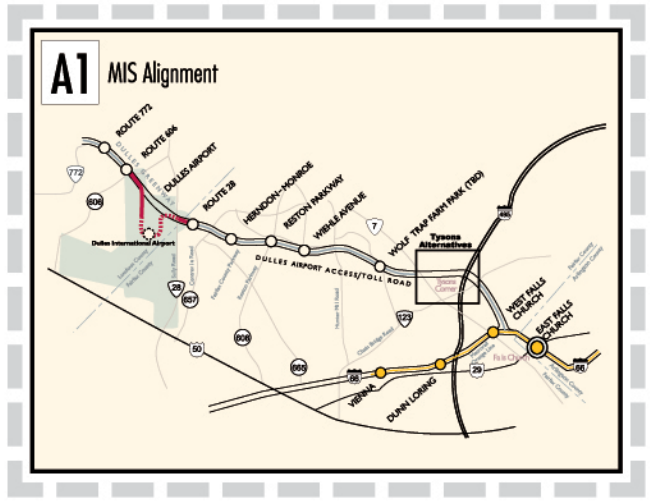
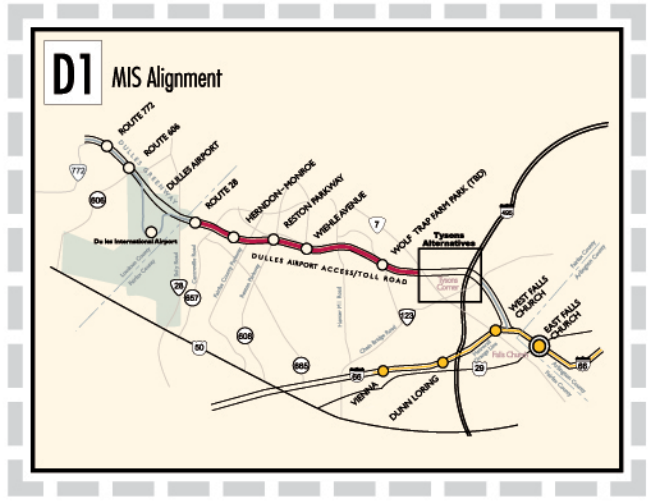


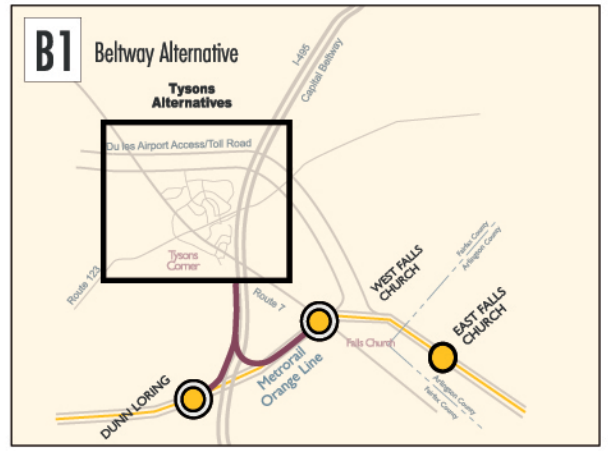
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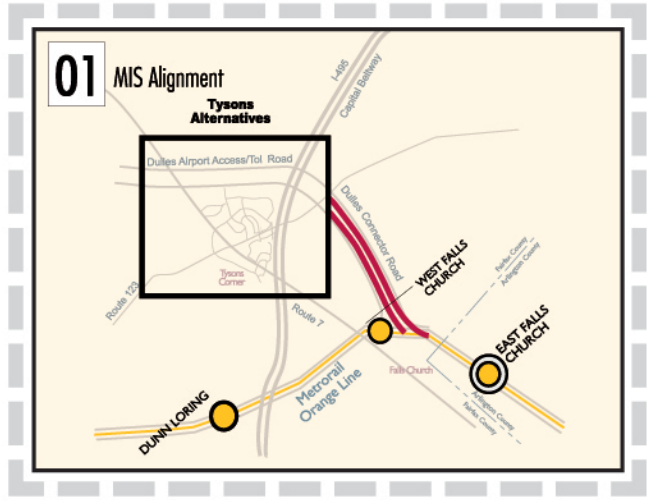
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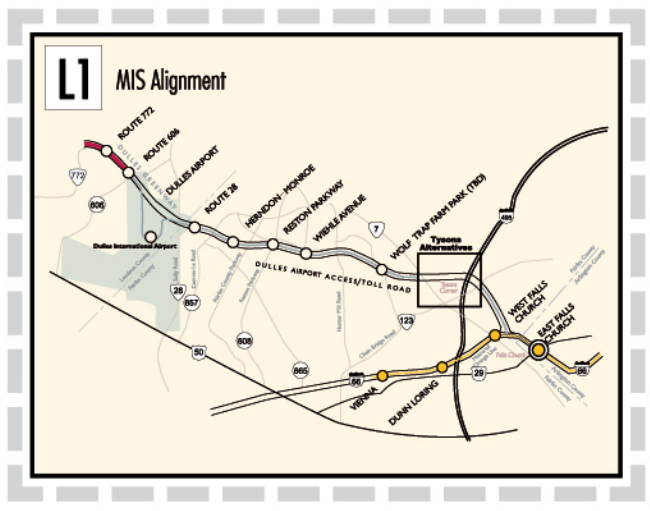
Dulles Corridor Rapid Transit Project

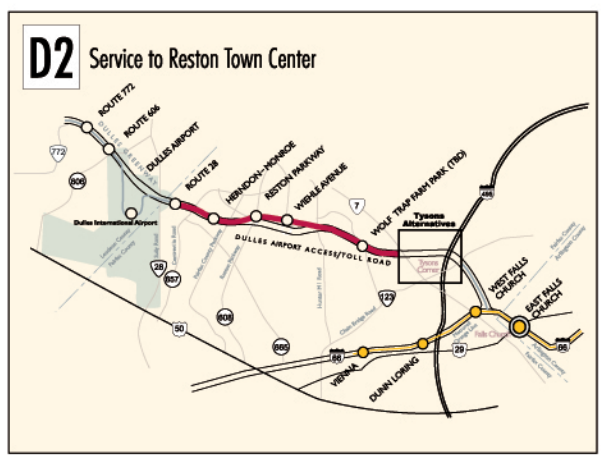


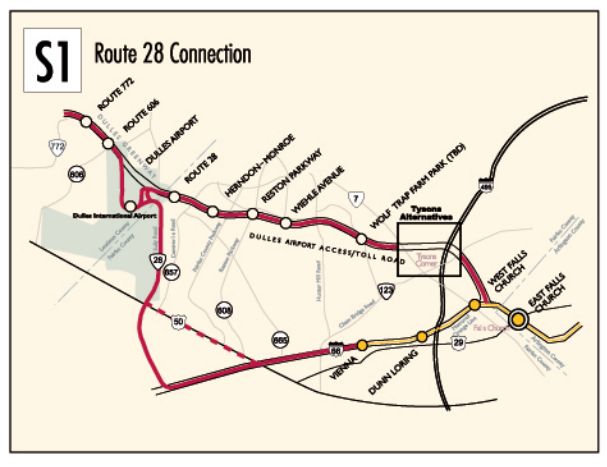


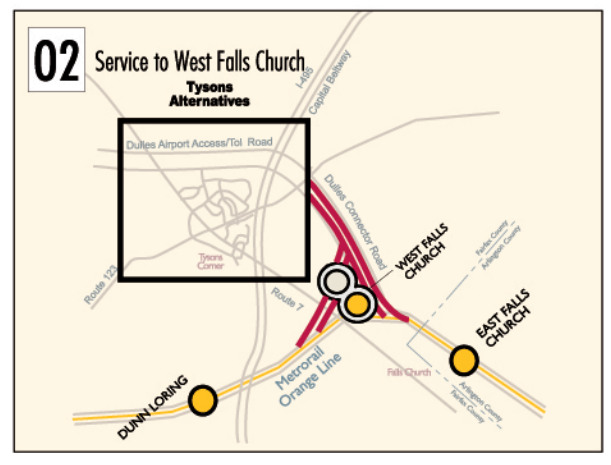












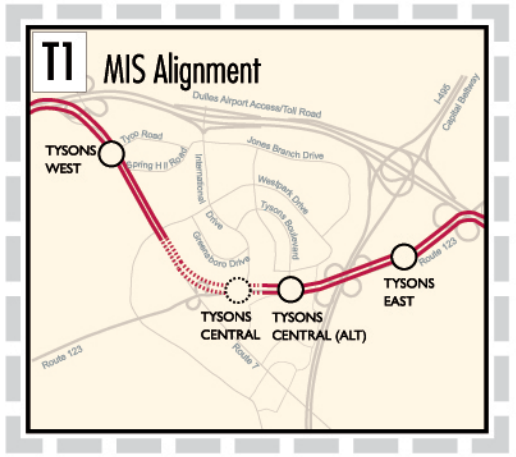
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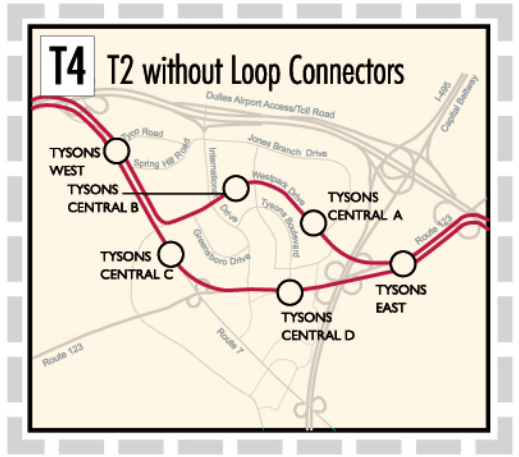
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- Proposed Transfer Station
- Proposed Rapid Transit
- Metrorail Alternative
- Limited Access Highway
- U.S. Highways
- Major Arterials
- Alignments Carried Forward

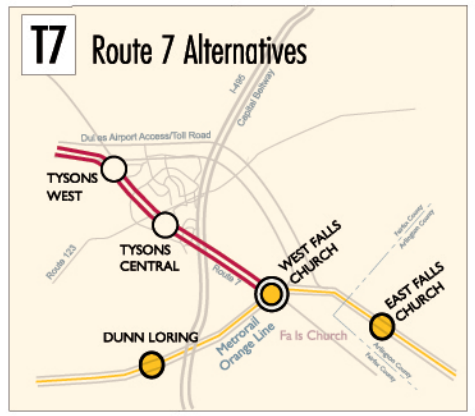
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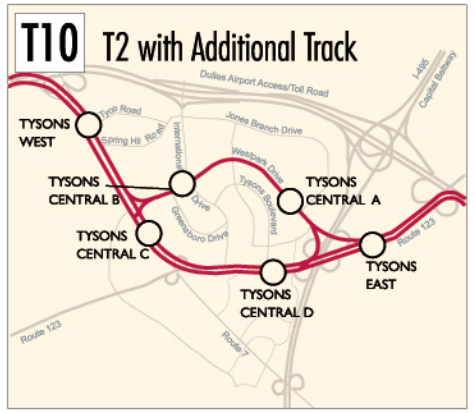
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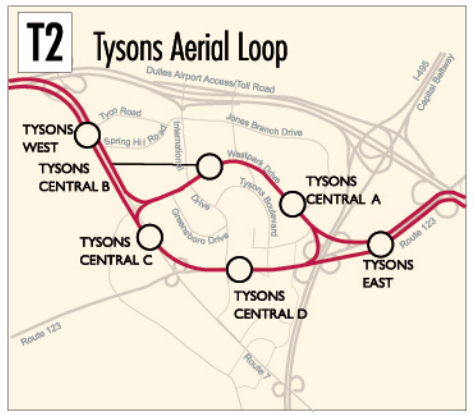
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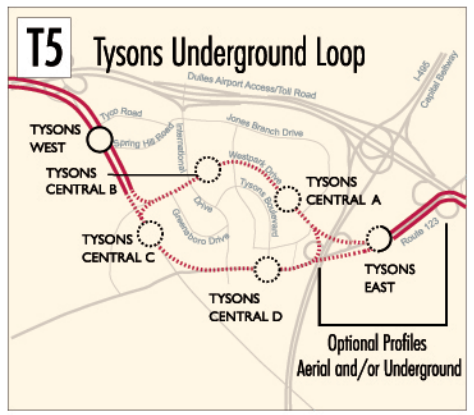


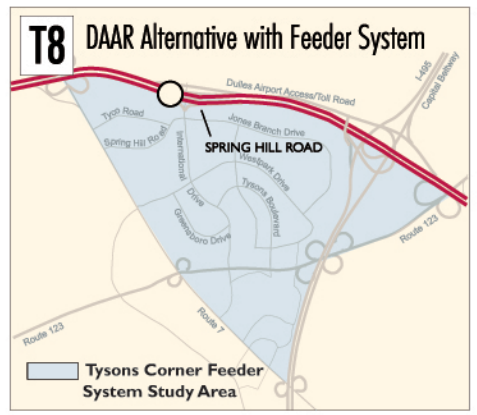


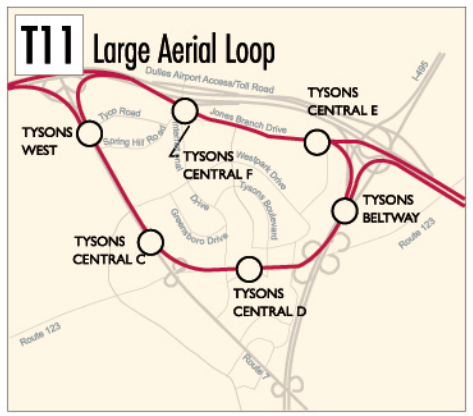


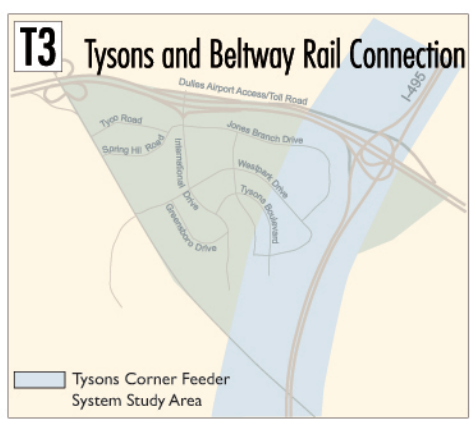


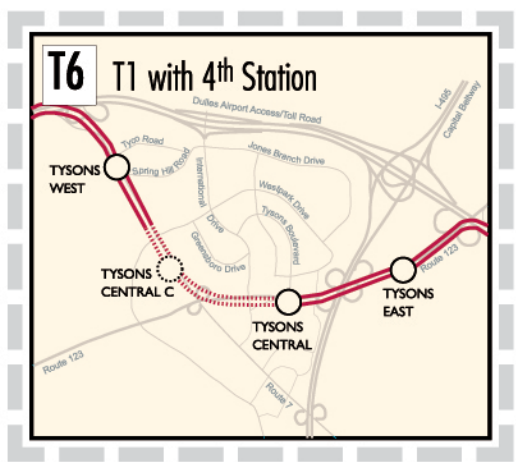


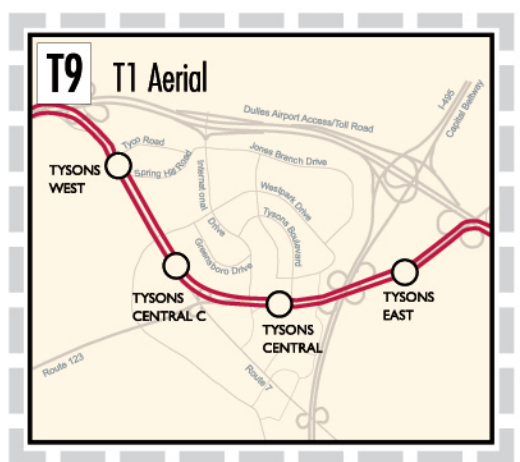












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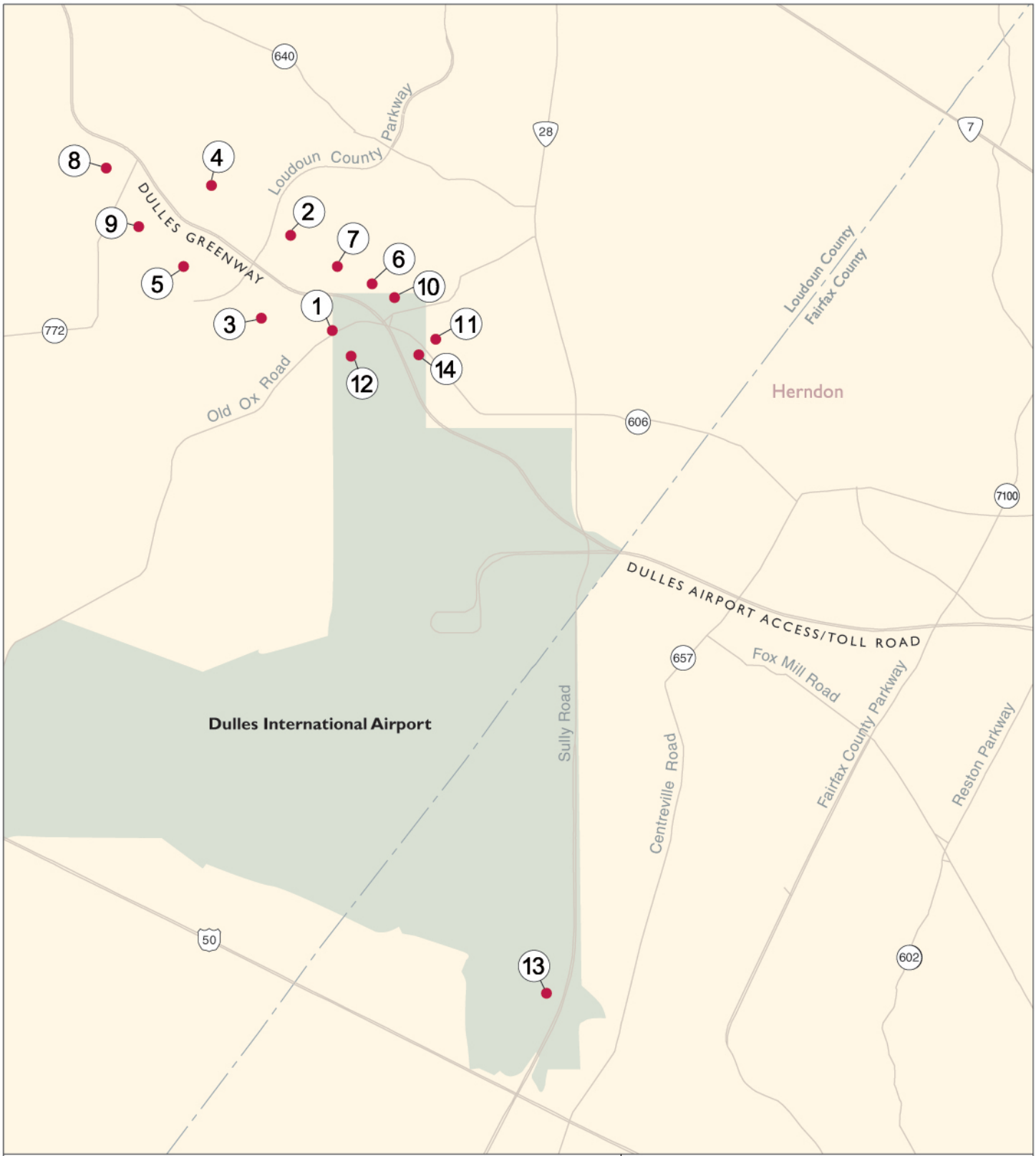
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- Proposed Transfer Station
- Proposed Underground Station
- Metrorail Alternative
- Limited Access Highway
- U.S. Highways
- Major Arterials
- Alignments Carried Forward

0 1 2 3 MILES

Figure H.1-3

Tysons Corner Alignments Considered during Alternatives Screening

Dulles Corridor Rapid Transit Project



LEGEND

- Approximate location of Potential Yard Sites Considered During Screening
- County Boundary
- Major Arterials

0 3000 6000 FEET

Figure H.1-4

Potential Yard Sites Considered during Alternatives Screening

Dulles Corridor Rapid Transit Project

Ancillary Facilities	Three yard sites along Dulles Greenway north of Dulles Airport One yard site south of the airport, adjacent to Route 28 and south of the Dulles Toll Road (DTR) Additional yard sites identified during agency coordination West Falls Church Yard Complex Traction power substations Tie-breaker stations

* Indicates alternatives that were examined during the MIS process, but were eliminated from further evaluation.

For the stations, "BRT to Metrorail" indicates BRT stations that would be convertible to Metrorail, and "BRT, Metrorail" indicates locations that would have BRT stops or Metrorail stations.

During the alternatives analysis process, it was assumed that the BRT Maintenance and Storage Facility and the Metrorail S&I Yard would be collocated on a single site.

Because of the large number of rail alignment alternatives, the corridor was divided into geographic sections to facilitate presentation and discussion. The labels of the alignments conform to the sections of the corridor below, and are presented in general east-to-west order:

- O is for the section of line connecting to the existing Metrorail Orange Line.
- B is for a transit line under study in the Beltway Corridor.
- T is for the section of line in Tysons Corner.
- D is for the section of line in the Dulles Airport Access Road.
- A is for the section of line at Dulles Airport.
- L is for the section of line in Loudoun County.
- S is for a rail line in the Sully Road (Route 28) corridor.

The development of the initial National Environmental Policy Act of 1969 (NEPA) alternatives is described in more detail in the *Scoping Process Report* (September 2000). Some alternatives were added following publication of the *Scoping Process Report*, in response to either ongoing engineering studies or additional public comment.

H.1.2 EVALUATION PROCESS

To determine which alternatives would move forward for detailed evaluation in this Draft EIS, the initial NEPA alternatives were evaluated and screened in a two-phase process: initial screening and intermediate screening. As outlined in the *Evaluation Methodology Report*, the process applied increasingly detailed and comprehensive measures of effectiveness to a decreasing number of alternatives. The alternatives advanced or carried forward for further evaluation at the end of each phase were the ones that were determined to best achieve the following:

- Improved transportation service;
- Increased transit ridership;
- Supported future development;
- Supported environmental quality;
- Provided cost-effective, achievable transportation choices; and
- Served diverse populations.

These project goals are based on those originally developed during the 1997 MIS.

The intent of the initial and intermediate screening evaluations was to compare the relative performance of a large number of alternatives using a small number of criteria. The four basic categories of evaluation criteria identified in the *Evaluation Methodology Report* are social, environmental, economic, and transportation. Analysis of performance relative to these criteria enabled the project team to distinguish between those alternatives that were likely to be most effective in meeting the project's goals and those that were not.

The results of the alternatives screening process are presented in Table H.1-2. Each of the alternatives eliminated from further consideration is discussed in more detail in the following sections.

H.1.3 INITIAL SCREENING

The initial screening criteria, as defined in the *Evaluation Methodology Report,* included consistency with land use plans, order of magnitude capital costs, service to activity centers within the Dulles Corridor and the region, and compatibility with existing infrastructure, among others. At this level of analysis, most measures were qualitative. Because not all of these criteria are sensitive to differences between modes, the initial screening was conducted as a two-part process. First, the modes (i.e., Metrorail, BRT, light rail, personal rapid transit, and monorail) were reviewed using appropriate measures of effectiveness. Then, the alternative alignments, stations, and ancillary facilities were evaluated. The following sections identify the alternatives that were eliminated from further study during initial screening and summarize why these alternatives were not carried forward for additional analysis.

H.1.3.1 Modes

Several modes added to the list of alternatives during the scoping process were previously examined and eliminated from further study during the 1997 MIS. The project team reviewed the reasons for the decisions to eliminate these modes and reaffirmed the validity of these decisions based on current data.

Light Rail Transit

Light rail transit was suggested in lieu of Metrorail because it is a rail technology that can operate on alignments that are not grade-separated. Typically, light rail is a mode that consists of passenger rail cars operating in short trains. The cars are usually powered electrically by overhead catenary lines, although diesel-powered systems do exist. This mode was eliminated during the 1997 MIS.

It was determined that light rail would not be as cost-effective as Metrorail because it would require a transfer at the Metrorail Orange Line, which would reduce ridership in the Dulles Corridor. Also, the capital costs for light rail would be similar to those for Metrorail because it would have to follow the same grade-separated alignment as a Metrorail alternative through Tysons Corner and at Dulles Airport, reducing any potential cost-savings benefits. For these reasons, light rail transit was eliminated from further consideration.

Personal Rapid Transit

Personal rapid transit is a technology typically envisioned to function like an automobile in an urban setting. The technology uses small, low-capacity vehicles (one to four persons) and, ideally, would have numerous closely spaced stations in a dense guideway network.

This mode, eliminated during the 1997 MIS, was also suggested in lieu of Metrorail, but was eliminated from further consideration because it is not a technology intended to provide the long-distance, high-speed service required in the Dulles Corridor.

Table H.1-2: Alternatives Considered During the Screening Process

	Alternatives Eliminated in Initial Screening	Alternatives Eliminated in Intermediate Screening	Alternatives Evaluated in Draft EIS
MODES	Personal Rapid Transit Light Rail Transit (LRT) Monorail Feeder System to Metrorail stations in Tysons Corner BRT or Express Buses in a Dedicated Lane on the DIAAH	None	BRT Metrorail
ALIGNMENTS	Route 7 (T7) Tysons DIAAH Station with Feeder System (T8) Partial Double-Track Loop (T10) Large Aerial Loop (T11) Beltway Access thru Tysons (B1) Direct Service to Reston Town Center (D2) Dulles, I-66, Route 50, and Route 28 Connection (S1)	Service to West Falls Church (O2) Tysons Loops (T2, T5) Interface with Beltway Rail Line (T3)[a]	MIS Supplement BRT Alignment[b] MIS Rail Alignment (O1, T1, D1, A1, L1) Tysons MIS Alignment Variations (T6, T9)[d] Tysons Loop (T4)
STATIONS	Stations that were only associated with Alignments T7, T8, T11, and D2 Addition of Hunter Mill Road Station Removal of Wiehle Avenue Station	Platform connection to West Falls Church for O2 The MIS Tysons Central Station for T1 Wolf Trap Farm Park Station as a special use station[c] Relocation of the Wiehle Avenue and Reston Parkway stations under or near the highway overpasses Accommodation for Route 28 LRT[a]	Stations and stops associated with the MIS Supplement BRT Alignment Stations associated with the MIS Metrorail Alignment and its variations (O1, T1, D1, A1, L1 and T6, T9) [d] Stations associated with the Tysons loop alignment (T4) Route 28 BRT Station Tysons Central Alternative Station Tysons East and West stations with third track
ANCILLARY FACILITIES	Nine potential yard sites in Loudoun County	Two sites for BRT maintenance facility and rail yard near Route 606 interchange (Y6, Y10) Rail yard site at south end of Dulles Airport property (Y13) Two potential yard sites in Loudoun County and three sites on Dulles Airport as part of a supplemental study.	One rail yard site near Route 606 interchange (Y7)[e] One BRT maintenance facility site at north end of Dulles Airport property (Y14)[e] Two additional sites south of the Dulles Greenway along Route 606 (Y15, Y20)[f] West Falls Church Yard Complex

a In the future, the project team will cooperate with the groups implementing these projects and coordinate design with them to the extent feasible.

b The BRT alignment was refined after Intermediate Screening. Two options were added with varying station and stop locations.

c Only provisions to accommodate a future station at Wolf Trap Farm Park were evaluated in the Draft EIS.

d Alignment T9 was refined after Intermediate Screening. It remained a largely aerial alignment, with a short underground section. A technical memorandum was prepared discussing the rationale for revising Alignment T9.

e Site 14 was introduced after Intermediate Screening. It was carried forward in lieu of Site 7 for the BRT maintenance facility.

f Sites 15 and 20 were introduced after Intermediate Screening as part of the Supplemental Rail Yard Study (described in more detail in Section 2.6.5). Site 15 would include a rail yard only. Site 20 could support both a BRT maintenance facility and a rail yard.

Monorail

Monorail consists of automated transit vehicles operating on or suspended from a single rail, beam, or tube. Even though it was eliminated during the 1997 MIS, monorail was considered in lieu of Metrorail in the Dulles Corridor. As was the case with light rail, monorail would not be as cost-effective as a Metrorail alternative due to comparable or higher capital costs and lower ridership resulting from the forced transfer at the Orange Line. Therefore, monorail was eliminated from further consideration.

Feeder Systems

Different feeder system alternatives considered for the project included light rail transit and an elevated people-mover within Tysons Corner as a feeder to Dulles Corridor stations. People-movers are typically automated rail systems that use passenger vehicles operating individually or in multi-car trains. The guideway for this mode must be grade-separated.

These options for a fixed-guideway feeder system were eliminated from further consideration because they would not be cost-effective. Analysis conducted for the MIS demonstrated that a fixed-guideway feeder system would not enhance ridership on a Dulles Corridor line that followed either a Route 123-Route 7 alignment or a loop configuration in Tysons Corner. Moreover, the analysis showed that such a feeder system would substantially add to the cost of the project. Given that the feeder system would not substantially increase ridership on the Dulles Corridor line as a whole, it would be considered an unreasonable expenditure in the context of the Dulles Corridor Rapid Transit Project.

BRT or Express Bus (in lieu of BRT) Operating in Dedicated Third Lane on the DIAAH

These options were eliminated from further consideration because current and future traffic projections for the existing configuration of the DIAAH do not warrant construction of a dedicated lane as part of the Dulles Corridor Rapid Transit Project. Because the DIAAH only provides service to and from the airport and does not serve general traffic, it is expected that traffic flow on this road during peak periods will be, at worst, moderately congested. This flow of traffic would not interfere with the speed or reliability of bus operations in the DIAAH. When traffic flow on the DIAAH degrades, the Metropolitan Washington Airports Authority (MWAA) plans to build this additional lane for all airport traffic.

Current express bus operations in the corridor and planned operational enhancements are part of the phased implementation program recommended in the MIS Supplement. These operations were analyzed as an alternative to BRT as part of the No Build Alternative.

H.1.3.2 Alignments

With the exception of the BRT alignment, most of the alignment alternatives under consideration were variations of the rail alignment recommended in the MIS. Each of the alignments eliminated during initial screening and discussed below were proposed rail alignments.

Route 7 Connection (T7)

Alignment T7 was a connection from the Orange Line through Tysons Corner via Route 7. This alignment was eliminated from further consideration because it would not serve the eastern part of the Tysons Corner area as effectively as other proposed alternatives.

DIAAH Alternative with a Feeder System (T8)

Alignment T8 consisted of a rail station in the DIAAH near Spring Hill Road that connected to a feeder system to serve Tysons Corner. This alignment was examined during the MIS and was eliminated from further consideration because ridership would be lower due to the forced transfer between Metrorail and the feeder system. In addition, it was determined that this alternative might have impacts on residences and historic resources near the Spring Hill Road Station. The MIS assumptions were examined and verified during initial screening.

Partial Double-Track Loop (T10)

This alignment consisted of an aerial loop in Tysons Corner following Route 123, Route 7, and Westpark Drive with a double-track configuration on the southern leg of the loop. It was determined that T10 could provide operational flexibility in Tysons Corner; however, this flexibility could be provided through less costly options. The alternative was eliminated from further consideration because its additional costs and impacts would yield little or no additional benefit, particularly given that T10 was not likely to provide better service than the single-track loop configuration under consideration.

Beltway Connection (B1 and T11)

Alignment B1 provided an Orange Line connection via the Capital Beltway, while Alignment T11 consisted of a large aerial loop that would include a station adjacent to the Capital Beltway. Alignment T11 could connect to Alignment B1, as well as a possible future transit line in the Beltway Corridor.

Alignments B1 and T11 were eliminated from further consideration because they would have higher costs but not greater benefits than other proposed alternatives. Because of the planned widening of the Beltway, I-66, Route 7, and Route 123, implementation of Alignment B1 would require significant right-of-way acquisition at substantial cost. In addition, the larger loop of Alignment T11 would provide inferior service coverage compared to other loop alternatives and would be more costly than the smaller loop.

Alignment D2

Alignment D2 would provide direct service to Reston Town Center via the Washington & Old Dominion (W&OD) Railroad Regional Park, in lieu of the indirect service provided by an alignment in the DIAAH median. Alignment D2 is not consistent with existing land use, nor is it consistent with local or regional land use plans. Development of Alignment D2 would not preclude other planned improvements from occurring, but it would preclude the continued use of the W&OD Railroad Regional Park in certain areas because parkland would be converted for permanent use as a rail line. Because the DIAAH median alignment provides a prudent and feasible alternative to the use of this parkland, and would not have impacts on the park, Alignment D2 was eliminated from further consideration, consistent with Section 4(f) of the U.S. Department of Transportation Act of 1966.

Alignment S1

Several alignments suggested during the scoping process involved connections to transit improvements in the corridor that are either currently under study or are identified in long-range plans. Alignment S1 combined the proposed Dulles Corridor alignment with two other rail alignments: one an Orange Line extension in the I-66 Corridor that is currently under study as a separate project, and the other a proposed rail line along the Route 28 and Route 50 corridors. This large loop alignment was eliminated from further consideration because it was inconsistent with federal guidelines for defining the scope of a project for evaluation in an EIS. The guidelines state that a proposed project should have logical endpoints and should be usable as an independent improvement, even if additional transportation

improvements in the area are not made. The various segments of Alignment S1 would each have logical endpoints and would function as independent improvements if the other segments were not developed. Therefore, each should be studied as a separate project.

H.1.3.3 Stations

Stations that were located only on alignments that were eliminated from further consideration were also eliminated. For example, Alignment D2 was eliminated from further consideration, precluding stations proposed along the former W&OD right-of-way at Wiehle Avenue and Reston Town Center. Summarized below is the initial screening analysis for eliminated station alternatives that were not alignment-specific.

Hunter Mill Road Station

The proposed Hunter Mill Road Station was eliminated from further consideration because the station is not consistent with current or planned land use in the vicinity. Low-density land uses surrounding the proposed site would not generate enough ridership to support a station at this location. In addition, the citizens in the area have expressed strong opposition to a station at Hunter Mill Road.

The Dulles Corridor Land Use Task Force, appointed by the Fairfax County Board of Supervisors, stated strong opposition to a station at Hunter Mill Road in lieu of the proposed station at Wiehle Avenue. The Task Force voted at its session on February 26, 2001 to endorse the elimination of the Hunter Mill station and continued planning for the Wiehle Avenue station. The Comprehensive Plan changes adopted by the Fairfax County Board of Supervisors on May 21, 2001 support this position; no transit-oriented land use plans have been adopted or considered for a proposed station in the vicinity of Hunter Mill Road.

Though it was suggested during scoping that the proposed Wiehle Avenue Station be eliminated from the project, this station was retained for further analysis based on the current and planned uses for the area surrounding the proposed station location. These uses generate demand that cannot be adequately served by the Reston Parkway Station. As described above, the Dulles Corridor Land Use Task Force endorsed the continued consideration of the Wiehle Avenue Station.

H.1.3.4 Ancillary Facilities

During initial screening, 13 potential sites were examined for the BRT Maintenance and Storage Facility and the Metrorail Service and Inspection (S&I) Yard as shown in Figure H.1-4. Four sites were recommended during the MIS and additional sites were identified during agency coordination for the Draft EIS.

Nine of the proposed sites were eliminated during initial screening because they were inconsistent with local land use plans and zoning designations or because they contained or were crossed by important water resources in Loudoun County. For instance, sites located in areas consisting of, or zoned for, residential development or mixed-use and office park development were eliminated because these uses were not considered consistent with a transit system maintenance and storage facility. In addition, sites that traversed or were located near Broad Run and Horsepen Run (two streams in Loudoun County) were eliminated from further consideration.

Other ancillary facilities, such as traction power substations and tie-breaker stations, were not evaluated during initial screening because siting of these facilities was not complete at that time.

H.1.4 INTERMEDIATE SCREENING

The alternatives carried forward from initial screening were subjected to a more robust evaluation in intermediate screening. In this phase of evaluation, many of the criteria applied during initial screening were measured more quantitatively. For instance, the initial screening only considered the number of trip generators or the amount of employment within walking distance of a station to determine an alternative's ridership potential, whereas the intermediate screening used output from the travel demand model to generate preliminary ridership estimates for the remaining alternatives. Project staff also developed preliminary capital costs for the alternatives based on standard costs for various project elements.

Alternatives that were eliminated during intermediate screening and the reasons they were not carried forward for full evaluation in the Draft EIS are discussed in the following sections.

H.1.4.1 Alignments

Alignments eliminated during intermediate screening were proposed Metrorail alignment alternatives.

Orange Line Connection (O2)

Evaluation of the Orange Line Connection focused on the relative costs and benefits of a western leg that would allow trains from the Dulles Corridor to continue directly to the western end of the Orange Line. The configuration with the western leg, called Alignment O2, was a design variation of Alignment O1, the MIS configuration for connecting to the Orange Line. Alignment O1 is the basic configuration required to allow trains from the Dulles Corridor line to connect to the rest of the Metrorail system, but would require a transfer for passengers traveling west on the Orange Line.

The intermediate screening evaluation showed that Alignment O2 would cost nearly twice as much as Alignment O1, but the expected increase in ridership for Alignment O2 was negligible. In addition, Alignment O2 was expected to have greater impacts on adjacent communities. Because the higher costs and impacts associated with Alignment O2 would not be warranted by the small expected increase in ridership, it was eliminated from further consideration.

Should the Orange Line be extended to Centreville in the future, travelers from the western portions of the region would be able to access the Orange Line closer to their homes and avoid traffic congestion en route to Vienna. Riders from these areas may create demand for a direct connection between the Dulles Corridor and the western end of the Orange Line. Accordingly, the design of Alignment O1 does not preclude future development of a western connection to the Orange Line.

Loop Alignment and Variations (T2 and T5)

Three variations of the loop alignment for serving Tysons Corner were carried forward from initial screening. These alignments were evaluated relative to one another during intermediate screening, and it was determined that two of the loops would have significantly higher costs and impacts.

Due to the inclusion of loop connectors, Alignment T2 would have greater potential for visual and noise impacts on adjacent residential communities than Alignment T4 (a similar alignment without the loop connectors). Alignment T2 would also have operational difficulties, and higher capital, operating, and maintenance costs than Alignment T4, but would only provide modest ridership benefits. Alignment T5 would avoid many of the impacts of Alignments T2 and T4, but would have much higher costs than these alignments, as well as additional risks associated with underground construction. While Alignment T4

would not be without impacts, it would not have the severity of impacts or the costs associated with Alignment T2, nor would it have the capital cost and level of risk associated with Alignment T5.

Based on these findings, Alignments T2 and T5 were eliminated from further consideration.

Connections to Future Transit Improvements (T3)

During initial screening, study of Alignment T3 was suspended until additional information was available regarding possible modes and alignments for a future rail line in the Capital Beltway Corridor.

The *Capital Beltway Corridor Rail Feasibility Study*, released in March 2001, included recommendations for three different modes, each with a different alignment and station locations. The current Beltway rail plans are not yet developed to a level that would make it appropriate or feasible to conduct detailed coordination efforts related to those improvements. Therefore, Alignment T3 was eliminated from further consideration, as they would not be developed in a time frame consistent with the schedule for the Dulles Corridor Rapid Transit Project.

As work progresses on a future Capital Beltway rail line, the Dulles Corridor Rapid Transit Project team will coordinate with the groups implementing that project and coordinate with them to the extent feasible regarding a connection between the two transit systems.

H.1.4.2 Stations

Tysons Central Station

During initial screening, the possibility of shifting the Tysons Central Station farther to the east for Alignment T1 was carried forward for additional analysis. In intermediate screening, it was determined that the more easterly station location (Tysons Central Alternative Station) would be less costly and would likely have more benefits than the original Tysons Central Station location. Tysons Central Alternative Station would have better connections to existing employment concentrations and to proposed office developments. It also has higher potential for joint development at sites that are currently undeveloped or underdeveloped. Therefore, the original Tysons Central Station was eliminated from further consideration in favor of the alternative location.

Wolf Trap Farm Park Station

Based on coordination with the National Park Service (NPS) and the Wolf Trap Foundation (a non-profit organization associated with the park), it was determined that a station at Wolf Trap would not be constructed as part of the Dulles Corridor Rapid Transit Project. The project would include provisions to accommodate a future Wolf Trap station, but the station itself and its access facilities were eliminated from further consideration. Only the provisions required to accommodate the future station were fully evaluated in the Draft EIS. Should funding for a station be identified in the future, a separate environmental review process would be required to fully evaluate the proposed station.

Relocation of the Wiehle Avenue and Reston Parkway Stations Under or Near the Highway Overpasses

The project team proposed that the Wiehle Avenue and Reston Parkway stations be located in the median of the DIAAH west of their corresponding highway overpasses at places where the DTR has been realigned to accommodate transit stations in the DIAAH median. During the public scoping process, it was suggested that the stations be relocated under the highway overpasses to provide better access to all four quadrants of the interchanges at Wiehle Avenue and Reston Parkway. The feasibility of this

relocation was examined during initial screening. It was determined that moving the stations would be costly and have substantial impacts, but additional analysis was recommended because the benefits of the relocation were not known at that time.

Following the initial analysis, stakeholders suggested that the project team should examine the feasibility of moving the stations closer to the overpasses, rather than directly under them. The stakeholders also encouraged the provision of station access from all four interchange quadrants. This option and the options originally assessed during initial screening were examined during intermediate screening.

In this second analysis, it was determined that moving the stations from the locations where the Toll Road was realigned would increase costs and impacts but would offer no significant benefits. For the central portion of the corridor, Fairfax County has amended their Comprehensive Plan to allow increased densities within the vicinity of transit stations. Because any proposed land use density bonuses would move with the stations (as discussed in the May 2001 recommendations of the Dulles Corridor Land Use Task Force), relocating the stations nearer to or under the overpasses and providing access to all four quadrants of the interchange would not increase ridership potential above that for the stations at the locations where the Toll Road was realigned.

Placing the stations under the overpasses would also generate several safety concerns, including narrow shoulder widths and station security issues. These issues would necessitate rebuilding the DIAAH, the Toll Road, the highway overpasses, and the interchange ramps to accommodate the stations under the overpasses. The result would be substantial cost increases, a lengthier construction period, traffic delays, and extensive impacts on people living and working in the corridor, particularly in Reston.

Similarly, moving the stations closer to the overpasses, as proposed by stakeholders, would necessitate rebuilding the highway overpasses because the proposed design would undermine the pier footings supporting the bridges. It is also possible that shoulder width considerations for this configuration could require rebuilding the DIAAH, the Toll Road, and the interchange ramps.

Given these findings, such relocations of the Wiehle Avenue and Reston Parkway stations were eliminated from further consideration.

Accommodation of Route 28 Light Rail Transit

Accommodation of Route 28 light rail transit (LRT) was evaluated with currently available information about potential transit improvements in the Route 28 Corridor. Several studies have recommended future development of light rail transit in the Route 28 Corridor, including recent proposals by the area's transportation management agency (TMA) that would bring the alignment very near the proposed Route 28 Station for the Dulles Corridor Rapid Transit Project. However, a Route 28 LRT system is not currently included in the Virginia Transportation Development Plan, indicating that, while transit improvements have been identified as desirable in the Route 28 Corridor, no Route 28 transit study is currently being conducted nor is one currently planned by the Commonwealth.

Because plans for a Route 28 LRT system have not been developed to a level that would make it appropriate or feasible to conduct detailed coordination efforts related to those improvements, accommodation of a Route 28 LRT system has been eliminated from further consideration.

H.1.4.3 Ancillary Facilities

Four proposed sites for a BRT Maintenance and Storage Facility and a Metrorail S&I Yard were carried forward for further evaluation in intermediate screening. They include three sites near the Route 606 interchange with the Dulles Greenway (Sites 6, 7, and 10) and one site at the south end of Dulles Airport property near the National Air and Space Museum Udvar-Hazy Center (Site 13). During intermediate screening, the project team determined that each site would have the potential for the following impacts:

- Steep slopes, floodplains, and wetlands restrict the suitability of Site 6.
- Locating a maintenance and storage facility on Site 10 would require extensive property acquisition, including a historic property, from the federal government and from private properties housing existing business operations.
- Site 13 is inconsistent with the approved Airport Layout Plan for Dulles Airport and, like Site 6, may have environmental resources that could be affected by a S&I Yard. Furthermore, locating a S&I Yard on Site 13 would result in significantly higher capital and operating costs due to the required length of the yard lead.
- Although Site 7 also contains floodplains and wetlands that could be affected by a maintenance and storage facility, the relatively large size of the site allows a configuration that would minimize these impacts. In addition, Site 7 has a more optimal end-of-the-line location than Site 13 and it is closer to the mainline tracks.

Based on these findings, Sites 6, 10, and 13 were eliminated from further consideration.

Initially, Site 7 was carried forward as the site for both the BRT Maintenance and Storage Facility and the Metrorail S&I Yard. Following the publication of the *Final Alternatives Analysis Report*, MWAA made a parcel of land on the northern part of the Dulles Airport property available for use as the BRT Maintenance and Storage Facility. This new site, Site 14, was screened using the same criteria applied to potential yard sites during initial and intermediate screening. It was determined that though the site has some floodplain and wetland restrictions, it is consistent with local zoning designations and the Airport Layout Plan. Moving the BRT Maintenance and Storage Facility from Site 7 to Site 14 would also allow the S&I Yard at Site 7 to be reconfigured to further minimize environmental impacts at that site. Therefore, Site 7 was eliminated from further consideration as the site for the BRT Maintenance and Storage Facility.

H.2 ALTERNATIVES CONSIDERED DURING CONTINUED DEVELOPMENT OF DRAFT EIS

Following the publication of the *Final Alternatives Analysis Report*, the ongoing development and review of alternatives for the Draft EIS resulted in several design refinements of existing alternatives, as well as the identification of new alternatives. In order to provide an equivalent evaluation, these alternatives were assessed using the same criteria applied during initial and intermediate screening. The results of these analyses are documented in post-screening technical memoranda.

Many of the refinements identified during this period were carried forward for further evaluation, some in lieu of alternatives that were previously carried forward. Those alternatives that were eliminated from further consideration, and the reasons for their elimination, are discussed below.

H.2.1 ALIGNMENT T9

The T9 alignment carried forward from intermediate screening was an entirely elevated version of Alignment T1 with an optional station at the Tysons Central C location. The Tysons Central Station was configured as a side-platform station with narrow track centers, while the other three stations had center platforms with wide track centers.

As part of conceptual design development in support of the Draft EIS, the design of Alignment T9 was refined. For T9 Revised, all stations had side platforms and narrow track centers and the profile of the alignment was lowered along Route 123. In addition, a short tunnel segment was added in the vicinity of the Route 123/Route 7 interchange.

A screening evaluation of the revised alignment showed that, relative to the T9 alignment carried forward from the alternatives analysis phase, Alignment T9 (Revised) would likely offer cost savings, enhanced structural efficiencies, and several other benefits such as the reduction of visual impacts on surrounding communities. However, the revised alignment would also have a number of drawbacks including increased right-of-way requirements, and the increased potential for noise impacts in certain residential areas adjacent to the alignment. It was decided that Alignment T9 (Revised) should be carried forward in lieu of the original Alignment T9, because the trade-offs associated with the revised alignment could not be fully evaluated during screening due to the lack of detailed cost and environmental data. The original Alignment T9 was eliminated from further consideration so that a wider range of configurations could be examined in detail in the Draft EIS.

H.2.2 STATION CONVERTIBILITY CONCEPTS

The three Build Alternatives initially carried forward for evaluation in the Draft EIS were envisioned as three construction stages in a phased implementation program. The BRT Alternative would be constructed first; then Metrorail would be constructed from the Orange Line through Tysons Corner, connecting to BRT service between Tysons Corner and Loudoun County; and finally, Metrorail would be constructed between Tysons Corner and Loudoun County, replacing BRT service in the corridor. Although the three Build Alternatives were to be evaluated as stand-alone alternatives, it was initially proposed that the overall project move forward with the phased approach.

As work on the Draft EIS progressed, it was decided to evaluate the phased implementation program as a fourth Build Alternative, called the Phased Implementation Alternative. A key element of this alternative was the DAAH median stations, which were to be constructed during the BRT phase for BRT use, then later converted to rail stations for Metrorail use.

Seven concepts for converting the median BRT stations to Metrorail stations were explored. The range of concepts included center- and side-platform configurations and shared and exclusive guideway configurations. Several concepts involved constructing the full Metrorail platform prior to the beginning of BRT operations, with 260 feet of the platform temporarily configured as a low platform for BRT operations.

These potential station configuration concepts were assessed against three main evaluation criteria:

1) Minimize downtime during conversion, that is, the time during which joint-use guideway areas and other station elements would be unavailable for BRT use during Metrorail start up and testing.

2) Limit BRT station width to a maximum of 80 feet so as to avoid additional widening of the DIAAH or the DTR.
3) To the extent feasible, preserve MWAA's ability to construct and operate future third lanes of the DIAAH independently of the Dulles Corridor Rapid Transit Project. In order to meet this criterion, overall station widths of 60 feet or less are necessary.

Based on the evaluation, three conversion concepts were eliminated from further consideration because they violated one or both station width criteria. Two other concepts were eliminated because they would require reduced BRT running speeds, would have the potential for damage to the third rail during BRT operations, and would limit rail testing and startup to non-revenue hours.

H.2.3 SUPPLEMENTAL RAIL YARD STUDY

In November 2001, the Steering Committee for the Dulles Corridor Rapid Transit Project asked the DRPT and WMATA to consider alternative yard sites to Site 7. In response, the project team initiated a Supplemental Rail Yard Study to examine different end-of-line locations for a Metrorail S&I Yard. Sites were also assessed to determine the feasibility of collocating the BRT Maintenance and Storage Facility with the S&I Yard.

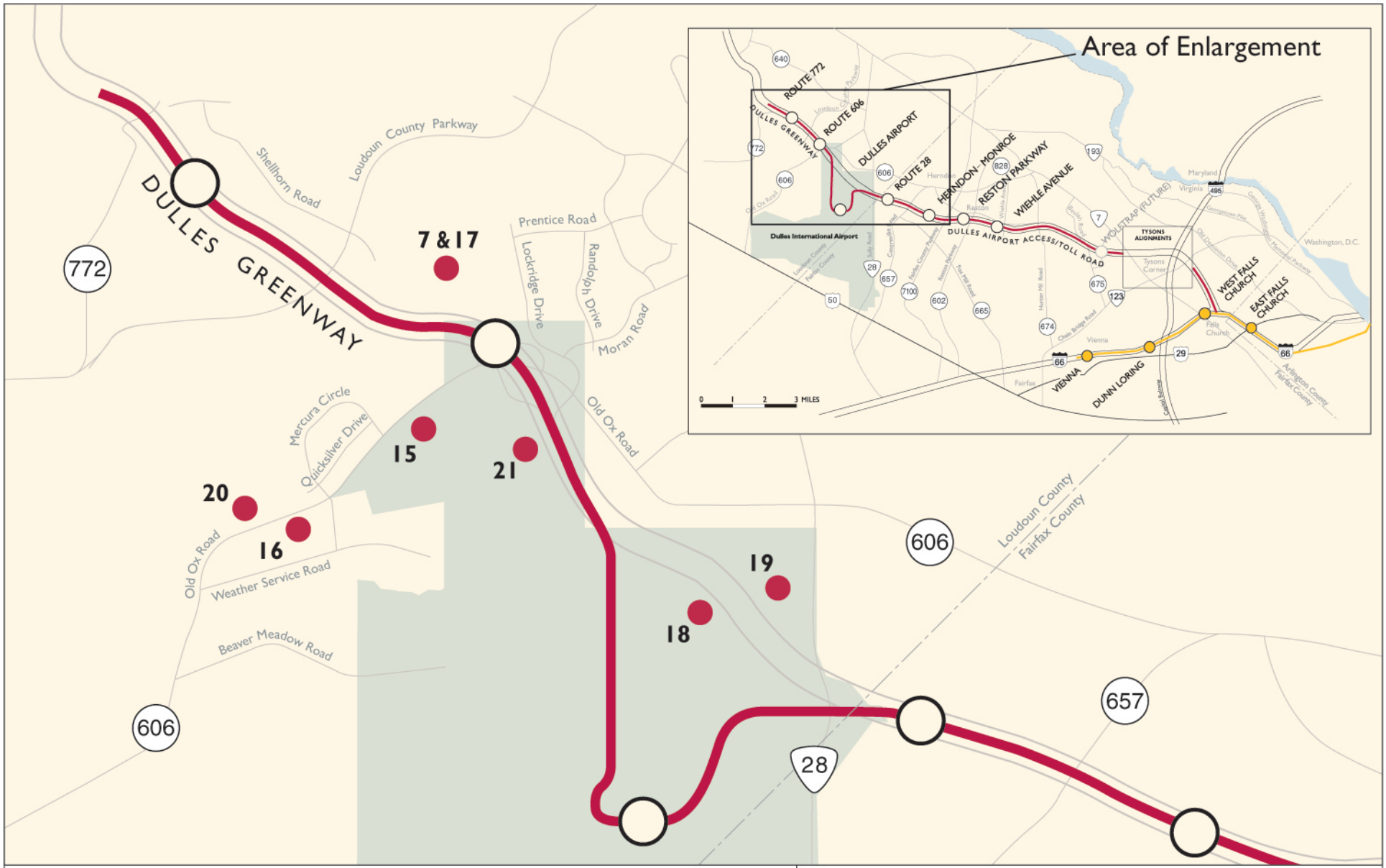
As shown in Figure H.2-1, seven supplemental yard sites were investigated during the study, all of which were located in Loudoun County. Four of the sites were located on Dulles Airport property. All sites were evaluated using the same screening process applied to the Initial NEPA Alternatives. For initial screening, the supplemental sites were assessed at a lower level of detail against the same social, environmental, economic, and transportation criteria used during the previous alternatives analysis. Five sites were eliminated based on environmental constraints, inconsistencies with land use plans, or operational constraints.

- Use of two of the sites would result in impacts on the Horsepen Run wetlands system—an important water resource in Loudoun County.
- For two other sites, the existing and planned land uses would be inconsistent with a BRT Maintenance and Storage Facility and/or an S&I Yard.
- A fifth site would be inconsistent with WMATA design and operational requirements.

Because only two sites remained following the initial screening, consensus was reached that intermediate screening was not necessary. Both remaining sites, Site 15 and Site 20, were carried forward for detailed evaluation in the Draft EIS.

H.3 ALTERNATIVES CONSIDERED IN RESPONSE TO PUBLIC COMMENTS

On June 28, 2002, the Draft EIS and the General Plans for the Dulles Corridor Rapid Transit Project were made available for public review and comment. The Draft EIS was also circulated to federal, state, and local agencies to solicit comments. Public hearings on the Draft EIS and General Plans were held on July 29, 30, and 31. The Project Team accepted written comments for a period of 62 days from June 28, 2002 to August 28, 2002.



LEGEND

- Supplemental Rail Yard Study Sites
- Proposed Transit Station
- Rapid Transit (Rail or BRT)
- County Line
- Major Arterials

0 1000 2000 FEET

Figure H.2-1

Supplemental Rail Yard Study Sites

Dulles Corridor Rapid Transit Project

During this public review and comment period, several new or modified alternatives were proposed for the project. Those alternatives that were eliminated from further consideration and the reasons they were not carried forward are discussed in the following sections.

H.3.1 DULLES PLAN B

Dulles Plan B was a proposal put forth by several citizens in the project area. In essence, the Dulles Plan B proposal represented a modified version of alternatives already studied in detail in the Draft EIS. The Dulles Plan B proposal contended that a combination of BRT and increased use of the high-occupancy lanes along the DTR could meet the projected demand for transit in the corridor at a much lower cost than Metrorail. The proposal also suggested the implementation of several forms of "private transit," including just-in-time ridesharing (i.e., casual carpooling, slug lanes) and high-occupancy toll lanes.

The Project Team reviewed the range of alternatives proposed on the Dulles Plan B website, but did not recommend the alternative for further study. Although the team's analysis confirmed that increased use of the HOV lanes could have benefits for the Dulles Corridor, such an increase would not dramatically increase the person-moving capacity of the corridor.

Moreover, although the proposed combination of BRT with increased vehicle capacity and increased use of the HOV lanes would provide enough capacity to support the projected demand for Metrorail, it would only do so if all new HOV users are travelers that formerly drove alone. It is very unlikely that incentives to increase HOV use would appeal only to people who previously used the general traffic lanes. It is much more likely that some of the new HOV users would be persons that would have otherwise used the transit system, reducing rather than enhancing demand for transit in the corridor.

Furthermore, capacity is not what truly limits the ability of the BRT Alternative in the Dulles Corridor to serve the same level of demand as Metrorail. BRT would not have the same "drawing power" as Metrorail due to a forced transfer at the Metrorail Orange Line and the lack of a direct connection to Tysons Corner.

The other proposed "private" transit modes were determined to be either infeasible in the Dulles Corridor, or not as beneficial as suggested in Dulles Plan B.

H.3.2 ALIGNMENT T12

Alignment T12 was a split-service alignment, with one branch extending along the DIAAH on the north side of Tysons Corner, and a second branch penetrating the core of Tysons Corner. The north branch of Alignment T12 (or the "express" leg) would be constructed first; allowing service to the remainder of the corridor to begin while construction of the south branch (or "local" leg) is completed. The local leg of the alignment would follow one of the four Metrorail Alignments evaluated in the Draft EIS.

Alignment T12 was eliminated from further consideration because it would have greater costs and impacts than the alternatives considered in the Draft EIS, would not effectively serve corridor activity centers, and would likely result in ridership reductions. In addition, the service associated with the alignment would be difficult to integrate with operations along the rest of the Metrorail system and with the Virginia Department of Transportation (VDOT) expansion plans at the Capital Beltway/DTR/Connector Road interchange.

H.3.3 ALIGNMENT T13

Alignment T13 was an entirely underground variation of Alignment T6, one of four Metrorail alignments evaluated in the Draft EIS. This alignment was eliminated from further consideration because it would have much greater costs than alternatives previously considered in the Draft EIS, with no additional transportation service benefits. Moreover, the primary benefits of the configuration—mitigation of the visual and noise effects associated with the alignments considered in the Draft EIS—could be achieved through much lower cost mechanisms.

H.3.4 ALIGNMENT T14

Alignment T14 was a variation of Alignment T4, one of the four Metrorail alignments evaluated in the Draft EIS. Unlike Alignment T4, which was an entirely aerial loop through Tysons Corner, Alignment T14 included two short underground segments, one along each leg of the loop.

Alignment T14 would reduce the visual impacts of Alignment T4, but would have greater costs, increased risks, no additional ridership benefits, and the same operational complexities. However, given that Alignment T14 presented one of the few viable approaches for mitigating some of the visual effects associated with Alignment T4, it was recommended for further analysis should Alignment T4 be carried forward as the LPA. When the WMATA Board of Directors and the Commonwealth Transportation Board selected Alignment T6 as the LPA, Alignment T14 was eliminated from further consideration.

H.4 BUILD ALTERNATIVES CONSIDERED IN THE DRAFT EIS BUT NOT CARRIED FORWARD

DRPT, in partnership with WMATA and FTA, prepared the Draft EIS to document the evaluation of alternative transit improvements for the Dulles Corridor. The relative merits and potential impacts of several alternatives were evaluated for the Draft EIS. The Build Alternatives included BRT, Metrorail, BRT/Metrorail, and Phased Implementation alternatives. Three BRT alignment options were evaluated, and in Tysons Corner four Metrorail alignments were considered. For the Metrorail and Phased Implementation alternatives, three potential sites for a new S&I yard were evaluated.

Following the public review and comment period, the WMATA Board, the Commonwealth Transportation Board, and local boards of supervisors selected the LPA for the Dulles Corridor Rapid Transit Project from those evaluated in the Draft EIS. Those alternatives that were eliminated from further consideration and the reasons they were not carried forward are summarized in the following sections.

H.4.1 BASELINE AND BUILD ALTERNATIVES

H.4.1.1 BRT Alternative

The BRT Alternative would have several advantages relative to the Metrorail Alternative, including improvements in corridor transit service at an earlier date, fewer impacts on the natural environment, fewer noise and visual impacts, lower traffic impacts in the vicinity of stations (though still higher than the Baseline), lower costs, and higher cost effectiveness. However, BRT would not provide the same degree of improvements in transportation service or increases in overall transit ridership as the Metrorail Alternative. In addition, the BRT Alternative would be less likely to support a focused development pattern, because the comprehensive plans for Fairfax and Loudoun counties include lower density

bonuses for BRT stations along the DTR and Dulles Greenway than for Metrorail stations and no BRT facilities are located in the core of Tysons Corner.

A direct service connector to the core of Tysons Corner was considered for the *Supplement to the Dulles Corridor Transportation Study* (1999). It was determined that direct service would require a grade-separated guideway through Tysons Corner, increasing the cost, time to implement, and impacts of BRT. And because the BRT Alternative would still require a transfer at the Metrorail Orange Line, accessibility to regional activity centers and overall ridership for the alternative would be reduced.

Overall, because the BRT Alternative would not satisfy the long-term travel demand of the corridor, nor provide the same level of support for the desired pattern of development in the corridor, it was not selected as the LPA.

H.4.1.2 BRT/Metrorail Alternative

The BRT/Metrorail Alternative would have some of the advantages and disadvantages of both the BRT and Metrorail alternatives. In general, the BRT/Metrorail would provide better connectivity to Tysons Corner than the BRT Alternative, but would not provide as direct a connection as Metrorail because it would require a transfer to travel between Tysons Corner and the western portions of the corridor. Although BRT/Metrorail would provide improved support for focused development in Tysons Corner, it would not provide the same level of support in the central and western portions of the corridor. In addition, BRT/Metrorail generally would have longer travel times and lower ridership than Metrorail. Because the BRT/Metrorail Alternative would not perform as well as the Metrorail Alternative in terms of transportation and land use benefits, it was eliminated from further consideration.

H.4.1.3 Phased Implementation Alternative

The Phased Implementation Alternative would have all of the benefits and impacts of BRT and Metrorail combined, at a higher cost. Phased Implementation could be implemented sooner than Metrorail, but would have higher capital costs and no additional ridership or economic development benefits than the Metrorail Alternative. Moreover, during conversion from BRT to Metrorail, BRT service would be displaced from the median stations in the Mid-Corridor for 15 to 18 months; during this period, BRT service would be relocated to the park-and-ride facilities. Because Phased Implementation would have greater costs, but would not offer a substantial increase in benefits, it was eliminated from further consideration.

H.4.2 TYSONS CORNER ALIGNMENTS

H.4.2.1 Alignment T1

Alignment T1 would have similar impacts to Alignment T6, because the configurations of these alignments are similar. However, Alignment T1 was eliminated from further consideration because it would include fewer stations than Alignment T6 and provide less service within the core of Tysons Corner.

H.4.2.2 Alignment T9

Alignment T9 was eliminated from further consideration because it would have greater visual effects and less operational flexibility than Alignment T6, and would potentially conflict with improvements planned at the Route 123/Capital Beltway interchange. Although Alignment T9 would have the same ridership benefits as Alignment T6 because it includes the same number of stations in the same locations, it would

have greater visual effects than Alignment T6 because most of the alignment is aerial and the stations are larger in mass due to side-platform stations. Moreover, Alignment T9 would not have pocket tracks and thus would not allow for train turnback operations.

H.4.2.3 Alignment T4

Alignment T4 would include more stations in the core of Tysons Corner and have greater geographic coverage than the other Metrorail alignments. Therefore, the alignment would have greater potential to foster the high level of development planned in Tysons Corner. However, because the four core stations on Alignment T4 would be located on one-way lines, this alignment would not necessarily provide greater transportation benefits in Tysons Corner than Alignments T6 and T9. For Alignment T4, many travelers using the one-way stations would be required to transfer and double back to reach the station within walking distance of their destination. Alignment T4 would also have much greater visual impacts than the other alignments. Because it would attract less ridership than Alignment T6, and have much greater visual effects, Alignment T4 was eliminated from further consideration.

H.4.3 YARD SITES

H.4.3.1 Yard Site 7

Though S&I Yard Site 7 would be the least expensive to construct and operate and would have fewer effects on wetlands and streams, an S&I Yard at this site would be inconsistent with existing and future land use plans and moderately incompatible with existing zoning requirements. In addition, use of S&I Yard Site 7 would result in aircraft noise effects on transit workers and potential safety issues related to airport operations (though to a lesser extent than S&I Yard Site 15). Overall, because S&I Yard Site 7 would be least consistent with existing land use, future land use plans, and existing zoning requirements and have greater negative effects on economic development in Loudoun County, it was not considered to be a practical alternative S&I Yard site and was eliminated from further consideration.

H.4.3.2 Yard Site 20

S&I Yard Site 20 is located the farthest from the mainline, requiring more non-revenue lead track and additional operational expenses. In addition, S&I Yard Site 20 would be less consistent with existing land use and future land use plans than S&I Yard Site 15, and it would have greater stream and water quality effects. Overall, because S&I Yard Site 20 would be less consistent with existing land use and future land use plans and have greater negative effects on economic development in Loudoun County, it was not considered to be a practical alternative yard site and was eliminated from further consideration.

APPENDIX I- DULLES GREEN PROFFER STATEMENT

Proffers for Athletic Facility for
Land Bay 5.
November 17, 1998

PROFFERS

RZ 89-D-060

ALAN I. KAY

October 7, 1992

Revised: (1) October 30, 1992
(2) November 21 1992
(3) November 10, 1992
(4) April 1, 1993
(5) April 12, 1993

Pursuant to Section 15.2-2303(a) of the Code of Virginia, 1950 edition as amended, and approval by the Board of Supervisors of application CDPA/FDPA 89-D-060 to permit the development of up to 866 multiple family units; possible retail/office in the ground floor of residential structures, only if approved by a subsequent Final Development Plan Amendment. Transportation Facility, and a child care center, in accordance with the provisions of the PDH-20 District and the Conceptual/Final Development Plan dated October 6, 1992 and revised October 30, 1992 and revised November 10, 1992 and again revised April 1, 1993, prepared by Dewberry & Davis; and further, upon approval of the CDPA/FDPA to RZ 89-D-060, dated March 6, 1998, and revised through October 15, 1998, prepared by christopher consultants, ltd., which provides for a temporary athletic field on Land Bay 5, the undersigned hereby proffers the following conditions:

PROFFERS

PCA 89-D-060-2

November 1, 1999

Pursuant to Section 15.2-2303(a) of the Code of Virginia, 1950 edition as amended, and approval by the Board of Supervisors of application RZ 89-D-060 to permit the development of up to 866 multiple family units; possible retail/office in the ground floor of residential structures, only if approved by a subsequent Final Development Plan Amendment, Transportation Facility, and a child care center, in accordance with the provisions of the PDH-20 District and the Conceptual/Final Development Plan dated October 6, 1992 and revised October 30, 1992 and revised November 10, 1992 and again revised April 1, 1993, prepared by Dewberry & Davis; and approval of PCA 89-D-060, which provides for a temporary athletic field on Land Bay 5 and further, upon approval of PCA 89-D-060-2, as proffered herein, the undersigned hereby proffers the following conditions:

Except as modified herein, the subject property is governed by the Proffers in RZ 89-D-060, dated April 12, 1993, and the proffers in PCA 89-D-060 dated November 17, 1998 and said proffers are hereby reaffirmed. Several of these proffered conditions have already been fulfilled.

E. At the time of construction set forth in Proffers 13A. B and C. Applicant will construct Projects 0-1 and 0-3 as delineated on the County's Master Drainage Plan.

14. No later than the site plan approval for the southern entrance to Land Bay 2. Applicant will construct Dulles Greens Drive from its intersection with Innovative Avenue to a point south of the entrance to Land Bay 2 as shown on the CDP/FDP which is approximately two hundred fifty (250) feet east of the intersection, as a four (4) lane undivided roadway to VDOT standards as depicted on the CDP/FDP.

15. A. Dedication.

Applicant will dedicate and convey in fee simple Land Bay 5, in the southeastern portion of the Property, as more particularly depicted on the CDP/FDP, to Fairfax County or its designee for use as a temporary athletic field and/or as a public transportation destination station, Kiss & Ride lot, Park and Ride facility, rail/bus transit station or other public transportation facility (herein referred to a "Transportation Facility"). At the time of dedication necessary easements shall be granted or assigned (at no cost to the County) by Applicant.

The following associated and/or ancillary uses, not to exceed a total of 2,500 square feet may be included as an integral component of a structure/facility that provides any of the uses set forth above:

1. Ticket sales for public transportation facilities
2. Office for administration of the Park and Ride facility

DULLES GREENE. L.P.. a Virginia limited partnership

By: DG Development. Inc.. a Delaware corporation. general partner

By: _____

Name: Corey DeSpain
Vice President
(PRINT)

Title: _____
(PRINT)

facilities shown on the CDP/FDP. All lighting of active recreation facilities shall be shielded and directed on site so as to keep glare from projecting off-site or into on-site residential areas.

All waste water resulting from the cleaning and draining of the pool located on the site shall contain a minimum dissolved oxygen concentration of 4.0 milligrams per liter prior to discharge. The Applicant shall neutralize pool waters to a pH from 6.0 to 9.0 prior to discharge. Sufficient amounts of lime or soda ash shall be added to achieve a pH approximately equal to that of the receiving stream.

If the water being discharged from the pool is discolored or contains a high level of suspended solids that could affect the clarity of the receiving stream, it shall be allowed to stand so that most of the solids settle out prior to being discharged.

This proffer #17 shall not apply to the proposed temporary athletic facility located in Land Bay 5.

18. Land Bay 5 shall be developed as a temporary athletic facility in accordance with CDPA/FDPA 89-D-060. Applicant's/Profferor's cost to complete this facility in accordance with CDPA/FDPA 89-D-060 shall not exceed the sum of $191,742.00, plus adjustments for inflation from September 10, 1992 until the date of completion of the facilities, or the date of full expenditure of said fund after adjustment for inflation, whichever event first occurs. This athletic facility will terminate at such time as a Transportation Facility is under construction for utilization on the site.

1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION

A. Draft EIS Comments

State Agency Comments

Need to Service Growth at Dulles Airport

State Comment: With the addition of a fourth runway and other major airport improvements and passenger amenities, Washington Dulles International Airport is poised for significant growth. Forecasts for passenger trips for 2010 have been increased from 30 million 37 million, an increase of more than 20 percent. Forecasts for 2025 have been increased from 55 to 63 million passenger trips. The Dulles Center of the National Air and Space Museum will open in December 2003 and is expected to generate three to five million visitors per year. While these visitors should be able to use transit, the growth of jobs in the hotel and restaurant and service industries will also bring additional employees and visitors to the area who could benefit from rail transit. (0131, 0131-T –6)

> ***Response:*** *As noted in Chapter 1 of the Final EIS, increasing air travel and employment at Dulles Airport are important factors underlying the need for rapid transit improvements in the Dulles corridor. The project goals and objectives outlined in Table 1.6-1 of the Final EIS include more frequent service for trips to Dulles Airport as well as other regional activity centers.*

Need to Service Growth in the Corridor

State Comment: Development in the corridor has proceeded more quickly than forecast. Twice as many jobs were created in the Dulles corridor as in the rest of the region over the last decade, fueling construction of office space. Regional forecasts indicate that the corridor will continue to grow at nearly double the rate of the rest of the region in employment and residents, adding 206,000 people, an increase of 56 percent, and 203,000 jobs, a 71 percent increase in employment levels, over the next 25 years. While vacancy rates and office space are high now, there is no doubt in my mind that this region will see the energy and entrepreneurship of our local business community lead us into new and promising directions that we will see business form and grow. (0131, 0131-T –4)

State Comment: We have problems to solve and they include, among other things, congestion, air quality, growth. But we want to, I would suggest to you, simply not solve these problems for today, we want to solve them for the long-term future. I would say to you that I speak today also in another capacity, in that of being a grandfather. My son Christopher, sitting here on the front row, and I want us to solve the problems not simply for me and for us today, but for Christopher and the other people who will live in our communities in the future. (0131, 0163-T –4)

> ***Response:*** *As outlined in detail in Chapter 1 of the Final EIS, the purpose of the Dulles Corridor Rapid Transit Project is to provide transit system enhancements that would provide a direct connection to the existing Metrorail system. These enhancements would offer an alternative means of travel for the growing number of residents, employees, and visitors in the Dulles corridor as well as a high quality transit link to the Metrorail system, to improve mobility throughout the region. These proposed improvements will address the issues raised in the comments listed namely improving transportation service, providing an alternative mode of travel to that of the automobile, increasing transit ridership, and supporting current and future population growth and development in the Dulles corridor and region.*

Regional Agency Comments

Need for Connections Between Dulles Airport and the District of Columbia

Regional Comment: Rail between the region's designated international airport and the national capital is long overdue. As other people have already said, Dulles airport is expected to increase passenger trips from 20 million in 2000 to 37 million by 2010, and expects to double the number of employees from 15,000 to 30,000. The Dulles Center of the National Air and Space Museum projects 3 to 5 million visitors per year when it opens in December 2003. (0132, 0132-T –3)

> ***Response:*** *As noted in Chapter 1 of the Final EIS, increasing air travel and employment at Dulles Airport are important factors underlying the need for rapid transit improvements in the Dulles corridor. The project goals and objectives outlined in Table 1.6-1 of the Final EIS include more frequent service for trips to Dulles Airport as well as other regional activity centers.*

Need to Provide Access to Jobs

Regional Comment: Commuters from the urban core and other parts of the region need to be able to reach jobs at Tysons, in the corridor, and at Dulles airport. Commuters from the growing western perimeter of Washington need access to jobs in other parts of the metropolitan area as well as in the corridor and at Tysons, and air travelers need to be able to reach Dulles airport by transit from any part of the metropolitan area. (0132, 0132-T –4)

> ***Response:*** *As outlined in detail in Chapter 1 of the Final EIS, the purpose of the Dulles Corridor Rapid Transit Project is to provide transit system enhancements that would provide a direct connection to the existing Metrorail system. These enhancements would offer an alternative means of travel for the growing number of residents, employees, and visitors in the Dulles corridor as well as a high quality transit link to the Metrorail system, to improve mobility throughout the region. These proposed improvements will address the issues raised in the comments listed, namely improving transportation service, providing an alternative mode of travel to that of the automobile, increasing transit ridership, and supporting current and future population growth and development in the Dulles corridor and region.*

Need for Design Flexibility to Meet Regional and Local Needs

Regional Comment: The Dulles Corridor has the potential to become one of, if not the most heavily used section of the region's Metro rail system. The potential is conditioned upon:

a) Effective service from the entire Corridor to Tysons Corner;
b) Optimization of the transit system with land use, including the future evolution of mixed use air rights developments above stations where such developments would enhance county objectives and where they would be compatible with neighborhood desires;
c) Careful integration of stations with their surrounding land uses such that the maximum number of people are attracted to transit from the automobile;
d) Journey times for the commuter, which over the longer distances at least, are comparable or superior to automobile travel during the peak hour times projected for 2025 and beyond;
e) A service oriented system that meets the requirements of the sophisticated, well-educated denizens of the Dulles Corridor.
f) A system that is operated as a transportation system designed to attract ridership rather than as a heavily subsidized social service - the normal attitude toward transit.

Requested Action: Provide flexibility in the locally preferred alternative to enable the design team to meet these objectives. (0133, 0405-L –3)

Response: *Comment noted. Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles corridor and region are important to us and have been considered by decision-makers in the selection of the Locally Preferred Alternative (LPA).*

Local Agency Comments

Need to Meet Mobility Accessibility Goals

Local Comment: But what is more important here is that unless these issues are addressed successfully, this will not be a project that works for the citizens of this region. We note that in the handout this evening that one of the objectives is to increase mobility and accessibility, and another key objective is to accommodate future increases in transportation demand. We certainly now and in the past and will be in the future are committed to achieving those objectives along with our colleagues and those others who share the region with us. (0165, 0165-T –4)

Local Comment: We are absolutely committed to the objectives of increased mobility and accessibility, we are absolutely committed to mass transit, and we have shown it in every way possible. We do tonight and we will in the future, and we certainly want to accommodate future increases in travel demand more effectively than we have been able to in the past. (0165, 0165-T –9)

Response: *As described in Chapter 1 of the Final EIS, goals for the Dulles Corridor Rapid Transit Project include improving transportation service, increasing transit ridership, and supporting future development and environmental quality, among others. These goals correspond to many of the objectives cited by the commenters.*

Need to Serve Population and Employment Travel Demand

Local Comment: Mr. Chairman, we stand at a critical moment in Fairfax County's history. The last two decades elected officials, government agencies, and the public have talked about extending rail to and through Tysons Corner on the way to Dulles. While that was taking place, Tysons Corner grew up. Businesses flocked there, creating over 30 million square feet of office space and lots of retail space and bringing in close to 100,000 jobs every day. Millions of people began visiting Tysons Corner Center and Tysons II and it became a retail center for the region. Tysons Corner grew to become a business district that if it was its own city would be larger than the commercial and retail spaces of Baltimore, St. Louis or Miami. All of this economic success, however, has not come without a price. Without mass transportation, all of these workers and visitors are forced to travel, by and large, to Tysons by automobile. Finally, after years of talking, we have reached the point to take some action. We are ready to bring mass transit to Tysons and the Dulles corridor. We must move forward. (0130, 0130-T-1)

Local Comment: The Mid-Corridor of the DCRTP consists largely of Hunter Mill District, from Tysons Corner to Dulles International Airport. This area comprises over 120,000 residents, 12 million square feet of office space and six of the nine proposed rail station locations. Today, many of these residents, employers and employees face inconvenience, diminished quality of life and the risk of economic stability as they await relief from congestion in their communities. While there are concerns that must still be addressed in the Final EIS, it is now time for federal, state and local officials to respond to the transportation needs of this community by supporting the DCRTP. (0437, 0437-E –2)

Local Comment: The current density and size of Tysons Corner justifies the extension of transit now. Predicted growth in jobs and retail space only underscores the urgent need for mass transportation. Equally as important is growth in the number of residents in Tysons Corner that has occurred and will continue to occur as Fairfax County encourages increased transit-oriented residential development pursuant to the 1994 comprehensive plan. It is imperative that mass transit be provided to serve these people and our future residents in Tysons Corner. (0130, 0130-T –3) (0130, 0289-T-3)

Local Comment: Washington, D.C. is one of the only capitals in the industrialized world whose international airport is not served by rail. Demand for a rail link to Dulles will only increase as travel volume is expected to grow to nearly 32 million passengers by 2010. The opening of the new Air and Space Museum next year will attract millions of tourists in that corridor, and if we needed a reminder about how important rail was, the events of September 11th were a wake-up call. When the Federal government decides to close the other airport, National, Reagan Airport, and the spillover has to go to Dulles, we need help from the Federal government and we need it now in getting a rail link to Dulles airport. By 2020, Tysons Corner and the Dulles corridor will be the second largest employment cluster in all of metropolitan Washington, next only to the core in Washington, D.C. That's an astounding statistic. If we fail to act now and we don't provide multi-modal transportation alternatives, growth in jobs and population will only make congestion much worse. We cannot afford to be a victim of our own success. We cannot let the high quality of life that's attracted so many of us and the jobs to Fairfax County in the first place be undermined by that traffic congestion. (0130, 0130-T –7)

Local Comment: And yet unless the issues are addressed which we have outlined in our written submission and we have talked about this evening, this will be like a beautiful, attractive island surrounded by a sea of sharks that you can't get to. (0165, 0165-T –5)

Local Comment: By 2020 Tysons Corner and the Dulles corridor will be the second largest employment center in the region (second only to downtown D.C.). If we fail to act and provide multi-modal transportation alternatives, growth in jobs and population can only make traffic congestion on our area roadways worse. We cannot afford to be a victim of our own success, we cannot let the high quality of life that attracts so many people and jobs to Fairfax County in the first place be undermined by traffic congestion. (0130, 0289-T –6)

Local Comment: We stand at a pivotal moment in Fairfax County's history. For the last twenty years, elected officials, government agencies, and the public have talked about extending rail through Tysons Corner to Dulles Airport. While that was taking place, Tysons Corner grew up: businesses flocked there creating 30 million square feet of office space and close to 100,000 jobs and more than 20 million people began visiting Tysons Corner Center and Tysons II annually. Tyson's Corner grew to become a business district that, if it was its own city, would be larger (in terms of employment) than St. Louis or Miami. All of this success, however, has not come without a price. (0130, 0289-T –1)

> ***Response:*** *As outlined in detail in Chapter 1 of the Final EIS, the purpose of the Dulles Corridor Rapid Transit Project is to provide transit system enhancements that would provide a direct connection to the existing Metrorail system. These enhancements would offer an alternative means of travel for the growing number of residents, employees, and visitors in the Dulles corridor as well as a high quality transit link to the Metrorail system, to improve mobility throughout the region. These proposed improvements will address the issues raised in the comments listed namely improving transportation service, providing an alternative mode of travel to that of the automobile, increasing transit ridership, and supporting current and future population growth and development in the Dulles corridor and region.*

Need for a "World Class" Transit System

Local Comment: Most importantly, a Dulles Corridor Rapid Transit Project (DCRTP) should provide a world class, comprehensive transit system, which will allow the Dulles Corridor and its surrounding communities to contribute to the ease of transportation in the capitol region. In addition, the project will connect Dulles Corridor to Dulles International Airport, which is vital to the continued growth and development of the region. (0437, 0437-E –1)

> ***Response:*** *Comment noted. Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles corridor and region are important to us and have been considered by decision-makers in the selection of the Locally Preferred Alternative (LPA).*

Public Comments

Need to Provide Transportation Enhancements and Travel Choices

Public Comment: As the population in Virginia increased, especially in the Northern Virginia area, from new businesses to new homes, very little was done in conjunction with this growth to handle the increase of commuters. The Tysons Corner area is a perfect example of this. As this area grew and expanded onto every available piece of real estate, nothing was done to ease congestion. No thought was given as to how to keep the congestion outside of the Tysons Corner area. Virginia and the businesses should have combined to develop a transit system around the Tysons Corner area and within to keep the vehicles out. At the time all the new corporations were building this would have been a perfect partnership. (0123, 0123-L –1)

Public Comment: So my bottom line in all that is I think that probably we will find the traffic congestion is as good as it's ever going to get in the Northern Virginia region on the whole, and that what we have to do is build for the future capacity and hope that we can stay in terms of transit times as good as we have right now. I think that the physics make that very difficult to just meet that goal. (0258, 0258-T –1)

Public Comment: As a long time commuter in this area, I know that traffic congestion in the DC area, especially the Dulles corridor is always congested. Anything you can do to alleviate this problem would be a great help. (0019, 0019-E –2)

Public Comment: Proposal merely connects several points along the greenway but it fails to establish any transportation means between these points where most of the needs are. (0094, 0094-CC-1)

Public Comment: This area is still dependent on local automobile use and this important need has not been addressed. (0094, 0094-CC-2)

Public Comment: BRT and/or Metro proposals appear to be good and proper by themselves (i.e., between stations) but this is not the problem. The problem is that the present development in the area developed because of and is dependent on the automobile and BRT and Metro will not change this situation. (0094, 0094-CC-3)

Public Comment: What we've got out there now are office parks, single-use office parks, and you can't do a darn thing without getting into your automobile. (0141, 0141-T –2)

> ***Response:*** *The purpose of the Dulles Corridor Rapid Transit Project is to improve mobility throughout the region by providing transit system enhancements that would offer an alternative means of travel for the growing number of residents, employees, and visitors in the Dulles corridor, and as a link to the Metrorail system. In a similar way the Northern Virginia 2020 plan, the Statewide Transportation Plan, and county comprehensive plans detail the roadway and transit improvements planned to address the current and future transportation needs in Fairfax and Loudoun counties. As outlined in Chapters 2 and 6 of the Final EIS, these current and future transportation needs have been incorporated into the analysis of both No-Build and two Build Alternatives (Wiehle Avenue Extension and the Full LPA). In addition, the operating plans for the two Build Alternatives include local and feeder bus service.*

Need to Service Dulles Airport

Public Comment: The Dulles rail corridor clearly already serves today as a critical gateway to our Nation's capital. Just 26 miles from downtown Washington, Dulles airport provides daily nonstop service to more than 75 cities and direct service to over 30 foreign countries. Additional cities will be added by 2012. (0153, 0153-T –2)

Response: *As noted in Chapter 1 of the Final EIS, increasing air travel and employment at Dulles Airport are important factors underlying the need for rapid transit improvements in the Dulles corridor. The project goals and objectives outlined in Table 1.6-1 of the Final EIS include more frequent service for trips to Dulles Airport as well as other regional activity centers.*

Need to Support Future Development While Maintaining Environmental and Community Quality

Public Comment: The Coalition for Smarter Growth is a coordinated effort of environmental, civic and transit groups in the Washington, D.C. region. We advocate continued urban revitalization and the focusing of regional growth in transit-oriented centers and other town centers that are mixed use and pedestrian and bicycle-friendly. Analysis demonstrates that this will be the most effective way to reduce regional traffic congestion. One of those analyses is Network of Liveable Communities, a report by the Chesapeake Bay Foundation, which found that if we revitalize Washington, D.C. and use transit-oriented development regionwide, we can significantly reduce vehicle miles traveled and regional congestion. (0149, 0180-T –1)

Public Comment: The Greater Washington Board of Trade is the regional chamber of commerce for Northern Virginia, the District of Columbia, and suburban Maryland, and represents businesses and nonprofits that employ over 40 percent of the private sector workforce in our region. We are committed to the efficient movement of people and goods and the high quality of life that a good transportation system can provide. (0142, 0142-T –1)

Public Comment: The Reston Citizens Association enthusiastically supports the statement of the Dulles Rail Now coalition for all of the many reasons offered in supporting statements presented at the hearings. These include arguments regarding (a) the high capacity, (b) the high ridership, particularly the high "new riders" whose switch to transit yields so much in the way of congestion relief and environmental benefits, (c) the ability to accommodate new growth without excessive congestion, (d) the greater mobility provided to the transit-dependent, and (e) the importance of having the rail link to the nation's capital. (0478, 0484-E –1)

Response: *As described in Chapter 1 of the Final EIS, goals for the Dulles Corridor Rapid Transit Project include improving transportation service, increasing transit ridership, and supporting future development and environmental quality, among others. These goals correspond to many of the objectives cited by the commenters.*

Need to Support Future Growth and Travel Needs

Public Comment: Our community, our whole community, needs public transit in the Tysons-Dulles Corridor and we need it now. (0157, 0157-T –1)

Public Comment: We are writing to express interest in the Dulles Corridor Rapid Transit Project which should be of help as part of the solution to the area's traffic congestion. (0483, 0483-E-1)

Public Comment: We have heard people talk about some of the growth statistics, but maybe it's worth mentioning a little bit again how large, how Tysons Corner has grown up and is now a place of 30 million square feet of office space. Even Reston and Herndon combined have as much office space as Tysons Corner does. There's plenty of growth out in the Route 28 area, and we have heard about what's happening at the airports, even despite the terrorists attacks. International travel has increased and we are seeing increasing flights out there at Dulles International Airport. (0141, 0141-T –1)

Public Comment: We face a future that will include many new residents and jobs. Over the next 25 years the Greater Washington region will add 1.4 million people, 32 percent increase, and 1.1 million jobs, 39 percent increase. In the Dulles corridor alone, this increase will amount to an additional 206,000 people, an increase of 56 percent, and 203,000 jobs, a rate of growth nearly twice the rate of the region as a whole. For purposes of perspective, this rate of growth will be equivalent to the corridor accommodating the populations of Arlington and the city of Fairfax and approximately the number of workers who are currently employed in Loudoun, Prince William, and Manassas. At the same time, the council of government also forecasts that vehicle miles traveled, VMT, in our region will increase by 46 percent by 2025, while freeway and arterial lane miles are forecast to increase by only 13 percent, a recipe for further gridlock compounding our current ranking as the Nation's third most congested region. (0142, 0142-T –2)

Public Comment: We face a future that will include many new residents and jobs. Over the next 25 years the Greater Washington region will add 1.4 million people (+32%) and 1.1 million jobs (+39%). In the Dulles corridor alone, this increase will amount to an additional 206,000 people (+56%) and 203,000 jobs (+71%) - a rate of growth nearly twice the rate of the region as a whole. For purposes of perspective, this rate of growth will be equivalent to the corridor accommodating the populations of Arlington and the City of Fairfax and approximately the number of workers who are currently employed in Loudoun, Prince William and Manassas. At the same time, the Council of governments also forecasts that vehicle miles traveled (VMT) in our region will increase by 46% by 2025, while freeway and arterial lane miles are forecast to increase by only 13 percent - a recipe for further gridlock compounding our current ranking as the nation's third most congested region. To complicate this problem, our region has severe air quality problems, and we are struggling to meet the requirements of the Clean Air Act. As you may know, today was a "code orange" day, indicating poor air quality - one of 12 this year already. In addition, we have already had four "code red" days - those days when air quality is at its worst. If we cannot reach our air quality goals we run the risk of losing billions of federal transportation dollars, while allowing the increased health risks of breathing polluted air. (0142, 0219-M –1)

Public Comment: All of us are being inconvenienced. We are being inconvenienced by unbearable traffic and pollution, inconvenienced by the lack of consideration for pedestrian amenities, and lack of consideration for our residential communities as we continue to increase zoning densities and attempt to expand roads into mega-facilities to service those increased densities. It may have been unintended, but we have planned and zoned our way out of the ability to rely on the automobile. Now the only choices that we have left are the tough choices involved in planning rational alternative transportation systems for the future. And the future is an integrated transportation plan serving the most people most effectively. (0148, 0148-T –7)

Public Comment: After September 11 last year, the Congress of the U.S. saw firsthand the transportation problems that exist in our region when the city of Washington was not able to be timely evacuated in response to the terror attacks. The metro system did work on that day in the midst of traffic gridlock. (0144, 0190-T –1)

Public Comment: Analysis demonstrates that this will be the most effective way to reduce regional traffic congestion. Changes to land use are also the fastest thing we can do to cut vehicle miles traveled and are critical for making transit work. (0149, 0149-T –1)

Public Comment: This is all about vision. Two pieces of vision. What is Fairfax now, and what do we want it to become, and how is the process for what is it going to become being made to happen? (0191, 0191-T –1)

Public Comment: As someone who manages human resources for a company with 110 employees located in Tysons Corner, I can't tell you how many times I hear from our employees about the miserable traffic in our region. While we offer flexible working hours to try and alleviate this problem for our employees, it only helps so much. Many of our employees are located at the Dulles Toll Road and most of them have indicated they would use a rail system if it were available. (0393, 0393-L –2)

Public Comment: Bringing transit to the Dulles corridor from West Falls Church to Loudoun County has long been discussed as a necessary transportation initiative in Northern Virginia. Tysons Corner and the Reston-Herndon-Dulles Airport-Eastern Loudoun corridor are two of the largest employment and residential centers in the country with the Council of Governments forecasting significant additional jobs and residential growth in the corridor through 2025. Currently planned transportation improvements will be unable to accommodate the projected growth (71% increase in jobs and 56% increase in population) without implementation of expanded transit options to compliment the baseline projects. Advocates on behalf o Washington Dulles International Airport have long desired rail access. (0396, 0396-L –2)

Public Comment: The Federation supports the concept of rapid transit service in the Dulles corridor. Rapid transit service has long been needed in this corridor because of the existing and projected communities, non-residential development, and employment centers along and beyond the corridor that would most efficiently be served by transit. This would reduce the disparity between development and supporting transportation infrastructure. (0402, 0402-L –1)

Public Comment: Our organization has held the longstanding position that the lack of adequate mass transit options for commuters living and working in Northern Virginia's employment and population centers represents a key shortfall of the Washington metropolitan region's transportation system. Nowhere is this deficiency more glaring than in Tysons Corner and the Dulles corridor which collectively represent approximately 300,000 residents and 182,000 jobs. With respective population and employment increases of 56 and 71 percent projected over the next 25 years in the business districts fueling Northern Virginia's economic engine, additional strain will be placed on the region's already congested traffic conditions and region's air quality. For this reason, the provision of integrated mass transit service to Tysons Corner and throughout the length of the Dulles corridor in addition to a baseline roadway and transit network improvements is necessary to sustain the Washington metropolitan region's economic vitality and to facilitate the efficient movement of people and goods throughout the region. (0233, 0426-M –37)

Public Comment: An integrated Metrorail system is critical to the quality of life in the Dulles corridor as it would limit future congestion on our already overcrowded highways. It would further allow our business community to develop with increased flexibility and reliability of transportation for the work force. Shifting vehicle traffic to public transportation will also have a very positive effect on air quality. (0027, 0027-L –3)

Public Comment: I agree completely that something has to be done about the traffic situation in the Tysons Corner area and I do believe we need more public transportation including a means for getting to Dulles International Airport, expeditiously. (0085, 0085-L –1)

Public Comment: Whether we like it or not this area is growing beyond all previous plans or expectations. There are way too many cars on our roads. People are looking for alternate ways to travel from point to point. Roads have been widened taking homes and trees as the expansion occurs without regard for the environment. (0098, 0098-E –1)

Public Comment: The parking at Tysons Corner and Dulles Airport is often difficult and expensive. The bus service is not that great. It is practically impossible to walk to most public places because of the great distances. Some form of transportation is needed to make this area accessible to everyone including the workers who cannot afford to live close to their jobs and do not even have a car. (0098, 0098-E –3)

Public Comment: A diversified transportation is the only way to relieve congestion on the roads, an increase everyone's quality of life. It is time America caught up with the rest of the world in this regard. (0103, 0103-E –3)

Public Comment: I think something has to be done to alleviate congestion and encourage the use of public transportation to get cars off the road. But I don't know if the current plans are the answers. (0011, 0011-E –2)

Public Comment: Finally, the effort to bring the 2012 Olympics to the Metropolitan area, the opening of the Air-Space Museum Annex at Dulles, and the need to increase the ways of improving dispersion of the population in case of further attacks on the regional core are collateral benefits for completing the Rail to Dulles Project as soon as possible, but they are not integral to the need for rail. Rail is needed to address the needs of the citizens to get from here to there without wasting inordinate amounts of time sitting in a SOV consuming non-renewable resources and aggravating air quality. (0208, 0208-M –7)

Public Comment: Since I don't think -- since the commute times will be so long on this rail or bus system, I don't think it will benefit me from a time standpoint. I do think it's necessary to have some sort of transportation system to the Dulles area, though. (0262, 0262-T –3)

Public Comment: This area desperately needs more public transit, to improve the air we breathe, to get drunk drivers off the road, to get us to work in a stress-free, productive way - the reasons go on and on. (0232, 0232-L –1)

> ***Response:*** *As outlined in detail in Chapter 1 of the Final EIS, the purpose of the Dulles Corridor Rapid Transit Project is to provide transit system enhancements that would provide a direct connection to the existing Metrorail system. These enhancements would offer an alternative means of travel for the growing number of residents, employees, and visitors in the Dulles corridor as well as a high quality transit link to the Metrorail system, to improve mobility throughout the region. These proposed improvements will address the issues raised in the comments listed namely improving transportation service, providing an alternative mode of travel to that of the automobile, increasing transit ridership, and supporting current and future population growth and development in the Dulles corridor and region.*

Potential Need to Service 2012 Olympic Games

Public Comment: We urge that all steps be taken to expedite a decision as soon as possible. The greater Washington area is a candidate for the 2012 Olympic Games, an event that could showcase the area as a premier place to live and work. Should the decision be made to move ahead with a rail system that would be fully installed prior to the 2012 games, our bid would be greatly enhanced. Even if the area is selected after the rail decision is made, a fully functional system by the time the Olympics arrive would provide an efficient mode of transportation that would be both expected and appreciated by the world community as well as our own area residents. (0027, 0027-L –4)

Public Comment: And in 2012, thousands upon thousands of the arrivals will be international visitors, spectators, athletes and members of the worldwide Olympic family. Easy rail access from major airports is a hallmark of most international capitals. As perhaps the world's greatest capital, Washington, D.C. can provide no less direct service and access to its multiple Olympic venues and visitor attractions, especially if our bid is to win the 2012 Olympic host city designation to be awarded in 2005, only a few years from now. (0153, 0153-T –3)

> ***Response****: With the region no longer in contention to host the 2012 Olympic Games, Olympic travel demand was not a factor in determination of the Locally Preferred Alternative.*

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> ***Response****: With the region no longer in contention to host the 2012 Olympic Games, Olympic travel demand was not a factor in determination of the Locally Preferred Alternative.*

Importance of Seamless Service and Effects of Modal Transfers

Public Comment: It is occasionally cited that one of the main advantages offered by Metro was that it would offer seamless service to/from Dulles Airport and that changing modes at Falls Church, such as to monorail, would decrease ridership. This assumption is questionable and particularly so if a lower system cost structure permits a meaningful lower fare. Structure and elimination or reduction of the need for a subsidy. I have ridden Metro for years and frequently changed modes - Yellow Line to Blue, Blue to Orange or Red, etc. This never kept me or my colleagues from using our fine Metro system. (0266, 0390-M –2)

> ***Response:*** *As described in Chapter 6 of the Final EIS, the number of transfers required to make a trip from an origin to a destination is one of the most important determinants of passenger convenience and comfort. Research shows that there are several reasons transfers decrease the attractiveness of a transit service. The added time associated with transfers increases a passenger's overall trip time. Also, there is a discomfort associated with uncertainty about the arrival of the vehicle being transferred to, specifically whether the vehicle will be early (and therefore missed by on-time arriving passengers), late, or will arrive at all.*
>
> *Intra-system transfers (like transferring from one Metrorail line to another) make much of the burden typically associated with a transfer between two modes less onerous, but still require moving between platforms and does not provide the convenience of a one-seat ride. Therefore, this type of transfer would still affect ridership levels.*
>
> *As described in Chapter 8, it is assumed in the Final EIS that the two Build Alternatives of Wiehle Avenue Extension and Full LPA would use the same fare structure as the existing Metrorail system and that this fare would be adjusted for inflation over time. Currently the maximum fare on the Metrorail system is $3.90. For trips between most parts of the corridor and Arlington and the core, the maximum fare would apply. In addition, parking fees would apply at the Project's Metrorail stations.*

Need for Transit Service to Support Local Conditions

Public Comment: Fortunately, the Dulles corridor transit project offers us a very important option in linking our land use and transportation needs. Transit in the Dulles corridor is one of the board of trade's top transportation priorities. (0142, 0142-T –5), (0142, 0219-M –2)

Public Comment: Boston Properties is the owner and developer of the 162-acre Broad Run Technology Park located between the AOL Time Warner and MCI WorldCom campuses. We have completed one of the nine master planned buildings and the Park has an office development capacity of over one million square feet. In addition, Boston Properties has completed over three million square feet of development in the Northern Virginia Technology Corridor and has over 15 million square feet either completed or planned in the Washington Metropolitan area. Given this magnitude of office development in the Northern Virginia area, we are highly supportive of the efforts to bring rapid transit to the Dulles corridor. (0003, 0003-L –1)

Public Comment: I believe that public transportation is the only way to go to deal with the increased population in Fairfax County. Having lived in Europe for nearly 9 years, I have experienced the advantages of public transportation. The time is right for mass transit along the Dulles Corridor. The population density is high enough to warrant public transportation. I also believe that the benefits mentioned below clearly outweigh the costs:

- Reduced emissions - leads to reduced ozone- better quality of life.
- Reduced traffic jams - better quality of life.
- Reduced commuting times - higher productivity & better quality of life.
- Alternative means of transport for the disabled/elderly.

Please do consider implementing this project sooner rather than later. (0077, 0077-CC-1)

Public Comment: The National Capital Area League of Women Voters was founded to provide a forum for study and action on transportation policy in the Washington Metropolitan Area. We were among the earliest and most enthusiastic supporters for building a mass transit system. We have many positions that favor expansion of this system, addressing issues of access, safety, social equity, environmental quality, sound land use planning, regional governance, and public participation in decision-making. (0206, 0206-M –1)

Public Comment: Very happy to see public transit coming to Loudoun. I am a big supporter as someone who works in DC. The sooner the better. Please let me know if I can be involved. (0272, 0272-I –1)

Public Comment: Let me be very specific. I support the alternate transportation being considered in this process. However, we have only one opportunity to get this - get it right. Whether it is rapid rail or bus rapid transit, it needs to work for the greatest number of people. We must not get - we must get, we the people, out of our automobiles and onto the integrated public transportation system. (0148, 0250-T –1)

Public Comment: I endorse the establishment of alternative means of transportation to include rapid rail and/or bus rapid transit serving the Dulles Corridor and airport communities. Either seems to be a quite desirable capability, and now with the gridlock an absolute necessity. But it is only a good thing if it can be built and is actually used. (0148, 0148-T –1)

Public Comment: The following are some of our specific concerns:

- 2010 is a long time to wait for service.
- We may run out of money before we get there.
- Too much State and County funding is coming from the Corridor itself, since the benefits are shared throughout the region.
- The General Plans do little to help knit together north and south Reston.
- Increased densities may appear before Metrorail service and mitigation plans are implemented.
- Pedestrian and bicycle access is not yet adequately addressed. (0210, 0210-M –3)

Public Comment: We just have suffered through the dot com bust where we had the dot com bubble, and of course what happened during the dot com bubble is a lot of people invested a lot of money, ignored profitability and fundamentals, and I would suggest that as we march forward with this type of project, because I do think we need mass transportation in the Dulles corridor, and we need to do it the most cost-effective way possible, but we ought to get the fundamentals right. (0136, 0168-T –1)

Public Comment: The Northern Virginia transportation line strongly supports a balanced regional network that includes improved Dulles corridor transit. The issue is what priorities do the most to reduce congestion and when these investments should be made. (0446, 0146-T –2)

Public Comment: Recognizes the concerns of many people regarding growth in the area. Fully supports preserving open spaces and historical sites, however the growth is inevitable, so responsible planning is necessary for the future. Believes that the Dulles Corridor Rapid Transit Project is an important part of an integrated growth strategy and should be pursued. (0036, 1-01)

> ***Response:*** *Comment noted. Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles corridor and region are important to us and have been considered by decision-makers in the selection of the Locally Preferred Alternative (LPA).*

Relationship to Other Transportation Studies/Projects

Public Comment: That is particularly important, as I will note for the record. There is an ongoing beltway DEIS that has other impacts on the mall property that we would encourage WMATA and the Commonwealth to consider as well. These projects are not in isolation but in fact work together. (0143, 0143-T –6)

> ***Response:*** *The Capital Beltway Improvements Draft EIS presents several alternatives that are under consideration. At the time of the Final EIS, a preferred alternative has not been determined. If a preferred alternative had been selected in time for incorporation into the Final EIS, the exact interactions with the mall would have been included in the secondary and cumulative effects analysis in Chapter 9 of the Final EIS. The Dulles Corridor Rapid Transit Project, now in preliminary engineering, is being coordinated with the Virginia Department of Transportation, which is conducting the Capital Beltway study, in order to ensure that the two projects will accommodate the each other and that all impacts are considered.*

Public Comment: At the Tyson station areas, there is a need for refinement of station locations while considering the eventual interconnection with a Purple Line linked to Metro at Dunn Loring and points in Maryland. (0158, 0475-L –9)

> ***Response:*** *Connections to the future transit improvements cited in this comment were considered under the Metrorail Alternative, Alignment T3. This alignment was evaluated in technical memoranda prepared during Initial and Intermediate screening. The plans for these future transit improvements are not at a level that would make it appropriate or feasible to conduct detailed coordination efforts related to those improvements. Given these findings, Alignment T3 was not carried forward. Now that the Metrorail Build Alternative has been selected as the LPA, DRPT and WMATA will continue to fully cooperate and participate with the coordination efforts of the groups studying these future transit improvements.*

Project Purpose, Goals, and Outcomes

Public Comment: That DEIS goals do not include traffic congestion reduction. In fact, the DEIS says that no transit alternative considered reduces corridor or regional congestion. (0446, 0218-M –4)

Public Comment: What is the purpose of rail to Dulles? If to reduce traffic congestion, the present study shows that it will increase it. Why? (0189, 0448-E –9)

Public Comment: That the goals do not include improved corridor vehicular travel times. In fact the DEIS says that travel times for most corridor travelers are not improved by this project. (0446, 0218-M –5)

Public Comment: Other DEIS items the alliance finds of concern are, one, that the goals do not include traffic congestion reduction. In fact, the DEIS says that no transit alternatives considered reduces corridor or regional congestion; that the goals do not include improved corridor vehicular travel times. In fact, the study says that travel times for most corridor travelers are not improved by this project. (0446, 0146-T –5)

Public Comment: No one seriously contends that even after spending all this money traffic congestion will be less than it is now. Why don't we spend just a fraction of this money in ways that we know will reduce congestion? (0162, 0162-T –4)

Response: *As identified in Chapter 1 of the Final EIS, the goals for the Dulles Corridor Rapid Transit Project include improving transportation service and increasing transit ridership, among others. One of the project purposes is to provide an alternative to auto travel to help meet increases in travel demand. However, the commenter is correct in stating that the two Build Alternatives of the Final EIS would not reduce traffic on most regional roadways. As shown in Section 6.2.3, only volumes on the DIAAH decrease enough to result in an improved level of service. The Metrorail extension, in combination with the planned transit-oriented urban form, will help to increase overall mobility in the corridor, the counties, and the region. Furthermore, it will increase overall transportation capacity and person throughput in the corridor.*

Consideration of Regional Context

Public Comment: Achieving higher transit ridership, creating additional transit capacity and constructing stations around which to focus future densities are laudable goals. However, Dulles transit is a huge, complex issue that also must be looked at in a larger regional context. Something the Draft Environmental Impact Document (DEIS) doesn't do. (0446, 0218-M –2) (0446, 0146-T-3)

Response: *Though many of the effects considered in the Final EIS are related to corridor-level impacts, the evaluation also includes anticipated impacts on regional transit ridership, roadways, and air quality. Other highway and transit improvements that would address the existing and potential future deficiencies in Northern Virginia's transportation system are recommended in the Northern Virginia 2020 Plan, the Statewide Transportation Plan, and local comprehensive plans. This program of improvements is being evaluated and developed by VDOT, DRPT, and others.*

Effectiveness in Addressing Suburban Transportation Needs

Public Comment: States that the selected Locally Preferred Alternative is based on an incomplete and flawed analysis, and that it does not solve the suburban transportation problem that it is supposed to address. (0294, 1-01)

Response: *The Project Team agrees that the selected Locally Preferred Alternative will not solve the congestion problems of the region; however, transit service in the Dulles corridor would provide an alternative to the automobile, while also increasing the overall transit capacity of the corridor and region.*

Diversity of Potential Benefits

Public Comment: It appears that many of the comments were from people who stand to benefit directly from building a rail system or developing along the rail line. There appeared to be very few comments from people who were actually interested in using transit.(0294, 1-02)

Response: *Comments on the Final EIS and Public Hearings Report were received from a variety of stakeholders representing the views of commuters, local residents, business owners, property owners, and local, state, and federal agencies.*

Need for Facilities to Adequately Support Anticipated Demand

Public Comment: I do have 2 major concerns: 1. Parking and Access: Will I have to pay to use the Dulles Toll Road to get to the new Dulles Metro stop? Will there be enough parking? Lots of folk who would normally use Vienna, like me, would turn to the Dulles stop. The WMATA should have a good idea of what the rider numbers are and how they "normally" change over time before plans are laid and carried out. (0108, 0108-E –2)

Response: *All stations will be accessible from the local street network so riders will not have to use the Dulles Toll Road to access stations. Parking at each station was designed and sized based on projected demand for spaces, site constraints, cost, and local land use plans. Consultation with local government was also an integral part of the sizing of parking facilities. The parking capacity identified in the Final EIS (see Table 6.3-3, page 6-39) and supporting documents such as General Plans – Facilities reflect this analysis and design process.*

B. Supplemental Draft EIS Comments

Local Agency Comments

Relationships to Other Planning and Transportation Initiatives

Local Comment: While we understand the Dulles Corridor Rapid Transit System is much further ahead of the Beltway Corridor rapid transit system, there is still a need and necessity to consider to the fullest extent possible how and where a Beltway Corridor rapid transit system will interface with the Dulles Corridor Rapid Transit System. Further, is it our understanding that the Commonwealth of Virginia recently examined potential Beltway Corridors and has additional information that may prove useful in the Dulles Corridor analysis that we are requesting. It is very unlikely that another public opportunity for planning system integration will occur in the Tysons Corner area.

What we are seeking is a graphical depiction of the general connection of the Beltway Corridor to the Dulles Corridor Rapid Transit System, so that in future years the figure in the Final EIS is a reminder and starting point for the facilities planning of that transfer facility. (0079, 1-01)

Response: *Montgomery County has clarified its request that the Dulles Corridor Rapid Transit Project recognize to the extent possible the interface between the Project and a future Beltway rapid transit system. In response, the Project Team has inserted a figure on page 1-15 of the Final EIS to serve as a reminder and starting point for future planning.*

Public Comments

Public Comment: The project team completely ignored the fact that the COG Board approved Version 6.3 in February '03, well in advance of the beginning of the SDEIS on LPA 1. (See attached again). The statement in the hearing report that Version 6.3 was not available until October '03 is false. Is the project team trying to avoid using 6.3 because the Loudoun Comp plan has fewer households that would feed into the rail system than the pre-2001 plan? Lastly, are you now saying that you are NOT going to use the official COG Version 2 travel demand forecasting model in the final EIS, as stated on page 94 of the SDEIS hearing report, despite the statement in the supplemental hearing report on the EIS: "If relevant, Version 2 may be utilized during the final EIS." Are you now saying Version 2 has no relevance to Dulles Rail? (0016, 1-01)

Response: *As described in the Supplemental Draft EIS Public Hearings Report (February 2004) the Round 6.3 land use projections were officially adopted by the MWCOG Board on October 8, 2003 and were not available for the Supplemental Draft EIS. More importantly, the purpose of the Supplemental Draft EIS is to provide additional opportunities for the public and agencies to comment on refinements that have been made to the LPA since the publication of the Draft EIS public hearings report. As such, the analysis documented in the Supplemental Draft EIS must use assumptions that are consistent with those used in the Draft EIS, as per CEQ regulations for implementing NEPA, parts 1500-1508. The Round 6.3 land use forecasts have been used in the analyses of the Final EIS.*

2.0 Alternatives Considered

A. Draft EIS Comments

Federal Agency Comments

Need for Implementation of the Full Metrorail Alternative

Federal Comment: BRT stations and stops should be designed as if they were rail stations. (0492 02)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS. As described in Chapter 2 of the Draft EIS, BRT stations would have been similar to Metrorail stations. BRT stops would have had Metrorail like amenities, such as a fare pavilion with ticket vending machines and faregate arrays. Stops may also have included bus bays for feeder buses, a Kiss & Ride area for short-term parking, and commuter park-and-ride spaces.*

Federal Comment: For portions of the project in the freeway medians, air rights above the freeway right-of-way should be transferred and developed so that walkable uses can be placed within ¼ and ½ mile from the stations. (0492 03)

> ***Response***: *As stated in Chapter 5 of the Final EIS, the land use plans adopted by local government within the Dulles Corridor all contain guidelines to support transit, higher densities, mixed-use development, and walkable, bike-friendly development patterns in close proximity to the transit stations. DRPT will work with the local governments to support access to transit stations for pedestrians and cyclists and to implement transit-oriented development initiatives, although implementation of this form of development on private land is under the jurisdiction of the local government's in the area.*
>
> *With respect to air rights development above Metrorail stations, the Project Team acknowledges that the two Counties govern land use and that FAA, MWAA, VDOT and TRIP II, as the owners and operators of the DIAAH, Dulles Toll Road and Dulles Greenway, must be involved. Therefore, the Project Team will await any initiative of the two Counties with the involvement of the highway owners and operators.*
>
> *Pedestrian walkways are provided from stations in the median of the highways to both roadsides.*

State Agency Comments

Recognition of Programmed Study Area Highway Projects

State Comment: Pg. 2-13 - The adopted FY-01 TIP/CLRP specifically identifies the following projects in the Route 28 Corridor between I-66 and VA 7:

- Partial interchange at Barnsfield Road, open to traffic in 2003
- VA 606 Interchange, open to traffic in 2005
- VA 625 Interchange, open to traffic in 2005
- VA 606 Interchange, open to traffic in 2005
- Westfields Road Interchange, open to traffic in 2006
- McLearen Road Interchange, open to traffic in 2006
- Innovation Avenue Interchange, open to traffic in 2006
- Study widening to 8 lanes and upgrading to a freeway between I-66 and the Dulles Toll Road, study to be
- completed by 2020
- Study upgrading to a freeway between the Dulles Toll Road and VA 7, study to be completed by 2020

- The draft FY-03 TIP/CLRP specifically identifies the following projects in the Route 28 Corridor between I-66 and VA7:
- Partial interchange at Barnsfield Road, open to traffic in 2003
- VA 606 Interchange, open to traffic in 2007
- VA 625 Interchange, open to traffic in 2005
- Upgrade VA 28 to a freeway (construct/interchanges/eliminate at-grade access points) and widen to eight lanes between I-66 and VA 7, open to traffic in 2015. Interchanges and widening could occur in the 2006 to 2015 time frame with all improvements open to traffic by 2015. (0421, 0421-A –15)

Response: *For the analyses in support of the Final EIS, the information provided by the commenter has been used to identify the significant roadways.*

Need to Reference Planning and Programming Documents

State Comment: Planned Roadway Improvements - It is suggested that, when discussing Planned Roadway Improvements, the DCRTP DEIS report make specific reference to their source official document(s): the Six Year Program, the Transportation Improvement Program (TIP) and the Constrained Long Range Plan (CLRP), and the Fairfax County Comprehensive Plan. Please refrain from using statements about "VDOT's decisions" that are not backed up by the approved Six Year Program or referred to in official correspondence. For projects beyond the Six Year Program time horizon, reference should be made to the source document: TIP, CLRP as appropriate (noting that these documents are the result of cooperative efforts of multiple agencies at various levels -- federal, state, local - - and subject to public review), and/or the Fairfax County Comprehensive Plan. Example planned improvements that need source clarification. (0421, 0421-A –17)

Response: *As suggested, all discussion of transportation programs and projects, including those of VDOT, has been appropriately referenced in the Final EIS.*

Need for Rail Improvements to Meet Existing and Future Demand

State Comment: Rail also responds to the phenomenal growth expected in this corridor; 56 percent in population and 71 percent in employment by 2025. With a capacity to carry 50 to 60,000 passengers maximum per hour, rail can in the future not simply meet the needs of today, but it can meet the needs of tomorrow. Rail will help us meet the needs of a rapidly expanding Dulles Airport, where passenger trips forecast for 2010 have been increased from 30 million to 37 million. Rail will help meet the demands of the National Air and Space Museum, which is expected to generate 3 to 5 million visits per year. (0131, 0163-T –7)

State Comment: I will highlight just a couple of the major reasons why I say we should move forward with rail now. First and foremost is the tremendous impact on the quality of life that rail transit will have for residents and employees in the corridor. People will be able to choose to take high quality, efficient rail transit service long envisioned for the corridor. Rail transit will enhance mobility and access to jobs and to cultural and educational facilities throughout the region. By providing a high capacity alternative to the single-occupant vehicle, we can use incentives in transportation measures to reduce vehicle miles of travel and improve air and water quality, a particularly important objective now. (0131, 0131-T –3)

State Comment: The Dulles Corridor Rail Association recommends the rail option now. It responds to our needs today, but most importantly, it provides a key element for a quality future for our communities in the corridor. Rail enhances our mobility in the corridor and eases access to jobs, but it also, and I think importantly, opens the region to a myriad of cultural and educational programs that are available throughout the area. (0131, 0163-T –6)

State Comment: I come to you tonight as an elected official saying that from my studies and my conclusions, looking at the alternatives proposed, I recommend that we choose as the Locally Preferred Alternative the rail option. (0131, 0239-T –2)

State Comment: And finally, as Mr. Klinge had mentioned, I chair a group called the Dulles Corridor Rail Association, and likewise our analysis says that we should go to the rail option. (0131,0239-T –4)

State Comment: The organizations I have just listed [Dulles Rail Now coalition] have studied the alternatives analyzed in the draft environmental impact statement of the Dulles Corridor Rapid Transit Project, and recommend that the Commonwealth of Virginia select as the Locally Preferred Alternative the rail option that produces the most ridership and has the most flexibility for increasing ridership in the future. While the organizations in the coalition will testify at the hearings on issues of particular concern to our individual organizations, we are united in our support of bringing rail transit to the corridor of the region that is second only to the District of Columbia in terms of employment, and contains several major activity centers. (0131,0239-T –5)

State Comment: Then in my capacity as chairman of the Dulles Corridor Rail Association, as I indicated, we are a membership organization made up of business and community leaders. We likewise have looked at the alternatives proposed in the project study. We unequivocally support the rail option now. (0131,0239-T –6)

State Comment: The organizations I have just listed issued a statement yesterday saying that having studied the alternatives analyzed in the draft environmental impact statement of the Dulles Corridor Rapid Transit Project, recommends that the Commonwealth of Virginia select as the Locally Preferred Alternative the rail option that produces the most ridership and has the most flexibility for increasing ridership in the future. (0131, 0163-T –1)

State Comment: Having studied the alternatives analyzed in the study, I strongly support Metrorail to Dulles Airport and Loudoun County as the locally preferred alternative. This alternative will provide both the highest transit ridership and the highest number of new riders, resulting in a higher percentage of people using transit. More commuters will benefit from shorter travel times than other alternatives. The best option is to build rail the full length of the project from the beginning. Most people living in my Senate district, which extends from McLean to the Loudoun County border, clearly prefer this alternative. They view rail as an attractive way to commute. They also want to have the entire system at the earliest possible date. (0298, 0298-L –1)

State Comment: Likewise, as an organizer with others of the Dulles Rail Coalition Now, I want to bring to you a statement brought forth by a number of organizations supporting again the rail option. (0131,0239-T –3)

State Comment: But for the decision before us tonight, that decision being the Locally Preferred Alternative, the Dulles Corridor Rail recommends that we move to rail now. (0131, 0163-T –10)

State Comment: We having studied the alternatives analyzed in the draft environmental impact statement of the Dulles Corridor Rapid Transit Project, recommend that the Commonwealth of Virginia select as a Locally Preferred Alternative the rail option that produces the most ridership and has the most flexibility for increasing ridership in the future. To optimize ridership, continuing planning efforts should focus on improving station access and transit-oriented development around the stations. While we are testifying at the hearings on issues of particular concern to our individual organizations, we are united in our support of bringing rail transit to a corridor of the region that is second only to the District of Columbia in terms of employment and contains several major activity centers. Rail would serve Tysons Corner and is able to accommodate the projected growth in corridor transit trips. The coalition supports rail now. We will work with the region's elected leadership to bring rail to the Dulles corridor by 2010, sooner if feasible. (0131, 0131-T –1)

State Comment: While we may, speaking of the organizations that I have listed, testify at the hearings on issues of particular concern to our individual organizations, we are united in our support of bringing rail transit to a corridor of the region that is second only to the District of Columbia in terms of employment and contains several major activity centers. (0131, 0163-T –2)

State Comment: Like the vast majority of residents and businesses in my district, I enthusiastically embrace the prospect of Rail Now to Dulles. And I look forward to assuring that it is done right. (0298, 0298-L –9)

State Comment: While these are troubling times for the national and Virginia economies, the project's feasibility may be increased. Competition for labor and materials is likely to work to reduce the cost of construction. Interest rates are low. This is the time to accelerate construction of the project. We need to maintain the effort rail is fully extended to Route 772 in Loudoun County. (0131, 0434-E –7)

State Comment: Now turning to my role a chair of the Dulles Corridor Rail Association, DCRA has been advocates for rail since we were organized four years in August of 1998. The analyses that have been done as part of the work preparing the Draft EIS and the facts that emerged about the alternatives under study support our goal of seeing rail adopted as the Locally Preferred Alternative. We urge the Commonwealth to reach agreement with the Dulles transit partners, the private sector team, to engineer and complete construction of the entire rail system as quickly as possible. (0131, 0131-T –2)

> ***Response:*** *Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to the Project Team and were considered by decision-makers in the selection of the Locally Preferred Alternative (LPA). The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative.*

State Comment: The Virginia Department of [Environmental Quality] is of the opinion that any of the "build" alternatives described in the Draft EIS would be preferable to the no-action alternative because of the beneficial impact of improved mass transit on congested areas in Northern Virginia, including Tysons Corner. (0407, 0407-A –18)

> ***Response****: Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to the Project Team and were considered by decision-makers in the selection of the Locally Preferred Alternative). The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative.*
> *The Virginia Department of Environmental Quality's participation in the public hearings, agency coordination process and opinion as to which alternatives would best serve the needs of the Dulles Corridor and region were incorporated into that decision-making.*

Need for Sensitivity in Station Design

State Comment: Special sensitivity is needed in the design of the Reston stations to encourage bridging the Corridor, which currently severs the community. The design of rail stations should further the goal of linking the opposite sides of the corridor. The station designs should not preclude the possibility of air right linkages across the Dulles Corridor. (0298, 0298-L –6)

> ***Response:*** *With respect to air rights development above Metrorail stations, the Project Team acknowledges that the two Counties govern land use and that FAA, MWAA, VDOT and TRIP II, as the owners and operators of the DIAAH, Dulles Toll Road and Dulles Greenway, must be involved. Therefore, the Project Team will await any initiative of the two Counties with the involvement of the highway owners and operators.*
>
> *Pedestrian walkways are provided from stations in the median of the highways to both roadsides.*

Need for Consistency with Fairfax County Trail Plan

State Comment: Ease of access by pedestrians, buses and bicyclists, including conformance with Fairfax County's County-wide Trail Plan, will be important measures of the success of our planning and implementation of this critical link in our transportation network. (0012, 0468-L –3)

State Comment: We also suggest that with the adoption of rail as the Locally Preferred Alternative that the counties move forward with the station access planning to ensure that the station area development provides an enhanced bicycle and pedestrian access facility as well as feeder bus services. (0131, 0131-T –9)

State Comment: Similarly, we request that future engineering work ensure optimum station access by pedestrians, bicyclists, and feeder buses. This has been an issue of particular concern at the Reston Parkway and Wiehle Avenue stations in Reston, at Route 772 and at the central stations is Tysons Corner. Now that the property owners group is coalescing as LEADER (the Landowners Economic Alliance for the Dulles Extension of Rail), there is even more reason to work closely with property owners adjacent to the rail stations and track alignment. They are in a position to help fund some of the station access enhancements. (0131, 0434-E –3)

> ***Response****: DRPT is the Project's sponsor and initial owner. However, the responsibility for modifications of sidewalks and trails as part of station access is with Fairfax County, Loudoun County, Town of Herndon, City of Falls Church and VDOT. DRPT will, though, coordinate with these jurisdictions and agencies during preliminary engineering and final design to determine the improvements for station access beyond the station site plans, as well as their ownership and maintenance. Close communication would also occur with the Fairfax County Non-Motorized Transportation Committee, private landowners and developers and other stakeholders. The Fairfax Countywide Trails Plan and the Loudoun County Trails plan have been and will be consulted. Comprehensive pedestrian circulation beyond the station site plans may be implemented in conjunction with other planned developments, County, and/or State projects and/or as elements of the Fairfax Countywide Trails Plan and the Loudoun County Trails plan.*

Need for Adequate Access and Parking at Stations

State Comment: To avoid disruption of communities and to encourage rail usage, adequate structured parking as well as pedestrian and bicycle access are required system-wide. (0298, 0298-L –7)

> ***Response:*** *Chapters 2 and 6 of the Final EIS identify the existing and proposed park-and-ride and Kiss & Ride facilities that would allow for automobile access to the stations of the Metrorail Extension.*
>
> *The Facilities General Plans (Final EIS Volume V) identify structured park-and-ride facilities and pedestrian access provisions within the station site plans. Designs will be developed in more detail during preliminary engineering and final design.*

Regional Agency Comments

Need to Reduce Operating Times

Regional Comment: Independent market research reports that Dulles Corridor ridership is very sensitive to journey time and service standards. Rail and Bus Rapid Transit (BRT) options proposed in the DEIS offer trip times that in most instances are similar to or longer than the single occupancy vehicle traveling under the super congested conditions of 2025. This is unacceptable. It would depress ridership and undermine the return on the taxpayer's investment. As part of the remedy for this serious deficiency, a Corridor-to-Core express track should be built in the corridor median between Route 123 and Route 7, in addition to the four-station Tysons Corner detour proposed in options T6 and T9. Trains using the express track would cut 17 minutes or more from the journey time between stations in the Corridor and those in the region's inner core, without undermining the attractiveness of service to Tysons Corner. The precise ratio of express trains should be determined by market demand. The express track would optimize rail's appeal for:
a) Riders from the Dulles Corridor and Dulles Airport to inner core destinations;
b) Riders from the inner Core to Corridor destinations west of Tysons Corner including Dulles Airport.

Construction cost of the Tysons Corner express track should be minimal as the right-of-way exists and no additional stations, elevated sections, etc. would be needed. At the very least, the option to create a Tysons Corner express track should be maintained as part of the Commonwealth's preferred local alternative. Table 1 demonstrates the significant timesavings offered by an express train bypassing Tysons Corner in comparison to DEIS projections for T6, T9 and the baseline. Figure 1 illustrates the alignment of the express track. Requested Action: Include an express track in the Corridor between Route 123 and Route 7 as part of the locally preferred alternative. (0133, 0405-L –4)

> ***Response****: The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. Alignments T1, T4 and T9 were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*
>
> *In response to the above requests, the Project Team evaluated the suggested alternative using the same social, environmental, economic, and transportation factors used for the evaluation of alternatives documented in the Final Alternatives Analysis Report (May 2001). This new alternative, called Alignment T12, was not recommended for further consideration in the Dulles Corridor Rapid Transit Project. Alignment T12 would have numerous deficiencies relative to the alternatives previously considered in the Draft EIS. These deficiencies include increased costs, substantial impacts associated with shifting roadways to accommodate the alignment, reduced ridership, and operational complications.*
>
> *The full evaluation for Alignment T12 is documented in a technical memorandum, now part of the Final Alternatives Analysis Report Addendum).*

Concern for Appropriate Aesthetic Integration

Regional Comment: The rail system should blend with its surroundings. The elevated concept, suggested in the draft EIS, we think underlines the need for a talented designer. (0133, 0133-T –4)

Regional Comment: The rail system should blend with its surroundings. The elevated designs suggested in the DEIS underline the need for a talented designer. (0133, 0221-M –3)

Regional Comment: Architectural standards and landscaping: A talented designer should be engaged to ensure that stations and any elevated structure blend with their surroundings and that the corridor remains attractively landscaped. Good design need cost no more than bad, and indeed costs significantly less if the attractive proposals win citizen support instead of opposition. (0133, 0405- L- 6)

> ***Response:*** *The design of the elevated guideway as well as stations and landscaping will be refined during preliminary engineering and final design. Dulles Corridor station architecture may incorporate WMATA's "New Look" design that has been part of the New York Avenue, Morgan Boulevard and Largo Town Center Stations, all opening in late 2004. This concept retains key principles of Harry Weese's original design, with more inviting and better-defined entrances, an emphasis on customer information, and an open, graceful, and light feel through the use materials such as steel and glass for enclosures.*

Need for Integration of Adequate Pedestrian Access

Regional Comment: The Airports Authority intends on preserving the right-of-way for future underground pedestrian connections to the Terminal from the vehicle parking north of the Terminal to remove pedestrian-vehicle conflicts and increase capacity of the commercial vehicle road. This pedestrian connection would be similar to the pedestrian connection that this project proposes to use for rail passengers to gain access to the Terminal. The current plans do not provide sufficient detail but it appears that the east portion of the Dulles Station and the #10 double crossover do not allow sufficient clearance between existing grade and the top of the station structure for the pedestrian connection to cross over the top of the station. (0440, 0440-A –13)

Response: *The future underground connection cited in this comment is assumed to pass through the train room, not above the station structure. This future underground pedestrian connection could be constructed as a separate walkway, and/or as a second entrance to the station. DRPT and WMATA will continue to coordinate with MWAA as the design of the Dulles Airport Station is refined during preliminary engineering and final design.*

Need for Adequate Parking Facilities

Regional Comment: Also as we see a majority of this rail extension serving commuters, we have some concern whether adequate parking is being planned for in this project. The Airports Authority is prepared to make reasonable accommodations for commuters and commuter parking on airport property in the form of the BRT maintenance facility, the Dulles North Transit Center, and future parking accommodations at the Route 606 Station. We are willing to consider sitting the rail inspection and maintenance facility on Airport property provided there are no other reasonable and prudent alternatives. However, these regional commuter accommodations proposed on Dulles property represent the upper limit of what the Airports Authority may be willing to accept. To help realize the full potential of this rail extension, accommodations for additional parking beyond what is proposed in the draft EIS should be further considered. (0440, 0440-A –3)

Regional Comment: The rail stations should be integrated with land use in order to increasing ridership and reduce the subsidy burden on the region's taxpayers. The lack of parking at Rt. 772 and the location of parking at Rt. 606 are examples of the many refinements required in the design phase. (0133, 0221-M –4)

Response*: As stated in Chapter 5 of the Final EIS, the land use plans adopted by local government within the Dulles Corridor all contain guidelines to support transit, and walkable, bike-friendly development patterns in close proximity to the transit stations. Parking at each station/stop was designed and sized based on projected demand for spaces, site constraints, cost, and local land use plans. Consultation with local government was also an integral part of the sizing of parking facilities. As evaluated in the SDEIS as a revision to the selected LPA and further documented in the Final EIS and final General Plans, the Project Team reconfigured the park-and-ride program in Loudoun County. Route 772 Station increased from no park-and-ride facility to two structures of 3,300 spaces combined. Route 606 Station decreased from 4,750 spaces to 2,750 spaces.*

Local Agency Comments

Concern for Potential of Pedestrian/Auto Interactions

Local Comment: Impacts - It is troubling that little consideration was given to pedestrian improvements as a significant number of young people traverse this area due to the proximity of schools. We see pedestrian and vehicular conflicts increasing as enrollments and car trips increase in this small geographic area. There are no plans for widening either US 29 or VA Route 7 within the City [of Falls Church] and the City's Adopted Comprehensive Plan and Streetscape Plan do not recommend any future street widening in the City. As a result, the existing streets will have to accommodate any increased vehicular traffic. (0122, 0122-A –22)

Response: *It is not within the scope of the Dulles Corridor Rapid Transit Project to mitigate existing traffic/roadway capacity problems on Route 7 and Route 29 within the City of Falls Church.*

Implementation of the Project would result in increased off-peak service frequencies for eastbound trains at the East Falls Church Station. However, operating plans for the Wiehle Avenue Extension and Full LPA assume no additional feeder bus service, nor any new parking for the off-peak period for this station. Because the station's existing park-and-ride facilities are

typically full by 8:00 AM on most weekdays and parking is controlled on local streets, it is not anticipated that increased off-peak Metrorail frequencies would generate additional traffic in and around the East Falls Church Metrorail Station. While the Project Team does anticipate other effects, as there would be no change from existing conditions, meetings with the City of Falls Church were held to discuss the issues of overflow parking and cut-through traffic due to the selected LPA, the Metrorail Extension.

The demand forecasting model used in the Final EIS utilizes an approach called a nested logit model. This model approach is a detailed method for first taking all person trips and distributing them between different modes (e.g. automobile, transit, other mode). The total person trips are modeled based on the number and density of residences in a geographic area called a Transportation Analysis Zone (TAZ). For transit trips the model then distributes trips between different modes of arrival (e.g. walk, auto, feeder bus). In assigning trips to a specific mode of arrival, the model considers total trip time, including time required to access the station by each mode, whether a walk access path exists, available parking, and available feeder bus service. This model is quite detailed and can be further fine-tuned by splitting the geographic analysis zones that are the foundation of the modeling process to more accurately reflect where people live and work within a densely developed area such as Tysons Corner.

Public Comments

Successful Operating Parameters of the Preferred Alternative

Public Comment: The Dulles Corridor has the potential to become one of, if not the most heavily used section of the region's Metro rail system. The potential is conditioned upon:

a) Effective service from the entire Corridor to Tysons Corner;
b) Optimization of the transit system with land use, including the future evolution of mixed use air rights developments above stations where such developments would enhance county objectives and where they would be compatible with neighborhood desires;
c) Careful integration of stations with their surrounding land uses such that the maximum number of people are attracted to transit from the automobile;
d) Journey times for the commuter, which over the longer distances at least, are comparable or superior to automobile travel during the peak hour times projected for 2025 and beyond;
e) A service oriented system that meets the requirements of the sophisticated, well-educated denizens of the Dulles Corridor.
f.) A system that is operated as a transportation system designed to attract ridership rather than as a heavily subsidized social service - the normal attitude toward transit.

Requested Action: Provide flexibility in the locally preferred alternative to enable the design team to meet these objectives. (0133, 0405-L –3)

Response: *Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to the Project Team and have been considered by decision-makers in the selection of the Locally Preferred Alternative (LPA). The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner and with Yard Site Y15 on Airport property as the Locally Preferred Alternative. The LPA will be constructed in two phases, the first being the Wiehle Avenue Extension.*

Public Comment: The rail stations should be integrated with land use in order to increasing ridership and reduce the subsidy burden on the region's taxpayers. The lack of parking at Rt. 772 and the location of parking at Rt. 606 are examples of the many refinements required in the design phase. (0133, 0221-M –4)

Response: *As stated in Chapter 5 of the Final EIS the land use plans adopted by local government within the Dulles Corridor all contain guidelines to support transit, and walkable, bike-friendly development patterns in close proximity to the transit stations. The Project Team will work with the local government to integrate transportation with land use. As evaluated in the SDEIS as a revision to the selected LPA and further documented in the Final EIS and final General Plans, the Project Team reconfigured the park-and-ride program in Loudoun County. Route 772 Station increased from no park-and-ride facility to two structures of 3,300 spaces combined. Route 606 Station decreased from 4,750 spaces to 2,750 spaces.*

Need for Improved Transit Access to Airport

Public Comment: Today there are four lanes in the Dulles Corridor dedicated to airport access, and two further lanes, for a total of six can be added. An earlier airport access study prepared for the task force showed that reasonable levels of service on the Dulles airport access road in 2010, without rail, would require eight lanes between Route 28 and the capital beltway. (0132, 0132-T –2)

Public Comment: Today there are four lanes in the Dulles corridor dedicated to airport access, and two further lanes for a total of six can be added. An earlier airport access study prepared for the Task Force showed that Reasonable levels of service on the Dulles Airport Access Road in 2010 without rail would require 8 lanes between Route 28 and the Capital Beltway. Rail between the region's designated international airport and the National Capital is long overdue. Dulles Airport is expected to increase passenger trips from 20 million in 2000 to 37 million by 2010 and expects to double the number of employees from 15,000 to 30,000. The Dulles Center of the National Air and Space Museum projects 3 to 5 million visitors per year when it opens in December 2003. (0132, 0222-M –1)

Response: *As shown in Chapter 6 in the Final EIS, the Dulles International Airport Access Highway currently operates at Level of Service (LOS) C during the peak period. This level of service represents moderately congested conditions and relatively free-flow travel speeds. By 2025, the DIAAH is expected to operate at LOS D without the Full LPA and at LOS C with the Full LPA. A level of service at D represents more congested conditions, but speeds are only reduced moderately, and, in practice, it is widely considered an acceptable level of service.*

Suggested Alignment Modification

Public Comment: The WATF recommends that the rail option offering the greatest potential ridership should be selected by the Commonwealth Transportation Board as the locally preferred alternative. (0133, 0405-L –1)

Response*: Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to the Project Team and were considered by decision-makers in the selection of the Locally Preferred Alternative (LPA). The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner and with Yard Site Y15 on Airport property as the Locally Preferred Alternative. The LPA will be constructed in two phases, the first being the Wiehle Avenue Extension.*

Need for Bus Service Improvements

Public Comment: Reiterates his support for the proposed Metrorail project, and supports some form of bus service, preferably express bus service, prior to the arrival of Metrorail. (0096, 2-01)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner and with Yard Site Y15 on Airport property as the Locally Preferred Alternative (LPA). The LPA will be constructed in two phases, the first being the Wiehle Avenue Extension.*

For the Wiehle Avenue Extension, corridor express bus service, formerly referred to as 'premium bus', will be a feeder system for the interim end-of-line Wiehle Avenue Station. It will be a high quality service meant to replicate rail service to the greatest degree possible until rail is extended to Loudoun County in the second phase of the project. The service would mimic rail in terms of service to station areas served by rail (Route 772, Route 606, Dulles Airport, Herndon-Monroe, Reston Town Center, and Wiehle Avenue) service frequency, hours of service, and the fact that there would be high quality service in the reverse peak direction. The Corridor express bus service will not replace express service currently run by Loudoun County into Rosslyn and downtown Washington.

B. Supplemental Draft EIS Comments

No comments pertaining to this topic were received

2.1 Alternatives Previously Considered

A. Draft EIS Comments

Public Comments

Need to Adequately Consider Lower Cost Alternatives

Public Comment: As a part of the necessary re-examination, alternatives that were given short shrift in the original planning need to be looked at again. In particular, a light rail system running from Tysons Corner to Dulles Airport and Loudoun County should be considered. Metro from Falls Church to Tysons, fine-- but then light rail to Dulles. Whatever the technical reasons for choosing heavy rail Metro, the sheer cost of a Metro extension tells us that we have no choice but to look a new at less expensive alternatives. Light rail costs about $25-40 million per mile including rail cars. Metro costs projected for this project are about $140 million per mile without rail cars. (0151, 0297-E –5)

Public Comment: Alternatives that were given short shrift in the original planning needs to be looked at again. In particular, a light rail system running from Tysons Corner to Dulles airport and Loudoun County should be considered. Metro from Falls Church to Tysons, fine, but then light rail to Dulles. Whatever the technical reasons for choosing heavy rail metro, the sheer cost of a metro extension tells us that we have no choice but to look anew at less expensive alternatives. Light rail costs about $25-40 million per mile, including rail cars. Metro costs projected for this project are about $140 million per mile, without rail cars. Beyond that proposal, we have a series of questions that reflect our concern. (0151, 0151-T –4)

***Response:** A number of other modes were considered for the project, including light rail. Light rail was studied as part of the Dulles Corridor Transportation Study (June 1997), a major investment study, and was requested again during the Scoping Process for the preparation of the Draft EIS. As part of the Draft EIS process, the Project Team reconsidered light rail. The Project Team reviewed the findings of the analysis performed during the Major Investment Study and found the analysis to be valid. Therefore, light rail was eliminated from further consideration and was not fully analyzed in the Draft EIS. The reasons for the elimination of this alternative are fully detailed in the Final Alternatives Analysis Report (May 2001), and are summarized below.*

Light rail is often proposed as an alternative to heavy rail as a lower cost solution, because it can operate in existing roadway rights-of-way, and does not require a fully-grade separated alignment. However, in the Dulles Corridor, light rail would have followed the same alignment as the Metrorail Alternative. Different alignments for light rail, including off-median alignments that directly served town centers in the corridor, were considered during the MIS, but were determined to be less cost effective than a median alignment. In locations where the Metrorail Alternative diverges from the median and is grade-separated, light rail would also have had to be grade-separated. In Tysons Corner, light rail would have had to be elevated or underground to avoid existing traffic; and at Dulles Airport, light rail would have needed to be underground to avoid

visual impacts to the historic airport terminal. For the remainder of the alignment, both light rail and Metrorail would operate at grade; therefore, light rail would not have likely offered a substantial cost savings over Metrorail.

The Metrorail Extension capital costs average $150 million per mile, including all vehicles, right-of-way, roadway work, and escalation to year of expenditure. The costs for a light rail system will vary depending on alignment, grade separation, station configuration, and environmental constraints. Though some light rail systems have cost approximately $25 to 40 million per mile to build; other systems have cost much more. As noted in the technical memorandum for light rail in the Final Alternatives Analysis Report (May 2001), the first mile of the Newark-Elizabeth Rail Link in downtown Newark, New Jersey cost $141 million per mile.

Use of light rail would have forced a transfer at the Orange Line for passengers traveling between the corridor and the region's core, reducing ridership on the Dulles Corridor line. As noted in the comment, this transfer would have been a high-quality transfer, similar to the transfer between two Metrorail lines; however, because transfers introduce additional wait time and travelers are generally resistant to changing vehicles once they have started a trip, transfers typically incur an additional penalty in models. The more time that a traveler would have to spend waiting for a transit vehicle or changing between transit vehicles, the less attractive transit becomes. The ridership estimated in the MIS demonstrated the effect of this transfer would reduce ridership on the line by approximately 20 percent. Overall, the combination of reduced ridership and similar capital costs would have resulted in lower cost effectiveness for a light rail alternative than for the Metrorail Alternative.

Because light rail and Metrorail would have the same degree of grade separation, light rail would not have been less intrusive than Metrorail. In fact, elevated light rail would have been visually more intrusive than Metrorail. Because a light rail alternative would have been powered by overhead catenary wires, the visual profile of an elevated light rail alternative would have been higher than that for Metrorail. In addition to the elevated structure, the light rail alternative would have included catenary poles and wires extending another 22 feet above the top of the structure. As a result, in the Tysons Corner area, an elevated light rail system would have had greater impacts on area aesthetics.

Consideration of Monorail Technology

Public Comment: The Dulles Corridor transportation study, dated in June 1967 -- 1997, excuse me, mentioned emerging technologies, one of which was monorail. It concluded that monorail had not yet been established as a proven technology in an urban transportation role, and that the Dulles Corridor did not appear to be an appropriate place for such a test case. It concluded that monorails are found in airports and theme parks and that they did not have sufficient capacity to provide long distance, high volume service, which clearly the Dulles Corridor area required. (0266, 0266-T –1)

Public Comment: The situation has changed in the past five years, with respect to monorail. The current assessment for the Dulles Corridor concludes that metro, heavy rail, is estimated to cost over $3 billion, with an annual operating cost of about 100 million. Frequent mention has been made that funding sources of this magnitude are in question, if not in doubt. We therefore have the opportunity to revisit the position taken in 1997 with respect to monorail, which today offers some real possibilities and capacity for the Dulles Corridor. (0266, 0266-T –2)

Public Comment: In reviewing the Dulles Corridor Transportation Study dated 1997 - June 1997 - I found that the reason given for not considering monorail for the Dulles Corridor was that these were options that were not established as proven technologies in a conventional urban area, and that we didn't want to use monorail as a test case in the Corridor. Also the reason of seamlessness was originally cited, although I've read it in the report, but it's not in the one that's published. I don't know why the difference, but it doesn't provide seamless. One must change modes at West falls Church. (0266, 0283-T –1)

Public Comment: Monorail offers the possibility of reducing the Dulles transit costs by two-thirds or more. (0266, 0266-T –3)

Public Comment: "Monorail or similar system - Before proceeding further with the EIS process, DRPT should re-evaluate the outdated 1997 Major Investment Study (MIS) regarding the feasibility of using monorail for the Dulles Corridor project, taking into consideration the lower costs of construction and operation, the ability to better serve the "downtown" areas of Tysons Corner, Reston, Herndon and Dulles Corner, and the requirement for less right-of-way. Rationale: While monorail was rejected in the 1997 MIS because it was considered an "emerging technology," today, five years later, there are 41 such systems in operation around the world. Seattle, Washington is proposing to add three additional monorail lines. The costs of construction and operation of monorail is much less than heavy rail as shown in comparing costs between the Draft EIS and cost data available from monorail companies. An aerial monorail/monobeam system is more flexible and can be routed through "activity centers" to serve the entire areas instead of only the core or only the periphery. Finally, a monorail-type system is less invasive aesthetically and more environmentally friendly. (0402, 0402-L –8)

Public Comment: Monorail offers the possibility of reducing the Dulles transit cost by 2/3 or more and avoiding the requirement for an annual subsidy - assuming adequate ridership demand. (0266, 0390-M –1)

> ***Response:*** The *comments are correct in stating that the reason that monorail was eliminated during the 1997 MIS process was because (1) it was not a proven technology in an urban setting, (2) the Dulles Corridor was not deemed an appropriate test case for the technology, and (3) the technology typically had insufficient capacity for long-distance, high-volume lines.*
>
> *During the early stages of the Draft EIS process, a number of other modes were considered for the Dulles Corridor Rapid Transit Project, including monorail. The MIS reasons for dismissing monorail were re-evaluated to determine if they were still valid. Overall, it was found that these reasons are valid. Though monorail technology is capable of supporting high-speed, high-capacity service, few such systems are in operation over long distances. It was decided that the Dulles Corridor was not an appropriate test corridor for a long distance application. These and additional reasons for eliminating monorail from further consideration have been explained fully in the Final Alternatives Analysis Report (May 2001).*

Comparison of Alternatives

Public Comment: Disappointed that you did consider only heavy rail, and not monobeam/monorail which is less costly and less environmentally intrusive. (0069, 0069-CC-1)

Public Comment: I would like to quote from the Capital Beltway Rail Feasibility Study of February 2001, issued by the VA Department of Rail and Public Transportation. It evaluated a number of alternatives, including heavy rail, light rail and monorail. In referring to monorail, it said: This alternative could offer high ridership, lower cost, and the least environmental impacts of all the alternatives. In a similar alignment, the heavy rail alternative featured only seven stations, whereas light rail offered 17, monorail 19. A solitary Tysons heavy rail station would have the additional benefit of allowing for a shorter commute for through passengers; that is, those for whom Tysons Corner is not a destination. (0178, 0178-T –5)

Public Comment: But here both light rail and monorail were rejected even though VDOT's own data from the study of the lines from Springfield to Tysons Corner show that light rail and monorail were more cost-efficient than heavy rail. (0112, 0245-T –3) (0112, 0269-M –4)

Public Comment: It is essentially - the monorail is mounted on a single beam and you have transit cars move both ways on the same beam. That was - this particular type of system was addressed in the study that was done - directed by the Virginia General Assembly, under Mr. Corey Hill, and evaluated mono-beam monorail, light rail, heavy rail and bus between the Tyson's Metro system station in Springfield, via

the hospital, through Annandale, via Fairfax Hospital, Merrifield, and through into Tyson's Corner, then to American Legion Bridge. (0266, 0283-T –2)

Public Comment: It is requested that advanced monorail systems be evaluated for the Dulles Corridor in the same rigorous fashion that was done for the Capital Beltway Corridor Study, previously cited. It appears that some of the information already collected in existing studies (Beltway and Dulles Corridor studies) could be used for this analysis. This would likely be an unplanned extra effort. However, it would permit you to evaluate a monorail strategy and possibility of generating economic and demographic solutions beyond our current vision. It might introduce a new transportation mode in our area and create change in our human scene and betterment of the life of our citizens. (0266, 0390-M –3)

Public Comment: I would urge that because of the cost involved for the current Metro system to Dulles, that's currently envisioned in the EIS and the MIS studies, that mono-beam monorail be evaluated. I know it's late in the day, I know that a lot of work has been done, but we would be remiss by not doing those hard tasks that evaluate all the alternatives, as was done in a study directed by - as I said earlier, by the Virginia General Assembly. (0266, 0283-T –3)

Public Comment: According to the DEIS, the monorail alternative was eliminated from further consideration based on how well it served business and community transportation needs in the corridor, and how well it "fit" into the transportation, social, environmental and economic context. (S-22). The DEIS concluded there was no justification for including the monorail as a viable alternative without giving the public an opportunity to review the evidence or analysis. Again, the DEIS indicates a bias for Rail. By rejecting the monorail alternative and failing to provide the public with the analysis, the NEPA process has not been followed. Therefore, the monorail alternative should be analyzed and reported as a viable transit alternative. This information should have been included in the DEIS. (0147, 0459-L –6)

Public Comment: Monorail offers the possibility of reducing the Dulles transit costs by two-thirds or more. (0266, 0266-T –3)

> ***Response:*** *The commenters are correct in stating that the Capital Beltway Rail Feasibility Study (March 2001) found that light rail and monorail were more cost effective than Metrorail in the Capital Beltway corridor (in terms of cost per passenger mile and cost per new transit trip). The study also concluded that, in the Beltway corridor, suspended-monobeam monorail could offer high ridership, lower cost, and the least environmental impacts. However, the findings of this study are not directly applicable to the Dulles Corridor Rapid Transit Project, because the evaluation of a particular mode in a given corridor is dependent on a number of factors. Due to differences in the constraints and conditions in the corridors, the proposed alignments, and the number of stations for each mode, the findings of the Rail Feasibility Study do not necessarily have relevance for the Dulles Corridor Rapid Transit Project.*
>
> *Unlike in the Dulles Corridor, the alignments under consideration for each mode in the Rail Feasibility Study were different for each mode. For the Red corridor, a substantial portion of the Metrorail alignment was underground or aerial, while the light rail alignment was almost entirely at-grade. These differences heavily influenced the cost differences between these two modes. Moreover, as noted by one commenter, the light rail alignment had more than twice the number of stations of the Metrorail alignment. An alternative with this many more stations is almost certain to have more ridership.*
>
> *For the Dulles Corridor, light rail would follow the same alignment and have approximately the same number of stations as Metrorail (as documented in the Final Alternatives Analysis Report, May 2001). The alignment would have to be elevated (or underground) through the core of Tysons Corner to avoid traffic impacts, and it would have to be underground at Dulles Airport to avoid impacts to the historic airport terminal or views of the terminal. The majority of the alignment would be located at-grade. As a result, there would be little cost savings advantages for light rail. Moreover, use of light rail would force a transfer at the Orange Line for passengers traveling between the corridor and the region's core, reducing ridership on the Dulles Corridor*

line. Therefore, in the Dulles Corridor, the cost effectiveness of a light rail alternative would likely be similar to that for the Metrorail Alternative.

The suspended-monobeam monorail system evaluated in the Rail Feasibility Study is a prototype system that, at present, has only been operated as a quarter-scale model in Charleston, South Carolina. The manufacturer of the system, FUTREX, Inc., is currently in the process of selecting a location for the first full-scale implementation. It is anticipated that they will select the city in the next six months. According to their website, "It is anticipated that the first installation will require a three-to-four year effort at a cost that is dependent upon the location, system length, and complexity" (www.futrexinc.com/ OriginFuture.htm). The benefits, impacts, and costs of the operational system would not be fully understood until several years later. In the interim, there is no real-world operating experience to determine whether the suspended-monobeam system would definitely be able to function as proposed, particularly in a long, suburban corridor.

Moreover, the final costs to design, construct, and operate a suspended-monobeam system are in question at this time. The cost estimates for the conceptual monorail system studied in Rail Feasibility Study were based solely on the manufacturer's estimates of per mile costs. At that time, costs were $22.5 million per mile, including guideway, stations, power substations, vehicles, vehicle maintenance facility, and train control. Currently, the manufacturer's website indicates these costs would be $30-35 million per mile (conservatively). It is very possible that as the technology is developed further and put into full-scale operation, particularly for longer and more complex systems, cost estimates will escalate further (see subsequent monorail responses for examples of how costs for newer technologies can escalate dramatically as conceptual system designs are advanced into more detailed design and construction).

As noted in the Capital Beltway Rail Feasibility Study, though monorail technology appears to offer several transportation benefits, numerous issues would affect the decision to implement this technology in the Washington metropolitan region:

- *Trials indicate the FUTREX system can operate as proposed, but it has "no track record of revenue service to create confidence that the region should invest in excess of two billion dollars on this approach" (Rail Feasibility Study, Final Report, Page 7-5).*
- *Likewise, traditional monorail systems have no real-world operating experience in long-distance, suburban environments.*
- *In addition, traditional monorail systems would not likely have the same cost effectiveness as determined for the monobeam system because (1) they would have a larger footprint and higher costs, and (2) they would have slower speeds, resulting in lower ridership.*

Overall, monorail was recommended for further study in the Rail Feasibility Study because it showed promise and because it was recognized that "rail in [the Capital Beltway corridor] is still projected to occur no sooner than twenty years in the future" (Page 7-5).

Rapid transit improvements in the Dulles Corridor, however, are expected to be implemented in the near future. As noted in the Dulles Corridor Transportation Study (June 1997) and the Final Alternatives Analysis Report, it would not be desirable to test an unproven technology in the Dulles Corridor, particularly given its length and the level of investment required.

A suspended-monobeam or other monorail system would not necessarily be less visually intrusive than Metrorail in the Dulles Corridor. Although the guideway elements are smaller, the size of the stations would be determined by the length of train consists and the expected number of passengers passing through the station at peak times. Station platforms must be long enough to accommodate lengthy trains, and wide enough to accommodate waiting and circulating passengers. Stations must also accommodate vertical circulation elements such as escalators, stairs, and elevators. In areas such as Tysons Corner, stations are the most significant visual element of the selected Metrorail Extension. If monorail stations are sized to accommodate the

same level of demand as Metrorail, then the stations would not necessarily be much smaller than the proposed Metrorail stations.

The issue of the solitary Tysons Corner station allowing a shorter commute for travelers bypassing Tysons Corner was explored as part of analysis conducted in response to other comments. The analysis showed that a Metrorail alternative that travels along the median of the DIAAH between Wiehle Avenue and East Falls Church with a stop at the Spring Hill Road Station would save approximately 5 minutes over alignments that penetrate the core of Tysons Corner. Given that, for the Metrorail Alternative analyzed in the Final EIS, travel times for trips between Arlington and the central and western portions of the corridor would be approximately 30 to 50 minutes, a time savings of 5 minutes would be negligible. For while the perceived difference between a 5-minute trip and a 10-minute trip could be substantial, the perceived difference between a 25-minute trip and a 30-minute trip is relatively minor.

Consideration of Light Rail Technology

Public Comment: It is time to look at a method of travel that would be less invasive and much needed. I believe that light rail is the answer. This rail could connect our present metro system to the Tysons Corner area and the Dulles Corridor. Currently, when we ride Metro and we change lines, we are required to change trains. It should be possible to use some of the current metro stations as transfer points for these light rail cars. People from all over the metro area could travel from one area of the line to another with little or no interruption. (0098, 0098-E –2)

Public Comment: Why didn't you look at light rail when WMATA is looking at that for D.C. right now? (0112, 0382-L –25)

Public Comment: Yes, there is a solution, Light Rail directly to Dulles. A light rail was put in place in Pasadena, CA which is over eighteen miles and was built at a cost of only six hundred million dollars, which also included land acquisition cost. This system will carry twenty five percent more than what our system is projected to carry. This of course, is not a too heavy financial burden of which the state could pick up its share of the cost. The only criticism is that it is not seamless, but heck, the present metro is not seamless. I believe that over two to three billion dollar savings is not a bad deal, except for those who are planning on getting rich from building the present proposed rail system. (0189, 0201-L –5)

Public Comment: Light rail was not effectively analyzed. The system in Pasadena, California, which is over 18 miles long, can carry 25 percent more than the proposed Metro Rail, cost around $600 million to build should have been considered. Why not? The argument for seamless is moot since the present Metro system is not seamless. (0189, 0448-E –8)

Public Comment: Supports WMATA as the “operator of choice” for the regional light rail system. (0486 2-02)

Public Comment: In reference to page 133-135 of the *Public Hearings Report*, commenter questions why light-rail would have to follow the same alignment as Metrorail, and why it would not go to Reston Town Center. Believes the consultants are short-shrifting the flexibility of light-rail in terms of routing. (0112, 2-06)

Public Comment: Supports the implementation of light rail because the overall project costs as well as annual operating costs are much cheaper than those of BRT and Metrorail. States that the Project Team has pushed BRT instead of light rail in the DEIS, because BRT would better serve the interests of the Project Team. (0486 2-01)

Public Comment: States that the claim of light rail needing to be grade separated is ungrounded. From a cost and community impact standpoint, the commenter states that the Project Team should have examined other alignments, because all of the proposed alternatives have the same alignment, except for the Tysons Corner segments. (0112, 2-10)

Response: *A number of other modes were considered for the project, including light rail. Light rail was studied as part of the Major Investment Study for the Dulles Corridor Rapid Transit Project, and was requested again during the Scoping Process for the preparation of the Draft EIS. As part of the Draft EIS process, the Project Team reconsidered light rail. The Project Team reviewed the findings of the analysis performed during the Major Investment Study and found the analysis to be valid. Therefore, light rail was eliminated from further consideration and was not fully analyzed in the Draft EIS. The reasons for the elimination of this alternative are fully detailed in the* Final Alternatives Analysis Report (May 2001), *and are summarized below.*

Light rail is often proposed as an alternative to Metrorail as a lower cost solution, because it can operate in existing roadway rights-of-way, and does not require a fully-grade separated alignment. However, in the Dulles Corridor, light rail would follow the same alignment as the Metrorail Extension. Different alignments for light rail, including off-median alignments that directly served town centers in the Mid-corridor, were considered during the MIS, but were determined to be less cost effective than a median alignment. In locations where the Metrorail Extension diverges from the median and is grade-separated, light rail would also have to be grade-separated. In Tysons Corner, light rail would have to be elevated or underground to avoid existing traffic; and at Dulles Airport, light rail would need to be underground to avoid visual impacts to the historic airport terminal. For the remainder of the alignment, both light rail and Metrorail would operate at grade; therefore, light rail would not likely offer a substantial cost savings over Metrorail.

The Metrorail Extension capital costs average $150million per mile, including all vehicles, right-of-way, roadway work, and escalation to year of expenditure. The costs for a light rail system will vary depending on alignment, grade separation, station configuration, and environmental constraints. Though some light rail systems have cost approximately $25 to 40 million per mile to build, other systems have cost much more. As noted in the technical memorandum for light rail in the Final Alternatives Analysis Report*, the first mile of the Newark-Elizabeth Rail Link in downtown Newark, New Jersey cost $141 million per mile.*

Use of light rail would force a transfer at the Orange Line (or at the Tysons West Station if Metrorail is used through Tysons Corner) for passengers traveling between the corridor and the region's core, reducing ridership on the Dulles Corridor line. As noted in the comment, this transfer would be a high-quality transfer, similar to the transfer between two Metrorail lines; however, because transfers introduce additional wait time and travelers are generally resistant to changing vehicles once they have started a trip, transfers typically incur an additional penalty in models. The more time that a traveler would have to spend waiting for a transit vehicle or changing between transit vehicles, the less attractive transit becomes. The ridership estimated in the MIS demonstrated the effect of this transfer would reduce ridership on the line by approximately 20 percent. Overall, the combination of reduced ridership and similar capital costs would result in lower cost effectiveness for a light rail alternative than for the Metrorail Extension.

Because light rail and Metrorail would have the same degree of grade separation, light rail would not be less intrusive than Metrorail. In fact, elevated light rail would be visually more intrusive than Metrorail. Because a light rail alternative would be powered by overhead catenary wires, the visual profile of an elevated light rail alternative would be higher than that for Metrorail. In addition to the elevated structure, the light rail alternative would include catenary poles and wires extending another 22 feet above the top of the structure. As a result, in the Tysons Corner area, an elevated light rail system would have greater impacts on area aesthetics.

Reduced Density as a Result of Light Rail

Public Comment: On the quality of life, Light Rail would call for significantly less density since the cost of it is far less. In fact, it is affordable rail. This would result in reduced density and a reduction in office buildings and resident housing. This would alleviate traffic congestion, poor air quality and traffic, and

pedestrian safety concerns. It would allow for timely responses from our ambulances, fire, and police. And, of course, we will not be faced with the Great Wall of China dividing our community. (0189, 0201-L – 6)

Public Comment: Build the Light Rail now, reduce density, and preserve the quality of life in Reston and save Restonians over four billion dollars. These are noble goals and ones that can be achieved. Let's do it. (0189, 0201-L –7)

Public Comment: Do you need this density to support light rail? Light rail estimate cost being around 600 million dollars. (0189, 0448-E –3)

> ***Response***: *A number of other modes were considered for the project, including light rail. Light rail was studied as part of the Major Investment Study for the Dulles Corridor Rapid Transit Project, and was requested again during the Scoping Process for the preparation of the Draft EIS. As part of the Draft EIS process, the Project Team reconsidered light rail. The Project Team reviewed the findings of the analysis performed during the Major Investment Study and found the analysis to be valid. Therefore, light rail was eliminated from further consideration and was not fully analyzed in the Draft EIS. The density bonuses proposed for the Dulles Corridor are not linked to the cost of the alternative. The bonuses are linked to station locations and the mode of the alternative. If light rail had not eliminated from consideration, it is likely that similar density bonuses would have been considered for light rail.*

Limitations of Light Rail

Public Comment: Light rail has been discussed, but light rail has the same problem, it runs on grade and across roadways, and if the roadways are congested, we have the same problem. Light rail cars cannot move. (0144, 0144-T –6)

> ***Response:*** *A number of other modes were considered for the project, including light rail. Light rail was studied as part of the Major Investment Study for the Dulles Corridor Rapid Transit Project, and was requested again during the Scoping Process for the preparation of the Draft EIS. As part of the Draft EIS process, the Project Team reconsidered light rail. The Project Team reviewed the findings of the analysis performed during the Major Investment Study and found the analysis to be valid. Therefore, light rail was eliminated from further consideration and was not fully analyzed in the Draft EIS.*
>
> *Because of the problems noted by the commenter, an at-grade light rail alignment would not be appropriate in Tysons Corner. A light rail line would have to be elevated in Tysons Corner to avoid traffic congestion, and would have to be underground at Dulles International Airport to avoid impacts to the historic terminal. In other areas, both Metrorail and light rail would be built at-grade, thus light rail would have no cost advantage. Because light rail cannot run on the same tracks as Metrorail, passengers would be forced to transfer at West Falls Church to continue their journey on Metrorail, this would decrease ridership.*

Need to Reexamine Cost Estimates

Public Comment: States that the costs for Metrorail are low-balled and the costs for light rail need to be reexamined. Cites Corridor Cities Draft EIS, which quotes $1B for a 14-mile light rail system. Believe that heavy rail costs are higher because vehicles are built in Brazil and Spain. In contrast, there are more manufacturers of light rail cars. (0112, 2-07)

> ***Response:*** *The capital cost estimates for Metrorail are in year-of-expenditure dollars, meaning that the estimates include the effects of future inflation. The cost estimates for the Build Alternatives are all based on the same methodology. Cost comparisons between one project and another can be misleading, especially when comparing different transit technologies (e.g., light rail and heavy rail*

Public Comment: Believes information regarding transfers from downtown D.C. to Loudoun County is misleading and inaccurate. Refers to the Georgetown Branch Trolley project, which would include a 500-foot transfer to light rail at Bethesda, and would have a sizable ridership at much less cost. (0112, 2-08)

> ***Response:*** *For trips between the corridor and the core, Metrorail would generally require fewer transfers than other proposed modes because it would not require a transfer where the Dulles Corridor Metrorail Extension meets the Orange Line. Though some trips would require a transfer elsewhere in the Metrorail system, other mode alternatives would always require one more transfer than the Metrorail Extension, because they would always have the forced at West Falls Church Station.*

Need to Examine Alternative Alignments

Public Comment: States that the Project Team is inviting a lawsuit by not examining other alignments and impact-mitigation measures, such as going underground at Hallcrest Heights and near the West Falls Church Yard. (0112, 2-09)

> ***Response:*** *Since the early 1970's, the planning for the connection between the Orange line and the Metrorail Extension has always incorporated the use of at-grade and aerial methods of construction for connecting the guideway between the median of I-66 and the median of the Dulles Connector Road. Provisions for this connection were made with the original construction of the Orange line in the early 1980s, including the construction of a pier and foundation between the Orange Line tracks to facilitate such an aerial guideway to minimize eventual disruption to the Orange Line during construction.*
>
> *The impacts and costs for underground construction of this connection were not evaluated as part of any alternative considered. Making this connection would present extremely complex construction challenges to maintain the Orange Line fully operational and not impact both directions of I-66, a major interstate highway. Due to its complexity, the cost of this underground construction for this segment would be significantly greater than typical cut and cover construction, and many times greater than the planned at-grade and aerial construction.*
>
> *The current alignment for the West Falls Church Yard lead track is partially underground as it goes beneath the eastbound Dulles Connector Road lanes and enters the rail yard. The remaining portion of the yard lead in the median of the Dulles Connector Road will be on aerial structure in order to meet the grade from the both the inbound and outbound project tracks descending from the flyover across I-66.*
>
> *For reasons of cost that are similar to the Orange Line Junction, the Project Team has not considered an underground section of the Metrorail Extension between the Dulles Connector Road and Route 123.*

Failure to Study Alternatives

Public Comment: So before we spend $2 billion to get rail into Tysons Corner, we're to find something that might work, monorail. There are other alternatives that have never been studied. We ought to consider these land use applications along with the transportation impacts they would have, which hasn't been done. The county's transportation staff has not only - they're on the bench, but they're not even on the bench, they're out of the stadium. (0136, 0168-T –4)

Public Comment: THE DEIS FAILS TO CONSIDER OTHER ALTERNATIVES: Example of other types of service that should have been included are monorail, dial-a-ride, transit, ridesharing, HOT lanes, and many others. (0138, 0476-L –6)

Public Comment: I don't understand why VDRPT studied monorail and light rail (all modes, essentially) for the Route 28 and Capital Beltway Corridor studies, but not for Dulles Rail? (0112, 0382-L –24)

Public Comment: WMATA and VDRPT also failed to study other modes (such as light rail, monorail and carpool/HOT lanes), though there is precedence for VDRPT to do this as with the Route 28 and Capital Beltway Corridor studies. (0112, 0462-L –2)

Public Comment: I am perplexed that light rail and monorail were not studied when DRPT studied these modes for the Route 28 and Capital Beltway Corridor studies. I understand WMATA has no experience operating light rail or monorail, but note that WMATA is considering light rail to service the district. (0112, 0462-L –45)

Public Comment: WMATA and VDRPT must do at least a financial, environmental and trip forecasting analysis of other alternative transportation modes. Such data should be generated for light rail, monorail, and allowing HOV and "HOT" lanes on the Dulles Access Road coupled with BRT. VDRPT studied HOT lanes, monorail and light rail for the Capital Beltway Corridor Study and Route 28 study, but these modes were summarily rejected because WMATA has no experience in this regard. But VDRPT is a significant partner in this DEIS and thus, if it studied these modes in the aforementioned studies, they should be studied for Dulles rapid transit. (0112, 0462-L –51)

Public: Dulles Road median & use monorail to service Tysons. (0073, 0073-CC-3)

Public Comment: Recent Washington Post articles indicate that WMATA has new focus on BRT and light rail solutions for other corridors because of high cost of heavy rail. (0488 02)

Public Comment: Cites examples of light rail systems around the country that show rail works better than bus service. Metrorail provides faster service at lower operating cost than most LRT lines so should be even more successful, as it has been on the first 103 miles. (0013, 2-03)

> ***Response:*** *While NEPA requires an evaluation of all reasonable alternatives, it allows alternatives to be eliminated prior to detailed studies as long as the reasons for eliminating them are discussed in the EIS. The process used for evaluating the initial list of alternatives for the Dulles Corridor Rapid Transit Project was a two-phase process: initial screening and intermediate screening. The process applied increasingly detailed and comprehensive measures of effectiveness to a decreasing number of alternatives. For the initial phase most measures were qualitative. The alternatives advanced or carried forward for further evaluation at the end of each phase were those alternatives that best met the transportation needs of the corridor, relative to the other alternatives under consideration.*
>
> *As detailed in Section 2.6 of the Draft EIS, numerous alternatives, including alternative modes of transportation, were studied prior to conducting the detailed evaluation of BRT and Metrorail that are presented in the Draft EIS.*
>
> *Monorail was considered for the Dulles Corridor Rapid Transit Project during the early stages of the Draft EIS process. The reasons in DRPT's Dulles Corridor Transportation Study (June 1997), a major investment study (MIS) for dismissing monorail were re-evaluated to determine if they were still valid. Overall, it was found that these reasons are valid. Though monorail is capable of supporting high-speed, high-capacity service, few such systems are in operation over long distances. It was decided that the Dulles Corridor was not an appropriate test corridor for a long distance application. These and additional reasons for eliminating monorail from more detailed study in the Draft EIS are explained fully in the Final Alternatives Analysis Report (May 2001). Some findings are summarized in previous responses addressing monorail. Updated cost information is also presented.*
>
> *WMATA in cooperation with the District of Columbia Department of Public Works is considering several alternative modes and alignments in multiple corridors within the District of Columbia.*

Light rail is often proposed as an alternative to Metrorail as a lower cost solution, because it can operate in existing roadway rights-of-way, and does not require a fully-grade separated alignment.

Light rail was also studied during the early stages of the Draft EIS process. The Project Team reviewed the findings of the analysis performed during the MIS and found the analysis to be valid. Light rail would not be as cost-effective as Metrorail because it would require a transfer at the Metrorail Orange Line, which would reduce ridership in the Dulles Corridor. Also, the capital costs for light rail would be similar to those for Metrorail because it would have to follow the same grade-separated alignment as a Metrorail alternative through Tysons Corner and at Dulles Airport, reducing any potential cost-savings benefits. The reasons for eliminating light rail from more detailed study in the Draft EIS are explained fully in the Final Alternatives Analysis Report (May 2001). Some findings are summarized in previous responses addressing light rail.
Dial-a-ride transit is a form of demand-responsive service. It is intended to serve areas where demand is too low for a conventional transit service. This is not the case in the Dulles Corridor. Some demand-responsive services are already operated in the corridor by Fairfax and Loudoun counties, but these services are intended to provide access for disabled and elderly persons who cannot use the conventional transit services provided by the counties.

The issues associated with encouraging increased ridesharing and implementing a high-occupancy toll system in the Dulles Corridor, as well as the possible benefits of such alternatives, were explored as part of the Project Team's review of the range of alternatives posted on the Dulles Plan B web site. A summary of the Team's findings are within this Appendix.

Need to Reanalyze BRT

Public Comment: I would urge that the EIS go back and reanalyze the BRT option. A review of the findings for the BRT alternative indicated that the analysis was done by placing buses in the congested travel lanes and on the shoulder lanes of the Dulles Toll Road. Therefore, I request that the BRT alternative be reanalyzed where you will use statistics derived by putting buses in the dedicated lane such as that is found in the rapid bus program. (0147, 0249-T –2)

Public Comment: According to the DEIS, BRT vehicles would travel in the regular traffic lanes of the Dulles Connector Road, the bus lane on the roadway shoulder, regular travel lanes of the Dulles Greenway, and in a limited number of BRT routes, BRT vehicles would use the HOV lanes of the Dulles Toll Road. (S-12) Completing the data analysis based on the above, BRT is made to be less competitive with respects to the rail. To ensure that the planning process gives fully objective treatment to BRT, data analysis should be based on all BRT travel is in a dedicated lane. (0147, 0459-L –4)

Response: *As shown in Chapter 6 of the Final EIS, the Dulles International Airport Access Highway currently operates at Level of Service (LOS) C during the peak period. This level of service represents moderately congested conditions and relatively free-flow travel speeds. By 2025, the DIAAH is expected to operate at LOS D. This level of service represents more congested conditions, but speeds are only reduced moderately, and, in practice, it is widely considered an acceptable level of service. The HOV lane on the Dulles Toll Road currently operates at LOS C and is expected to continue operating at LOS C under all alternatives. Therefore, to have introduced BRT vehicles to the DIAAH and the HOV lane would not have hindered traffic operations on the roadway, nor would the expected levels of roadway traffic have hampered BRT operations.*

BRT operating in a dedicated third lane on the Dulles International Airport Access Highway was an alternative requested during the Scoping Process for the preparation of the Draft EIS. This alternative was evaluated during the early stages of the Dulles Corridor Rapid Transit Project, and was eliminated from further study. The reasons for the elimination of this alternative are fully detailed in the Final Alternatives Analysis Report (May 2001), and are summarized below.

Data from MWAA and Project Team estimates showed that current and future traffic projections for the existing configuration of the DIAAH do not warrant construction of a dedicated lane as part of the Dulles Corridor Rapid Transit Project. Because the DIAAH only provides service to and from the airport and does not serve general traffic, it is expected that traffic flow on this road during peak periods will be, at worst, moderately congested. This flow of traffic would not interfere with the speed or reliability of bus operations in the DIAAH. When traffic flow on the DIAAH degrades, the Metropolitan Washington Airports Authority (MWAA) plans to build an additional lane for all airport traffic.

The reasons for the elimination of BRT from further consideration are presented in the Final EIS in its Executive Summary (pages S-9 and S-10) and in Section 2.2, Draft EIS Alternatives and Recommendations.

Need to Address Linkages with Adjacent Projects

Public Comment: Linkages: The Draft EIS does not indicate that consideration was given to the rapid transit mode that might be used on the Beltway in both Virginia and Maryland and how the current project would link with it. New transit systems on the major corridors should be compatible. DRPT should review the results of the March 2001 report on the alternatives for transit on the beltway and reflect how and why these systems should be compatible. Rationale: Delegate David Albo legislated a study of possible rail on the Beltway. As of the time of the scoping meetings, several modes were still under consideration: heavy rail, light rail, and monorail. It would seem wise to have compatible modes of transit on the Beltway and out the Dulles Corridor so the systems could be easily linked. (0402, 0402-L –9)

Response: *A Project alignment that would provide a connection to a future transit line in the Beltway corridor was examined during the early stages of the Dulles Corridor Rapid Transit Project, and was eliminated from further study. The reasons for the elimination of this alternative are fully detailed in the* Final Alternatives Analysis Report (May 2001) *and are summarized below.*

The plans for future transit in the Beltway corridor are not advanced enough to make it appropriate or feasible to conduct detailed coordination efforts related to these improvements. The Capital Beltway Corridor Rail Feasibility Study includes recommendations for further evaluation of several transit modes and alignments in the Beltway corridor. Further study would be necessary to advance Beltway Rail plans to the level that coordination would be possible.

Since publication of the Final Report in March 2001, the recommendations of the Capital Beltway Rail Feasibility Study have not been advanced further.

Need to Evaluate Alternative Alignments

Public Comment: How come you did not consider alignments that would serve existing densities, such as Reston Town Center or downtown Herndon? (0112, 0382-L –6)

Public Comment: How come most of the alignment is in the Toll Road? (0112, 0382-L –7)

Public Comment: I would like to express concerns over the route and method of moving people you have chosen.#1) I think running the train down the median of the highway is a big problem for the following reasons: - This leaves no possibilities for walkable Transit Oriented Development at the stations (The Orange Line along Clarendon was originally supposed to go along the highway median, and was changed to the present route. This allowed the creation of all the dense, walkable places that exist along the corridor. This will not happen with the train down the center of the highway).-This requires additional transit such as BRT which people will be required to transfer to, and many people won't ride if they have to transfer 2 times -This requires the riders to be "stuck" in the middle of the highway as they ride, which is quite an unpleasant experience.(0110, 0110-E –1)

Public Comment: I believe that alternative modes and alignments should be studied, including heavy rail and BRT alignments that will put stations near existing density (i.e., Reston Town Center and downtown Herndon, or Dulles Town Center). Cost per rider and other cost figures should be generated, too. (0112, 0462-L –46)

Public Comment: It is far better to select a route that goes under or through low density office parks and mall that can be redeveloped into dense walkable communities right directly at the Metro stations. Planning with a connection of a BRT is a bad idea and will cost a lot of potential riders. The center of the highway is not a friendly place to be, to go to, or to be waiting for a train. With all the noise, car fumes, and dust and dirt flying, this is asking a lot to make people wait in this inhospitable place to use public transit. Most will just drive instead if the train experience is not great. The train stations need to be in the center of the communities, and a short walk to people's homes and workplaces. They need to be accessible directly, and not through having to wait for another form of transit and then to transfer. When public transit becomes more hassle than driving, people will just keep driving. (0110, 0110-E –3)

Public Comment: The environmental impact statement should analyze the potential for increased ridership that might result from stations within the Reston Town Center and other built-up locations. (0066, 0254-T –4)

Response: *While NEPA requires an evaluation of all reasonable alternatives, it allows alternatives to be eliminated prior to detailed studies as long as the reasons for eliminating them are discussed in the EIS. The process used for evaluating the initial list of alternatives for the Dulles Corridor Rapid Transit Project was a two-phase process: initial screening and intermediate screening. The process applied increasingly detailed and comprehensive measures of effectiveness to a decreasing number of alternatives. For the initial phase most measures were qualitative. The alternatives advanced or carried forward for further evaluation at the end of each phase were those alternatives that best met the transportation needs of the corridor, relative to the other alternatives under consideration.*

As described in Section 2.6 of the Draft EIS, during the early stages of the EIS process, a number of station and alignment alternatives were considered for the Dulles Corridor Rapid Transit Project, including an alignment that diverged from the DIAAH to provide direct service to Reston Town Center (Alignment D2). This alignment was eliminated from more detailed study because it would have followed the Washington & Old Dominion Railroad Regional Park, and, therefore, was not consistent with existing land use, nor with local or regional land use plans. Because Alignment D2 would preclude the continued use of the W&OD Railroad Regional Park in certain areas, and because the DIAAH median alignment is a prudent and feasible alternative to the use of this parkland, Alignment D2 was eliminated from further consideration, consistent with Section 4(f) of the U.S. Department of Transportation Act of 1966 (which protects public park and recreation lands, wildlife and waterfowl refuges, and historic sites). These reasons for eliminating Alignment D2 from more detailed study in the Final EIS are explained fully in the Final Alternatives Analysis Report (May 2001).

In addition, as part of the light rail alternative analysis, the Final Alternatives Analysis Report *documents the analysis in DRPT's Dulles Corridor Transportation Study (June 1997), a major investment study (MIS) that led to the elimination of off-median alignments. It was determined during the MIS process that a DIAAH median alignment would be the most cost-effective alignment. A number of off-median alignment and station options were examined, including an alignment with urban-center stations at Dulles Corner and Reston Town Center. These options were primarily dismissed due to much higher capital costs, relative to the median alignment option. High costs were associated with the structures that would be required to leave the median of the DIAAH, elevated guideway through the town centers, elevated stations, and the land acquisition required for right-of-way through the town centers. In addition, analysis for the Dulles Corridor Rapid Transit Project concluded that at-grade, off-median alignment options would be less attractive than the median alignment because at-grade operation through town centers would increase travel times through the corridor. These reasons are explained more fully in the Final Alternatives Analysis Report (May 2001).*

Please note that the design of the Metrorail median stations includes features to protect patrons from highway noise and dirt on both the platform and mezzanine levels. In addition, given the

frequent service of the Metrorail Extension, patrons will not have to spend significant time on the platforms.

Service to Tysons Corner

Public Comment: Recommendation - It seems much more efficient and cost effective to connect Tysons Corner to the Dulles Corridor heavy rail at the eastern and western ends and to install a lighter rail system, such as monorail, that can circulate through Tysons Corner to serve all parts of it. This system could be connected to the Dunn Loring Metro station to provide even better service. And, all of this could probably be provided at less cost that trying to put heavy rail through "downtown" Tysons Corner. (0086, 0086-CC-3)

Public Comment: Service to Tysons Corner - The proposed rail alternatives do not seem to provide adequate service to Tysons Corner. Three of these alternatives (T1, T6, T9) have only a single line through the middle of Tysons Corner. It is not clear that the proposed alternatives are any better than the alternative to serve Tysons Corner with a circulator system (alternative T8) that was eliminated in the Initial Screening Phase. The Draft EIS should be revised to include the T8 alternative and provide more details about the adequacy of service to Tysons Corner that could be provided by each of these alternatives. Rationale: The T1, T6, and T9 alternatives appear to leave much of Tysons Corner beyond walking distance from the stations. Alternative T4 does not appear to be a very practical solution because of the divided directional lines and the inconvenience this would cause riders. The EIS does not provide any information about that portion of the Tysons Corner workers and residents would be served by these alternatives. The rejected T8 alternative could be as good or better than the proposed rail alternatives but this cannot be determined because of inadequate information in the EIS. (0402, 0402-L –6)

Public Comment: However, upon further reflection and given the apparent likelihood that substantial funding for this project will be required from transportation tax districts and higher tolls, fairness and equity for those providing much of this revenue demands and the Alliance supports the following new phasing strategy:

Phase I – Bus Rapid Transit or increased express bus service from West Falls Church to Reston, Dulles and Eastern Loudoun until funds are in place to construct Phase II.

Phase II – Rail from East Falls Church along and totally within the Dulles Corridor to Tysons Corner, Reston, Herndon, Dulles Airport and Eastern Loudoun County. In this Phase Tysons would have stops only at Spring Hill and possibly Route 123.

Phase III – Construct a rail loop or transit circulation system within Tysons Corner.

Given that the most likely funding strategy will require a substantial investment from corridor property owners and toll road users, all owners and users must receive a return on their investment at approximately the same time. The above phasing approach meets that test. (0446, 0446-E –3)

Public Comment: The concept of rapid transit to Dulles is sound but the servicing of Tysons is both overly costly and very inefficient. The $1 billion cost could be reduced substantially by providing several rail stations along the corridor. These would be connected with a monorail system in Tysons which could provide satisfactory circulation for both transit riders and the residents, shoppers, employees, etc. Monorail is a mature technology currently employed in Tokyo (26 mile, 180K riders per day), Seattle (where the line is being expanded), and Sydney, Australia (where the line goes over the main street with a minimum footprint). The proposed location of rail stations would still require addition of an internal circulation system in order to reduce vehicular dependence. (0119, 0119-L –1)

Public Comment: It is not clear why a separate circulation system of some kind (for example, feeder buses or a monorail system) has been completely eliminated from consideration as part of the proposed rail alternatives in Tysons Corner. This appears to be needed because the 1/2 mile radius areas around the proposed rail stations that is used as walking distance leaves much of the Tysons Corner area

beyond walking distance. The EIS should state how much additional ridership would result from adding a circulation system serving the northern and southern parts of the Tysons Corner area to the proposed T1, T4, T6, and T9 alternatives. (0392, 0392-L -12)

> ***Response:*** *A significant percentage of the Tysons Corner core area is within reasonable walking distance of the proposed stations. It is anticipated that employee shuttles will be provided by many of the major employers in Tysons Corner, in addition to Fairfax County's planned circulator bus routes, and other feeder bus routes that will serve the stations. Provision of moving sidewalks to extend the pedestrian reach from the stations would not be practical or cost effective.*
>
> *A fixed-guideway circulator system in Tysons Corner was studied as part of DRPT's Dulles Corridor Transportation Study (June 1997), a major investment study (MIS), and was requested again during the Scoping Process for the preparation of the Draft EIS. As part of the Draft EIS process, the Project Team reconsidered the circulator concept. The Project Team reviewed the findings of the MIS analysis and found the analysis to be valid. Therefore, a circulator was eliminated from further consideration and was not fully analyzed in the Draft EIS or in the Final EIS. The reasons for the elimination of this alternative are fully detailed in the Final Alternatives Analysis Report (May 2001).*

Public Comment: Alternative fuel buses should be used. Evaluate the use of hybrid gasoline-electric, hybrid natural gas-electric, and hydrogen fuel cell powered buses. Alternative fuel buses will lead to a significant reduction in the region's air pollution. (0487 2-01)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS. Gasoline and/or diesel buses were considered in the Draft EIS to provide a worst case scenario in terms of air quality and energy consumption.*

Alternative Fuel Vehicles

Public Comment: Develop an alternative that does not utilize Metrorail, but uses only alternative fuel buses. (0487 2-02)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS. The BRT Alternative did not include Metrorail. The types of fuels used by BRT vehicles, , would have been determined during the later stages of the project. The types of fuels used by feeder buses will also be determined by the transit operators of those buses, including WMATA, Fairfax County, and Loudoun County.*

Need to Provide More Seamless Service

Public Comment: Project alternatives should address the access of buses to eliminate multiple transfers of passengers. More auto drivers might use transit if they were not required to transfer several times to other transit vehicles. (0487 2-03)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS. Certain BRT trips would have involved a bus-to-bus transfer and a bus-to-rail transfer.*

Consideration of Alignment T8 with feeder system and its reconsideration

Public Comment: Routes thru Tysons are foolish & add enormous cost. Better to keep rail in the Dulles Road median & use monorail to service Tysons. (0073, 0073-CC-3)

Public Comment: Recommendation - It seems much more efficient and cost effective to connect Tysons Corner to the Dulles Corridor heavy rail at the eastern and western ends and to install a lighter rail system, such as monorail, that can circulate through Tysons Corner to serve all parts of it. This system could be connected to the Dunn Loring Metro station to provide even better service. And, all of this could probably be provided at less cost that trying to put heavy rail through "downtown" Tysons Corner. (0086, 0086-CC-3)

Public Comment: Service to Tysons Corner - The proposed rail alternatives do not seem to provide adequate service to Tysons Corner. Three of these alternatives (T1, T6, T9) have only a single line through the middle of Tysons Corner. It is not clear that the proposed alternatives are any better than the alternative to serve Tysons Corner with a circulator system (alternative T8) that was eliminated in the Initial Screening Phase. The Draft EIS should be revised to include the T8 alternative and provide more details about the adequacy of service to Tysons Corner that could be provided by each of these alternatives. Rationale: The T1, T6, and T9 alternatives appear to leave much of Tysons Corner beyond walking distance from the stations. Alternative T4 does not appear to be a very practical solution because of the divided directional lines and the inconvenience this would cause riders. The EIS does not provide any information about that portion of the Tysons Corner workers and residents would be served by these alternatives. The rejected T8 alternative could be as good or better than the proposed rail alternatives but this cannot be determined because of inadequate information in the EIS. (0402, 0402-L –6)

Public Comment: However, upon further reflection and given the apparent likelihood that substantial funding for this project will be required from transportation tax districts and higher tolls, fairness and equity for those providing much of this revenue demands and the Alliance supports the following new phasing strategy:

Phase I – Bus Rapid Transit or increased express bus service from West Falls Church to Reston, Dulles and Eastern Loudoun until funds are in place to construct Phase II.

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Phase III – Construct a rail loop or transit circulation system within Tysons Corner.

Given that the most likely funding strategy will require a substantial investment from corridor property owners and toll road users, all owners and users must receive a return on their investment at approximately the same time. The above phasing approach meets that test. (0446, 0446-E –3)

Public Comment: The concept of rapid transit to Dulles is sound but the servicing of Tysons is both overly costly and very inefficient. The $1 billion cost could be reduced substantially by providing several rail stations along the corridor. These would be connected with a monorail system in Tysons which could provide satisfactory circulation for both transit riders and the residents, shoppers, employees, etc. Monorail is a mature technology currently employed in Tokyo (26 mile, 180K riders per day), Seattle (where the line is being expanded), and Sydney, Australia (where the line goes over the main street with a minimum footprint). The proposed location of rail stations would still require addition of an internal circulation system in order to reduce vehicular dependence. (0119, 0119-L –1)

Public Comment: It is not clear why a separate circulation system of some kind (for example, feeder buses or a monorail system) has been completely eliminated from consideration as part of the proposed rail alternatives in Tysons Corner. This appears to be needed because the 1/2 mile radius areas around the proposed rail stations that is used as walking distance leaves much of the Tysons Corner area

beyond walking distance. The EIS should state how much additional ridership would result from adding a circulation system serving the northern and southern parts of the Tysons Corner area to the proposed T1, T4, T6, and T9 alternatives. (0392, 0392-L -12)

Public Comment: We would have preferred the so-called T-8 alternative that proposed main line, at-grade trackage with a circulation feeder system to serve Tysons, but that was dropped during the Alternatives Analysis - prematurely, in my view. (0137, 0176-L –2)

Public Comment: Please put the T-8 option back on the table, that's the single station option. Let's not rush through in 30 days decisions that cannot be undone or corrected in a lifetime. (0148, 0148-T –8)

Public Comment: It is almost too easy to imagine attractive monorail or other circulating transportation system taking people to and from a single rail stop at the periphery of the city of Tysons Corner, while simultaneously serving the thousands of people who populate and need to circulate in and around these cities by day and by night. (0148, 0148-T –6)

Public Comment: I believe that a single heavy-rail station with a connection to a light rail or monorail loop is a more appropriate solution for transportation within Tysons Corner. Monorail or light rail would allow for three or four times the number of stations and offer more frequent trains. Which would you rather do? Be delivered directly to a station up to a mile from your destination, or change trains and end up a few blocks from where you're going? I submit to you that most commuters would prefer the latter. (0178, 0178-T –3)

Public Comment: It is disappointing that WMATA has prematurely chosen to dismiss the very viable T-8 alternative. It is in the region's best interest to first extend rail out to Dulles to provide the majority of commuter with mass transit opportunities and then focus on Tysons Corner. The T-8 feeder system to and at grade, main line metro system, would be a simpler, more timely, less expensive option that would provide through-commuters with more expedient access without delay. (0150, 0150-T –2)

Public Comment: The T-8 alternative should be reincluded for consideration. (0150, 0150-T –9)

Public Comment: A variation on the T-8 option, which was eliminated during the initial draft environmental impact statement screening phase, should be reevaluated. The draft environmental impact statement indicated that T-8 was eliminated because ridership would be lower due to the need to transfer trains. Yet the same document advanced the screwball T-4 alignment, wherein a third of the riders not only have to change trains, but they have to go all the way through Tysons and then backtrack to their destination. (0178, 0178-T –6)

Public Comment: It is disappointing to learn that the T-8 option, Tysons feeder option, has been summarily dismissed because it was determined that the Springhill Road station was inappropriate and should be rejected. By all appearances, the T-8 feeder monorail, light rail or personal rapid transit system compared to an at-grade main line metro system, could be a less expensive, greater ridership option that could provide through commuters less delay to their destination and a broader range of coverage for Tysons Corner residents and employers. A transfer the Dulles Silver Line to the Tysons feeder system is similar to a transfer at Roslyn to continue to National Airport or a transfer to Metro Center to the Red Line. This option needs to be revisited. (0179, 0179-T –5)

Public Comment: Though the option was eliminated from consideration in the recent Draft EIS study, is it too late to take another look at keeping the primary Metrorail system in the Dulles Corridor with a greatly upgraded Tysons station at Spring Hill Road / Dulles Highway? Could we then use the billion plus dollars of the proposed through-Tysons rail loop to fund the construction of a state-of-the-art people mover system serving even more of Tysons Corner? Of course, such a system would, of necessity, be elevated. It would have to be to avoid ground level congestion. However, the people mover guideway could be far less obtrusive than the conventional double track Metrorail platform. A people mover system could run more frequent service throughout Tysons serving a full range of internal trips as well as rail transit trips from outside. How many purely internal Tysons trips could be added to the transit-originated trips? No

more getting into your car to do lunch at a Tysons restaurant! With Metrorail bypassing three of the four internal Tysons stations, service to Dulles airport and communities west of Tysons could be speeded up, both in terms of normal travel time and also in terms of the initial construction time. Meanwhile the internal people mover system could serve far more stations throughout Tysons. Yes, this would add an additional mode transfer for transit-originated trips. However, it is entirely likely that the net portal-to-portal trip would actually be faster for many transit users even transferring modes. Surely the technology needed to make such a system effective is already at hand. Would the net cost really exceed what is currently planned for the Metrorail stations? Probably not. Wouldn't spreading the direct economic benefit of transit throughout a broader geographic area within Tysons ultimately generate greater tax revenues to finance such a system? Yes, the option isn't on the table today, but shouldn't it be? (0088, 0088-L –3)

Public Comment: The EIS does not show how the ridership for the proposed Tysons Corner rail alternatives T1, T4, T6 and T9 compares to Alternative T8 that was eliminated from further consideration at the Initial Alternatives Screening phase. It is not clear that the alternatives proposed in the draft EIS provide significantly greater ridership in Tysons Corner for the investment than the T8 alternative. The EIS should be revised to compare the ridership of the proposed Tysons Corner alternatives and the T8 alternative. If ridership is similar, the EIS should be revised to include the T8 alternative. (0392, 0392-L – 13)

Public Comment: The study never considered a secondary distribution system through Tysons Corner. (0162, 2-06)

Public Comment: Cannot support heavy rail through Tysons Corner for the following reasons:

- Aerial and surface rail in Tysons Corner are an albatross – very unsightly, a blight environmentally, and invasion on business and hotel guests, and a visual intrusion for everyone in and near Tysons Corner. It is difficult to envision aerial heavy rail 90 feet above ground level and the impact this might have on the reputation and vitality of the area.
- Cost – Installing heavy rail through Tysons Corner will cost over $1 billion whereas the cost of heavy rail from the current Orange Line to Route 772 in Loudoun County will be $1.7 billion.
- Service – Three heavy rail stations within Tysons Corner do not truly serve the residents, businesses, or visitors effectively. Tysons Corner needs a transit circulation system, not the system recommended in the Draft EIS. (0086, 0086-CC-2)

Response: *While NEPA requires an evaluation of all reasonable alternatives, it allows alternatives to be eliminated prior to detailed studies as long as the reasons for eliminating them are discussed in the EIS. The process used for evaluating the initial list of alternatives for the Dulles Corridor Rapid Transit Project was a two-phase process: initial screening and intermediate screening. The process applied increasingly detailed and comprehensive measures of effectiveness to a decreasing number of alternatives. For the initial phase most measures were qualitative. The alternatives advanced or carried forward for further evaluation at the end of each phase were those alternatives that best met the transportation needs of the corridor, relative to the other alternatives under consideration.*

As detailed in Section 2.6 of the Draft EIS, numerous alternatives, including alternative modes of transportation, were studied prior to conducting the detailed evaluation of BRT and Metrorail that are presented in the Draft EIS. A fixed-guideway circulator system in Tysons Corner was studied as part of DRPT's Dulles Corridor Transportation Study (June 1997), a major investment study (MIS), and was requested again during the Scoping Process for the preparation of the Draft EIS. As part of the Draft EIS process, the Project Team reconsidered the circulator concept. The Project Team reviewed the findings of the MIS analysis and found the analysis to be valid. Therefore, a circulator was eliminated from further consideration and was not fully analyzed in the Draft EIS. The reasons for the elimination of this alternative are fully detailed in the Final Alternatives Analysis Report (May 2001), and are summarized below.

The MIS analysis demonstrated that a fixed-guideway feeder system (people mover) would not enhance ridership on a Dulles Corridor line that followed a Route 123-Route 7 alignment. Moreover, the analysis showed that such a feeder system would substantially add to the cost of the project. Although some components of a circulator may be less expensive than aerial Metrorail, it would be necessary to procure a separate vehicle fleet, and build a separate vehicle storage and maintenance facility, and a separate operations control center. With a Tysons-only circulator, these facilities would have to be located in Tysons Corner, and would require the acquisition of valuable property.

A low-level assessment of cost-effectiveness conducted during the MIS for various Metrorail-people mover combinations found that few options would be as cost-effective as the Route 123-Route 7 alignment without the people mover, and none were more cost-effective, indicating that the potential increases in ridership would not offset the costs of construction for the fixed-guideway system.

Because the feeder system would not substantially increase ridership on the Dulles Corridor line as a whole, it would be considered an unreasonable expenditure in the context of the project. Similarly, given that a loop configuration would provide more coverage of Tysons Corner and, therefore, benefit less from a circulator system, the Project Team for the Dulles Corridor Rapid Transit Project concluded that a feeder system would also be an unreasonable expenditure for a loop alignment.

Early in the MIS process, consideration of a median station alignment that connected to a feeder system was eliminated from detailed evaluation, because it was determined that this configuration would severely restrict access to Tysons Corner and would have potential adverse impacts on residential neighborhoods near the station site. It was also determined to be inconsistent with Fairfax County's economic development goals. In response to Scoping requests, the Project Team for the Dulles Corridor Rapid Transit Project reconsidered a feeder system connected to a DIAAH median alignment through Tysons Corner (Alignment T8). As noted above, the findings of the MIS team were reviewed and found to be valid.

For Alignment T8, the forced transfer of most passengers with an origin or destination in Tysons Corner would significantly reduce ridership on the system.

This configuration would not support the economic development goals of Fairfax County. The Fairfax County Comprehensive Plan, states, "the interests of the County as a whole are best served by a Metrorail transit system that penetrates the [Tysons Corner] core and brings riders to the jobs and shopping that are a major part of the foundation of the County's economic well-being." The "density bonuses" in the Comprehensive Plan would only be triggered by the development of "rapid transit stations." A circulator would not trigger these bonuses.

An Alignment T8 circulator would not be as cost effective as other proposed alternatives for Tysons Corner. The analysis in the MIS found that this option would decrease ridership on the line and in the corridor (because of the forced transfer) more than it would save in capital costs. It was also determined that a circulator option would cost more than an aerial Metrorail alignment through Tysons Corner. As noted earlier, a circulator would include costs for a separate vehicle fleet, a separate vehicle storage and maintenance facility, and a separate operations control center. With a Tysons-only circulator, these facilities would have to be located in Tysons Corner.

Public Comment: T-8 is not a current rail alignment, but was studied previously and is in the BRT alternative. Evaluation of this combination should not unduly delay the EIS. (0170, 0170-T –8)

Response: *The BRT 1 alignment was not similar to the Metrorail T8 alternative. The T8 alignment would have had a separate circulator in Tysons Corner, while BRT 1 would not have. T8 Metrorail alignment alternative was eliminated as documented in the Final Alternatives*

Analysis Report (May 2001) and was not evaluated in detail in the Draft EIS. BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS.

B. Supplemental Draft EIS Comments

Public Comments

Corridor Monorail Alternative

Public Comment: And why can't you build monorails, like Disneyworld? They are extremely quiet? (0011 0011-2)

Response: *The purpose of the Supplemental Draft EIS was to provide additional opportunities for the public and agencies to comment on refinements that have been made to the LPA since the publication of the Draft EIS Public Hearing Report (October 2002). During the early stages of the Draft EIS process, a number of other modes were considered for the Dulles Corridor Rapid Transit Project, including monorail. As documented in the Final Alternatives Analysis Report (May 2001)*, *monorail was eliminated from further study because it was not expected to offer cost savings in the Dulles Corridor and would result in reduced ridership due to a forced transfer at the Orange Line. As a result, the cost effectiveness of a monorail alternative was expected to be lower than that for the Metrorail Alternative, with the same high level of investment.*

2.2 Draft EIS Alternatives

A. Draft EIS Comments

Federal Agency Comments

Need for Implementation of the Full Metrorail Alternative

Federal Comment: Consequently EPA rates this project and the associated documentation with Lack of Objections with Adequate documentation (LO-1). We encourage the development of the full Metrorail alternative because with the highest ridership it will have the greatest capacity of moving people through the corridor and should have the greatest impact on reducing congestion and air pollution. The full Metrorail alternative will be a permanent alternative to the heavily congested roads in the Dulles Corridor and is supported by more businesses, residences and community groups than any other alternative. In addition, the full Metrorail alternative is on the MWCOG CLRP and has been found to conform to regional air quality plans. (0303, 0303-A –4)

Response: *Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to the Project Team and were considered by decision-makers in the selection of the Locally Preferred Alternative. The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative.*

Concern for Environmental Impacts of Yard Facilities

Federal Comment: We are concerned with the comparison of environmental impacts for the three rail yard sites. Site 15 appears to have the greatest environmental impacts. (0485, 0485 – A – 3)

Federal Comment: As you know from our meeting, held October 17, 2001, a rail yard sited on Dulles International Airport is not a desirable use of airport land. Rail yard site 15, one of three remaining alternatives, would be located on the airport. (0485, 0485 – A – 1)

Federal Comment: Concerned that constructing the Metrorail S&I Yard on Site 15 appears to have the greatest environmental impacts of the sites presented in the Draft EIS. States that a rail yard located on Dulles Airport property is not a desirable use of airport land. Concerned that the preferred alternatives may not pass legal muster under NEPA since there appears to be a practicable alternative rail yard site that meets the project purpose with less adverse environmental impact. (0485, 2-01)

> ***Response:*** *In December of 2001 and January of 2002, the Project Team, Metropolitan Washington Airports Authority (MWAA) and Loudoun County, in coordination with the Federal Aviation Administration (FAA), identified viable alternative sites for the Metrorail Service and Inspection (S&I) Yard. Yard Site 15 was determined to be viable for the following reasons:*
> - *The MWAA Land Use Plan does not indicate use of the site for any other purpose.*
> - *The yard's occupied structures of shop, operations, building and car wash are not within the runway approach surface of the future 19R runway, given the proposed runway separation of 4,000 feet. Most of the yard's surface tracks are outside the approach surface.*
> - *Across Route 606 from the yard site are established and newly constructed light industrial buildings, which will be within the runway approach surface of the future 19R runway.*
> - *The yard itself does not encroach in the floodplain of Horsepen Run and only impacts the edge of one wetland.*
> - *The outbound trains would have direct entry into the Yard Site in contrast to a reverse maneuver for yard Site 7.*
>
> *Since the FAA's initial review of the Draft EIS, the potential effects to wetlands, floodplains, and streams at Yard Site 15 have been minimized by reconfiguring its layout. In addition, potential effects to cultural resources have been eliminated.*

Federal Comment: The building associated with the S&I Yard is currently shown outside the approach zone to a proposed new runway, located 4,000 feet west of the existing Runway 1L/19R. However, there are several alternatives for the location of the new runway. If a new runway were to be constructed at some other separation distance from the existing runway, the design of the S&I Yard must respect the new approach, or MWAA must revise their policy. (0485, 2-02)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Metrorail Extension with Yard Site 15 on Dulles Airport property as the Locally Preferred Alternative. The forthcoming FAA Draft EIS on the proposed improvements to the Dulles Airport has evaluated new north-south runways that are 4300 feet and 5000 feet west of the existing runway. These greater separation distances lessen the influence of the new north-south runway on S&I Yard Site 15.*

Need to Acquire FAA Land

Federal Comment: If it is determined through the EIS process that this site meets your operational needs and receives environmental approval, land will have to be acquired from the airport. The land on which Site 15 is located is dedicated airport property. The Metropolitan Washington Airports Authority (the Authority) is required to seek FAA approval for the release of any property dedicated for airport purposes as identified on the Exhibit "A" Property Map for the airport. Also, under the **Federal Revenue Diversion Policy,** FAA will be required to publish the intent to release this property in the Federal Register for 30 days to solicit public comments. The Authority would be required to obtain the fair market value in compensation for the property. (0485, 0485 – A –2)

> ***Response:*** *As indicated in Section 3.3 of the Final EIS, the Full LPA requires the acquisition of property interest in the median and other parts of the Dulles International Airport Access Highway and Dulles Connector Road, and in parts of the Dulles Airport property itself, including the site of the S&I Yard and portions of eight parcels that are currently leased to commercial entities. The U.S. Department of Transportation (USDOT) owns the Access Highway, Connector Road and Dulles Airport property. MWAA has leased the property from the USDOT through the year 2067 and has sublet certain commercial parcels to businesses. DRPT will seek*

conveyance of the Access Highway, Connector Road and Airport property interest needed for the Project from the USDOT and MWAA. The acquired property interests will be adequate to assure DRPT's or WMATA's continuing control of the project property throughout the useful life of the project. In addition, purchase of land for an S&I Yard at fair market value was factored into the capital costs presented in Chapter 8 of the Final EIS.

Need to Avoid Impacts of Parking Facilities on Station Area Development

Federal Comment: Park-and-ride facilities should not interfere with development of the station areas, particularly within the ¼ mile radius. This area is better suited to pedestrian-scale development patterns. If parking facilities are located in these areas, they should be located underground. (0492 01)

Response: *Stations need to accommodate multiple arrival modes, including pedestrian, bicycle, feeder bus, private shuttles, and private autos. Each is important in building and maintaining ridership, and availability of daily parking is particularly influential in attracting choice riders – those who have a car available for a trip but choose to use transit. Providing such parking within a reasonable distance of the station does not preclude transit-oriented station-area development. Mixed-use, pedestrian-oriented, compact development can be integrated with parking areas. WMATA design criteria establish the maximum acceptable distance between the most remote station park-and-ride facilities and the station entrance to be 1,500 feet. Locating the station parking more remote than this would need to be weighed against negative impact on patronage.*

As stated on Chapter 5 of the Draft EIS, parking is a potential element of joint development opportunities in the Town of Herndon, and the Wiehle Avenue Station. Other parking facilities may be provided through the proffer system or as incorporated into private development proposals. The park-and-ride facilities that are currently under development or proposed for the corridor have been assessed for ridership effects in the Final EIS. The actual location and implementation of remote station parking would be under the control of the local government, which implement parking requirements as part of their local land use regulations.

State Agency Comments

Need to Implement Build Alternatives to Gain Air Quality Benefits

State Comment: The Commonwealth of Virginia has no objection to any of the "build" alternatives. It appears to us that any of the "build" alternatives would be preferable to the no-action alternative, given the widely acknowledged beneficial air quality impacts of improved mass transit, particularly in the Northern Virginia ozone non-attainment area. (0407, 0407-A –1)

Response*: The two Build Alternatives of the Final EIS are intended to address the deficiencies of the existing highway and transit systems in the Dulles Corridor and the future transportation needs of the growing number of residents, employees, and visitors in the corridor and region. A No-Build Alternative is required by the regulations that governed preparation of the Final EIS. The No-Build Alternative serves as the basis for comparison and evaluation of the two Build Alternatives.*

Note that the two Build Alternatives will result in pollutant levels that are similar to those expected for the No-Build Alternative. The difference between alternatives was negligible. All predicted pollutant levels are below those allowed under federal air quality standards. In addition, the two Build Alternatives are expected to have similar effects on air quality. All alternatives will have reduced levels of carbon monoxide emissions compared to existing conditions. This anticipated reduction is primarily attributable to improvements in vehicle emission rates over the next 25 years.

Need for Maintenance Yard Alternatives

State Comment: We are pleased with your efforts to find an alternative location for the rail operating and maintenance yard facility. We support the use of the site south of the station on Route 606 on Washington Dulles International Airport. (0131, 0434-E –4)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner and with Yard Site Y15 on Airport property as the Locally Preferred Alternative.*

Need for Bus Service Improvements

State Comment: While the bus rapid transit alternative described in the Draft EIS has a number of serious limitations, we think that there can and should be significant improvements to express bus service and passenger amenities in the interim, including the use of technology to enable prepayment before boarding, real time information about the location of buses, and more neighborhood and circular services. (0131, 0131-T –8)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner and with Yard Site Y15 on Airport property as the Locally Preferred Alternative (LPA). The LPA will be constructed in two phases, the first being the Wiehle Avenue Extension.*
>
> *For the Wiehle Avenue Extension, corridor express bus service, formerly referred to as 'premium bus', will be a feeder system for the interim end-of-line Wiehle Avenue Station. It will be a high quality service meant to replicate rail service to the greatest degree possible until rail is extended to Loudoun County in the second phase of the project. The service would mimic rail in terms of service to station areas served by rail (Route 772, Route 606, Dulles Airport, Herndon-Monroe, Reston Town Center, and Wiehle Avenue) service frequency, hours of service, and the fact that there would be high quality service in the reverse peak direction. The Corridor express bus service will not replace express service currently run by Loudoun County into Rosslyn and downtown Washington.*

Funding Implications of Roadway Improvements at Route 772 Station

State Comment: Site Plans for the Route 772 Stop indicate North and South of Dulles Greenway alternatives with Proposed Transit Connector Roads to be constructed by other . There is considerable cost in these roadway improvements particularly the bridge crossing Dulles Green Way. The agency charged with building these roads would need to program and fund these commitments and look at the cost verse area of service/ease of service vs. roadway network serviceability. For example the North Station Facility option could connect to Route 643 with traffic routing to Route 772 interchange avoiding the expensive bridge crossing of Dulles Greenway. This would also effect development/access to the areas of stations. (0421, 0421-A –23)

> ***Response:*** *As indicated in the General Plans (Final EIS Volume V), construction of the proposed Dulles Greenway overpass is assumed to be by others. Although the Route 772 Station of the revised LPA includes station facilities on both sides of the Dulles Greenway, the Project has determined that transit-related use of this overpass would be limited. Other roadways shown are included in the phased implementation of adjacent developments as approved by Loudoun County. Station access will be the subject of continuing coordination with Loudoun County, property owners, and developers in station area.*

Reston Parkway Constructability Issues

State Comment: Reston Parkway Stop - Shows proposed underpass by others directly conflicting with station - By who? Is it part of regional network? Does this station preclude overhead crossing over of roadway? (0421, 0421-A –26)

> ***Response:*** *In the final General Plans, the proposed southside station facilities are configured to permit the eventual construction of the underpass (this would result in the loss of some interim short-term/Kiss & Ride parking, but pedestrian and vehicular access to the station would be maintained). The underpass is in the Fairfax County Transportation Master Plan. The station and facilities as currently planned do not preclude construction of this roadway as an overpass.*

Need for Adequate Horizontal Clearances

State Comment: Sheet 690 - Does pedestrian bridge have adequate clearance over the Herndon Monroe Park and Ride Ramp from Structure? (0421, 0421-A –25)

> ***Response:*** *As indicated in the Facilities General Plans (Final EIS Volume V, Sheet 054), the pedestrian bridge will provide 17'-0" clearance for the existing ramp below.*

Regional Agency Comments

Need for Enhanced Horizontal Circulation at Stations

Regional Comment: It would appear that the four-station alternatives T6 and T9 offer the most potential service to Tysons Corner. However, only a small fraction of the Tysons Corner area would be within walking distance of these stations. The final EIS needs to include the concept of moving sidewalks or some other form of mechanized outreach to bring a much higher proportion of Tysons Corner's residents and employees within convenient access of the four stations. (0133, 0405- L-8)

> ***Response:*** *A significant percentage of the Tysons Corner core area is within reasonable walking distance of the proposed stations. It is anticipated that employee shuttles will be provided by many of the major employers in Tysons Corner, in addition to Fairfax County's planned circulator bus routes, and other feeder bus routes that will serve the stations. Provision of moving sidewalks to extend the pedestrian reach from the stations would not be practical or cost effective.*
>
> *A fixed-guideway circulator system in Tysons Corner was studied as part of DRPT's Dulles Corridor Transportation Study (June 1997), a major investment study (MIS), and was requested again during the Scoping Process for the preparation of the Draft EIS. As part of the Draft EIS process, the Project Team reconsidered the circulator concept. The Project Team reviewed the findings of the MIS analysis and found the analysis to be valid. Therefore, a circulator was eliminated from further consideration and was not fully analyzed in the Draft EIS or in the Final EIS. The reasons for the elimination of this alternative are fully detailed in the Final Alternatives Analysis Report (May 2001).*

Opposition to BRT

Regional Comment: BRT, as envisaged in the DEIS, lacks the ability to trigger the higher densities around rail stations permitted in county plans. So the decision between rail and BRT will have a profound effect on the Corridor's evolution and thus upon our quality of life and the Commonwealth's revenues. (0133, 0221-M –7)

Regional Comment: The primary "demand times" within the Dulles Corridor are along the Corridor to Tysons Corner and secondly to the inner core. BRT cannot, as discussed, effectively serve the Tysons Corner flow. There also is a physical limit to the number of buses that can connect to trains at the West

Falls Church Metro Station in any given hour in order to serve the inner core flow. That limit, even using high capacity buses, is less than the projected demand after 2010. This limit was found by an analysis presented to the Dulles Corridor Task Force in 1998 by its Service Delivery Working Group. (0133, 0405-L-13)

Response: *The commenter's statements are correct. These were among the issues considered in selection of the Metrorail Extension as the LPA.*

Support Metrorail Alternative

Regional Comment: The [Washington Area] Task Force supports rail in the Dulles Corridor. (0132, 0132-T –1)

Regional Comment: We strongly recommend the Commonwealth Transportation Board select the rail option offering the greatest potential for ridership now and in the future. (0133, 0133-T –1)

Regional Comment: I think that the one-liner is very simple: Select rail; do it right; do it now. (0133, 0133-T –8)

Regional Comment: We strongly recommend that the Commonwealth Transportation Board select the rail option offering the greatest potential for ridership now and in the future. (0133, 0221-M –1)

Regional Comment: The Washington Airports Task Force recommends as the Locally Preferred Alternative the rail option that will serve the most people. Only rail to Route 772 in Loudoun County can, number one, provide the most convenient connection of Dulles airport to every part of the region served by Metro and, number two, open up the airport's rapidly growing employment base to all parts of the region. (0132, 0132-T –5)

Regional Comment: Commuters from the urban core and other parts of the region need to be able to reach jobs at Tysons Corner, in the corridor and at Washington Dulles. Commuters from the growing western perimeter of Washington need access to jobs in other parts of the metropolitan area, as well as in the Corridor and at Tysons Corner. And air travelers need to be able to reach Dulles Airport by transit from any part of the metropolitan area. For all of these reasons, the Washington Airports Task Force recommends, as the locally preferred alternative, the rail option that will serve the most people. Only rail to Rt. 772 can:

1. Provide the most convenient connection of Dulles Airport to every part of the region served by Metro and

2. Open up the airport's rapidly growing employment base to the District of Columbia and all parts of the region. (0132, 0222-M –2)

Response: *Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to the Project Team and were considered by decision-makers in the selection of the Locally Preferred Alternative (LPA). The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner and with Yard Site Y15 on Airport property as the Locally Preferred Alternative. The LPA will be constructed in two phases, the first being the Wiehle Avenue Extension.*

Suggested Alignment Modification

Regional Comment: The western portal at station 168+00 blocks ingress/egress to the Dulles Marriott Hotel and to Navigation Road at 1685+50. Consideration should be given to either relocating the portal further north or relocating Navigation Road and the Marriott access. (0440, 0440-A –12)

Response: *With the Supplemental Draft EIS and revised General Plans (October 2003) the Project Team relocated northward the portal at the western end of the Dulles Airport tunnel so that the Project's effects on the Dulles Airport Marriott have been lessened. This relocation is part of the Full LPA and final General Plans.*

Opposition to BRT Alternative

Regional Comment: The BRT concept is not practical within Tysons Corner, as dedicated lanes would not be available. That is a serious deficiency as approximately 65% of Tysons Corner's commuters come down the corridor from the west and only 14% come from the east. Both figures were presented to the Dulles Corridor Task Force in 1998 by its Service Delivery Working Group. The 1996 MIS supports this conclusion. Therefore, if the proposed transit system is to be cost effective, it must:

a) Provide attractive, practical service to a very large part of Tysons Corner;
b) Provide such service from the west, not just from the east.

Options that rely upon BRT for service west of Tysons Corner are not likely to be cost effective, as they would not provide a direct link with the corridor destinations that generate most of Tyson Corner's traffic. (0133, 0405- L-7)

Regional Comment: Dulles continues to grow as a major international airport and the Airports Authority has not wavered in its vision to have a rail connection to the Nation's Capital. As part of that vision the Airports Authority supports the Draft Environmental Impact Statement alternatives that utilize the median of the DIAAH for rail, including phased implementation that provides for rail on a reasonable, predictable schedule. The Airports Authority recognizes that BRT could well be a part of such a phasing strategy. We do not, however, believe that BRT has the capacity to meet the long term needs of the region and the future growth of Dulles, and thus do not support it as a long-term solution to the corridor's transit needs. (0440, 0440-A –1)

Response: *Comments noted. Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to the Project Team and were considered by decision-makers in the selection of the Locally Preferred Alternative. The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. BRT and the BRT/Metrorail Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Need to Convert Existing Service to BRT

Regional Comment: We believe the current express buses in the Dulles Corridor, by running in lanes largely free of congestion, already are using the key feature of Bus Rapid Transit. It would take little effort to turn these services into true BRT without the delays and cost incurred in creating stops for them in the corridor. If executed quickly such an enhancement would be a valuable addition until rail can be completed through the Corridor to Loudoun County in 2010 or earlier. (0133, 0221-M –6)

Regional Comment: The current express buses in the Dulles corridor, because they ran in lanes largely free of congestion, already are using the key features of bus rapid transit. In fact, I think we see BRT as standing as build rail today. We believe it would take little effort to turn these services into true BRT without the cost incurred in creating stops for them in the corridor. Lastly, BRT lacks the ability to trigger the higher densities around rail stations permitted in county plans. (0133, 0133-T –6)

Response: *The Wiehle Avenue Extension will provide Metrorail service from the existing Orange Line through Tysons Corner, with interim express bus service between Wiehle Avenue and transit centers/stops in the western corridor, providing a level of service meant to closely replicate Metrorail service. Five routes or route families will provide service at frequencies comparable to Metrorail headways to transit centers/stops at Wiehle Avenue, Reston Town Center Transit*

Center, Herndon-Monroe Park-and-Ride, Dulles Airport, Dulles North Transit Center (Route 606), and Route 772.

Local Agency Comments

Support for Metrorail as Preferred Alternative

Local Comment: On August 13, 2002, the Town Council of the Town of Herndon unanimously passed the attached resolution recommending the "Metrorail Alternative" as the Locally Preferred Alternative (LPA) to be forwarded to the Virginia Department of Rail and Public Transportation (VDRPT), the Washington Metropolitan Area Transportation Authority (WMATA), and the Commonwealth Transportation Board (CTB). (0409, 0409-L –1)

Local Comment: As Hunter Mill District Supervisor, the following not only reflects my view but is also input gathered from numerous community venues. In general, there is as a consensus of support for rail now as the Local Preferred Alternative. While there are those that fear the outcome of rail may be detrimental to the community, I believe that the rail alternative over the BRT or No Build alternatives is critical to maintaining the quality of life and the economic stability of the surrounding communities in the Dulles Corridor. (0437, 0437-E –4)

Local Comment: The road network in Tysons Corner is at its limit. Important improvements can and will be made, however. The solution to Tysons Corner, nonetheless, is not in road expansion. While there are some favorable characteristics of bus rapid transit, there are clearly some additional costs that are associated with that that, in my opinion, perhaps force us to reexamine going the all-rail-now alternative. Rail transportation will improve air quality, will contain sprawl by creating a magnet for cluster development around the stations, and will maximize convenience to those living, working and shopping in Tysons. (0130, 0130-T –5)

Local Comment: We are on the verge of making the long-awaited vision of rail service to Tysons on the way to Dulles a reality. The time to take bold steps to solve the transportation problems has arrived, Mr. Chairman. Fairfax County and the Washington, D.C. region cannot afford to wait any longer. (0130, 0130-T –8)

Local Comment: While bringing rail to Tysons Corner is my top priority, I believe it is imperative that transit ultimately be extended through the Dulles Corridor to Dulles Airport. Washington, D.C. is one of the only capital cities in the industrialized world whose international airport is not served by rail. Demand for a rail link to Dulles will only increase as travel volume is expected to grow to nearly 32 million passengers by 2010. The opening of the new air and space museum next year is expected to attract millions more to the airport area. Furthermore, the closure of National Airport for months in the wake of September 11th is a compelling reminder of the reliance this region has on Dulles and the inconvenience of its missing rail link. (0130, 0289-T –5)

Local Comment: While bringing rail to Tysons Corner is my top transportation priority as the supervisor for Providence District representing most of Tysons, I do not want to neglect the fact that I believe it is imperative that transit ultimately must be extended throughout Dulles Corridor as soon as possible. (0130, 0130-T –6)

Local Comment: Compliments the Project Team on their efforts and is pleased that Metrorail and Y15 were recommended for the Locally Preferred Alternative. (0491 2-01)

Response: *Comments noted. Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to the Project Team and were considered by decision-makers in the selection of the Locally Preferred Alternative. The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative.*

BRT, the BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.

Local Efforts to Support Parking Facilities at Route 772 Station

Local Comment: The Loudoun County Board of Supervisors would like to address the problem of parking at the Route 772 Station. The Board of Supervisors is currently in negotiations with developers and believe that they can get dedication of the land necessary, at no cost to the project, to accommodate parking garages on both sides of the station, connected by a pedestrian bridge. (0491 2-02)

Local Comment: The land (in the vicinity of the Route 772 Station) is currently being rezoned, however, a parking solution from the Board of Supervisors is foreseeable in the near future. The Board of Supervisors would like to see the facilities necessary to accommodate the necessary demand (3,300 spaces) incorporated into the project costs. This parking area would be in addition to the parking already proposed for the Route 606 Station. (0491 2-03)

Response: *As evaluated in the Supplemental Draft as a revision to the selected LPA and further documented in the Final EIS and final General Plans, the Project Team in cooperation with Loudoun County reconfigured the park-and-ride program in Loudoun County. Route 772 Station increased from no park-and-ride facility to two structures of 3,300 spaces combined. Route 606 Station decreased from 4,750 spaces to 2,750 spaces.*

Need to Resolve T9 Design Conflicts

Local Comment: The public hearing report should include a determination as to whether the conflicts between the T9 Alignment and T9 Alignment design option and the potential I495/Route 123, Route 123/International Drive and Route 123/Route 7 interchanges can be resolved. (0479, 0479-L –2)

Response: *The T9 Design Option had been developed to significantly resolve the majority of conflicts posed by T9 at the crossing of the future I495/Route 123, Route 123/International Drive and Route 123/Route 7 interchanges. However, both the T9 Alignment, and the T9 Design Option Alignment were eliminated from further consideration after public and interagency review and comment on the Draft EIS.*

Need to Consider Secondary Impacts

Local Comment: The draft environmental impact statement has laid out several very viable alternatives. Close attention must be paid, however, to the potential impact on surrounding developments, especially residential development. And with that in mind, Mr. Chairman, while I think a loop may have some merit, I could not support an aerial loop running in Tysons. Its impact on existing residential development would be negative. (0130, 0130-T –4)

Response: *The T2, T5, T10, and T11 'loop' alignments were analyzed by the Project Team and eliminated from further consideration during Intermediate and Final Screening for a variety of reasons. The screening analysis and results are detailed in the Final Alternatives Analysis Report (May 2001). Alignment T4, the loop alignment that was advanced to the Draft EIS, was eliminated from further consideration after public and interagency review and comment on the Draft EIS.*

Support for Yard 15 Facility

Local Comment: With respect to the rail yard options, we are opposed to yard site 7 and 20 and favor yard site 15. Site 15 meets all of the Washington Metropolitan Area Transit Authority requirements and allows sites 7 and 20 to be developed as envisioned in the county's comprehensive plan. In time, these properties will contribute to the WMATA customer base. (0240, 0240-T –4)

Response: *Yard Site 15 was selected for the LPA after the public and interagency review and comment on the Draft EIS.*

Opposition to BRT

Local Comment: A savings in both time and funding that could be achieved on this project is the elimination of the bus rapid transit phase and going directly to rail. While BRT initially may have had certain advantages, such as a favorable Federal funding ratio, this is no longer the case. To include BRT may also have the added disadvantages of increasing the project's overall cost and, perhaps most importantly, it would present significant operational problems if you were to build the rail line while keeping BRT operational. Frankly, we do not see the cost justification and operational advantages for building BRT over maintaining or enhancing bus services that Loudoun County and others currently operate in the Dulles corridor. (0240, 0240-T –3)

Response: BRT *Alternatives were eliminated from further consideration after public and interagency review and comment on the Draft EIS.*

Herndon-Monroe Station Design Consideration

Local Comment: The Town Council views the near-term implementation of rapid transit in the Dulles Corridor as imperative. The Town Council is in full support of the effort to bring Metrorail to the Dulles Corridor due to the capacity limitations of Bus Rapid Transit and the disruption issues associated with phased implementation. During the past few years, we have been looking closely at the important Herndon-Monroe Station proposal and how to best develop pedestrian and vehicular access to the station from the Town of Herndon. This effort resulted in the Town completing an engineering concept and feasibility study in cooperation with VDRPT as well as other project sponsors. (0409, 0409-L –2)

Local Comment: On June 12, 2001, the Town Council unanimously passed a resolution recommending a preferred alternative for direct access from the Town to the future Herndon-Monroe Transit Station. The Town's selected alternative is referred to as Alternative #4 and, as stated in the attached resolution, it is the preferred configuration to be explored in more detail with Virginia Department of Rail and Public Transportation. This alternative emphasizes a pedestrian walkway extending from the station to the north, directly into Herndon, with a modal transfer point for persons arriving by bus, car-pool, van-pool, automobile and bicycle. The Town Council believes that enhanced pedestrian and vehicular access on the north side should be a part of the station development scheme from the beginning. Effective north side access to the station will have beneficial impact on Town property values and the quality of life of residents and person working in the Town, over the long term, especially if appropriate redevelopment of the transit station area is implemented during the coming years. (0409, 0409-L –3)

Local Comment: The [Herndon] Town Council requests that the Herndon-Monroe Station construction include necessary facilities for inter-modal transfers and adequate pedestrian facilities on the north-side of the station, and that such facilities be incorporated into the final Environmental Impact Statement for the Dulles Corridor Rapid Transit Project. (0409, 0409-L –4)

Response: *As indicated in the General Plans (Final EIS Volume V), the Project would provide a north side entrance pavilion and pedestrian walkway to Herndon Parkway. The configuration of these elements will be the subject of continuing coordination with Fairfax County, the Town of Herndon, and adjacent landowners and developers. As acknowledged in the Town's letter of April 2, 2002, the Project Team does not plan to construct the intermodal facility cited in these comments. If this facility is advanced by others, the Project Team will coordinate its design with the proponent(s) to the extent feasible.*

Need for Linkage Between Stations and Regional Bike/Pedestrian Connections

Local Comment: Provide increased pedestrian/cycle access to the transit stations of Wiehle Avenue, Reston Parkway and Tysons Corner and particularly as a means of allowing for reconnecting the north-south Reston communities. (0437, 0437-E –9)

> ***Response****: DRPT is the Project's sponsor and initial owner. However, the responsibility for modifications of sidewalks and trails as part of station access is with Fairfax County, Loudoun County, Town of Herndon, City of Falls Church and VDOT. DRPT will, though, coordinate with these jurisdictions and agencies during preliminary engineering and final design to determine the improvements for station access beyond the station site plans, as well as their ownership and maintenance. Close communication would also occur with the Fairfax County Non-Motorized Transportation Committee, private landowners and developers and other stakeholders. The Fairfax Countywide Trails Plan and the Loudoun County Trails plan have been and will be consulted. Comprehensive pedestrian circulation beyond the station site plans may be implemented in conjunction with other planned developments, County, and/or State projects and/or as elements of the Fairfax Countywide Trails Plan and the Loudoun County Trails plan.*

Need to Address Potential Parking Overflow Effects at East/West Falls Church

Local Comment: The draft EIS has failed to adequately address issues of parking overflow in the residential areas adjacent to the East and West Falls Church Metro Stations. (0122, 0122-A –3) (0122, 0164-T –4)

Local Comment: In addition, new parking facilities may be needed at either metro station to support ridership. If these motorists drive to the stations and cannot find parking, they will try to park on the residential streets, creating a significant impact on the surrounding neighborhoods. The City [of Falls Church] has repeatedly requested that these impacts, and others, be anticipated and addressed. (0122, 0122-A –9)

Local Comment: Parking - The pressure for Metro parking on the City's [Falls Church] residential streets is extreme at present. We are finding that permit parking or time restrictions simply moves the parking further out into other City neighborhoods impacting more and more residents constantly. Assumptions - The assumption that parking needs will not increase is flawed. The recently announced potential addition of 1,000 parking spaces at the West Falls Church Metro area clearly indicated parking needs are greater than stated in the report. (0122, 0122-A –18)

Local Comment: Impacts - Parking studies are needed for both the East and West Falls Church Metro areas. (0122, 0122-A –19)

Local Comment: Equity - The City and its environs have more residential streets impacted than any other locality, but no consideration was given to how parking will be handled on those streets. (0122, 0122-A –20)

> ***Response*****:** *Based on the analysis of the forecast traffic volumes for the East and West Falls Church Metrorail Stations, the Project Team does not feel that overflow parking onto residential streets will be a problem. Moreover, since completion of the Draft EIS analysis, WMATA has programmed a 960-space parking facility at West Falls Church to be completed in late 2005. Impacts on project analysis resulting from this facility are discussed in the Final EIS. The Project Team also initiated meetings with the City of Falls Church to discuss the issues of overflow parking and cut-through traffic.*

Effects of Park-and-Ride Facilities on Traffic Flow at Tysons West Station

Local Comment: I am writing to raise concerns that I have regarding the designs of the future rail stations in Tysons Corner. I understand that when Metro is extended to and through Tysons Corner there

will be a need for commuter parking. In the interim, before Metro is extended from Tysons to Dulles, there will also be a need for a terminus station with ample parking. While I support parking facilities at Tysons West I am deeply concerned that the existing DRPT / WMATA design proposal for the interim terminus station in Tysons Corner, that includes a 2,000 space parking garage on Leesburg Pike, would catastrophically effect traffic flow on Route 7 resulting in gridlock affecting most of Tysons Corner. (0130, 0308-L –1)

Local Comment: Mitigation measures should be examined to further handle the impacts of the proposed parking facility in the northeast quadrant of Route 7 and Tyco Road. (0479, 0479-L –3)

> ***Response*:** *In response to public and interagency review and comment on the Draft EIS, the capacity of the park-and-ride structure at the Tysons West Station was reduced from 2,000 to 500 spaces. Further, the peak activity at the station will be early on weekday mornings and the park-and-ride structure will likely be full before the local peak hour of Tysons Corner. For instance, the final park-and-ride customers of Metrorail would arrive before 7:30 a.m., while the local peak hour would be between 7:30 a.m. and 8:30 a.m.*

Station Location Incompatibility

Local Comment: The Wilmorite representatives suggested that the proposed location of the bus transit station along the private, internal ring road of the Center is incompatible with the existing circulation patterns and development of that portion of the Center. With the narrow internal roadways and tight turns along the Center's ring road, the Wilmorite representatives were concerned about potential conflicts between buses and passenger vehicles, as well as the potential burden the new bus circulation could place on the Center's internal road network. As you are aware, the Center is consistently busy, with many customers and employees accessing the site from Route 123 (especially during the busy holiday seasons) so the ingress/egress and circulation around the Center is extremely important. I have seen firsthand how difficult it is to navigate the roads around Lord & Taylor and Circuit City, where the station is proposed. Given the potential adverse effects of the bus transfer station, I request that you and the design team review the concerns above and reexamine the suggested location and configuration of the proposed station to see if a more appropriate location for this facility would better facilitate transit-oriented development in Tysons Corner. (0130, 0439-L –1)

> ***Response:*** *The proposed entrance pavilions and other station facilities at the Tysons Central 123 Station are important to the success of the project. In response to public and interagency review and comment on the Draft EIS, the intermodal facilities of the Tysons Central 123 Station have been reconfigured. As indicated in the General Plans (Final EIS Volume V), the south side bus bays have been relocated and reduced in quantity, and bus bays are now also provided at the north side. During preliminary engineering, DRPT and WMATA will continue to work with Fairfax County, VDOT, affected property owners and developers to coordinate integration of the station facilities with existing and proposed development. Any integration of the intermodal facilities with a proposed development will be subject to review by Fairfax County through its zoning and comprehensive planning procedures.*

Public Comments

Support for Metrorail as Preferred Alternative

Public Comment: Fairfax Coalition for Smarter Growth applauds the decision to emphasize mass transit, especially some form of rail, as the key to transportation in the Dulles corridor. (0151, 0151-T –1)

Public Comment: The Fairfax Coalition for Smarter Growth applauds the decision to emphasize mass transit-- specifically, some form of rail-- as the key to transportation in the Dulles Corridor. (0151, 0297-E –1)

Public Comment: As one member of the Board of Supervisors, I find that the analysis and evaluation provided in the DEIS reaffirms the conclusions of the MIS which recommended a seamless rail extension in this corridor. Such a rail extension is the only option that provides sufficient throughput capacity in the corridor to meet existing and future corridor travel demands, particularly in the Tysons area. The Tyson's area represents the largest employment center in the region and deserves to be connected via rail with the rest of the region. In addition, rail service to Dulles International Airport is essential towards serving the demand associated with continued growth in air traffic as well as serving commuter needs in the Renton/Herndon area. Finally, a rail extension is also consistent with and will support the County's comprehensive plans, which have long recognized the provision of rail. (0151, 0270-L –1)

> ***Response:*** *Comments noted. Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to the Project Team and were considered by decision-makers in the selection of the Locally Preferred Alternative. The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. BRT, the BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Opposition to BRT

Public Comment: Finally, the Fairfax Coalition believes that the BRT should be dropped as an interim step towards rail. The existing express bus service in the corridor is doing a better job than BRT would, and we can provide you the figures if you like. Throughout the U.S., busways have either failed or fallen short of projected riders. BRT costs more than light rail to build, slows travel, and adds transfers for most people, creates more air pollution and noise than rail, has a higher cost of operation than rail, has 80 percent more injuries than rail (0151, 0151-T –9)

Public Comment: Finally, the Fairfax Coalition believes that the Bus Rapid Transit should be dropped as an interim step toward rail. The existing express bus service in the corridor is doing a better job than BRT would. And we can provide the figures if you like. (0151, 0297-E –14)

> ***Response: BRT*** *Alternatives were eliminated from further consideration after public and interagency review and comment on the Draft EIS.*

Herndon-Monroe Station Design Consideration

Public Comment: Will the areas around the stations be pedestrian-friendly? (0151, 0297-E –10)

> ***Response*****:** *DRPT is the Project's sponsor and initial owner. However, the responsibility for modifications of sidewalks and trails as part of station access is with Fairfax County, Loudoun County, Town of Herndon, City of Falls Church and VDOT. DRPT will, though, coordinate with these jurisdictions and agencies during preliminary engineering and final design to determine the improvements for station access beyond the station site plans, as well as their ownership and maintenance. Close communication would also occur with the Fairfax County Non-Motorized Transportation Committee, private landowners and developers and other stakeholders. The Fairfax Countywide Trails Plan and the Loudoun County Trails plan have been and will be consulted. Comprehensive pedestrian circulation beyond the station site plans may be implemented in conjunction with other planned developments, County, and/or State projects and/or as elements of the Fairfax Countywide Trails Plan and the Loudoun County Trails plan.*

Need to Enhance Alternative Information

Public Comment: Description of the Alternatives: The description of the Build Alternatives in the draft environmental impact statement (EIS) does not adequately describe all of the components of the complete transportation system that must be put in place. The EIS only describes the core BRT, rail, or BRT/rail infrastructure component of each transportation system. The description of the system

components for passenger access to stations is completely inadequate. The EIS should be revised to describe completely all components of the transportation system proposed under each alternative, including the integral components for passenger access to stations by walking, bicycle, feeder bus, and automobile. (0392, 0392-L –7)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

As noted in Chapter 2 of the Final EIS, the local feeder and corridor express bus network for the two Build Alternatives will involve modifications to the existing bus network in the corridor. The modifications are described in detail in the Transit Operations and Maintenance Plan (2004). In the report, the bus network for the No-Build Alternative is described, including service route names, operator, type of service, days of operation, routing and terminal points, and service frequencies during the peak and off-peak-periods.

Chapters 2 and 6 identify the existing and proposed park-and-ride and Kiss & Ride facilities that would allow for automobile access to the proposed rapid transit improvements. More detail for these facilities is included in the Facilities General Plans (Volume V). Chapter 6 also states that the project is not expected to affect existing and planned pedestrian and bicycle facilities in the corridor.

DRPT is the Project's sponsor and initial owner. However, the responsibility for modifications of sidewalks and trails as part of station access is with Fairfax County, Loudoun County, Town of Herndon, City of Falls Church and VDOT. DRPT will, though, coordinate with these jurisdictions and agencies during preliminary engineering and final design to determine the improvements for station access beyond the station site plans, as well as their ownership and maintenance.

Limitations of the No Build

Public Comment: The DEIS considers a "No-Build" alternative for base line comparison. This alternative cannot work. It will gridlock. Great population, employment and traffic growth is forecast. Air quality fails to meet legal requirements. Property and money is not available to simply expand the existing system as it is but if it were, it would not help much. It would not be a good or useful investment. (0013, 0013-L –13)

Public Comment: Excellent bus service is now provided on the Dulles Toll Road #267 from West Falls Church MetroRail station to Reston and Herndon, but the bus service has several inherent disabilities that only MetroRail can correct. The bus service cannot adequately serve the 100,000 jobs in Tyson's Corner because of inherent traffic and highway patterns. Tyson's Corner has several bus routes but they are poorly patronized because of their inherent disabilities. (0013, 0013-L –5)

Public Comment: The "Baseline" or no-build option simply does not make sense. The population growth of the area west of Falls Church, and the employment base that drives it, will place a demand upon the Dulles transportation corridor that simply cannot be met by the highway and bus system upon which we have relied in the past. We will certainly need more and improved roadways and bus routes than we have today, but ultimately they simply will not be enough. We need a dramatically upgraded transit system in this corridor. (0088, 0211-M –2)

Public Comment: The Baseline Alternative, or "no build" option, would strangle Dulles Airport. Highly effective ground transportation is an essential part of any airport development equation. Even with the extreme reduction in flights following 9/11, the most recent projections for flight activity at Dulles substantially exceed the projections anticipated just a year ago. Such an increase in air traffic will inevitably create a corresponding increase in ground traffic. Since there is a very real limit to the number of highway lanes that can be built within the Dulles Corridor without extreme right of way acquisition

challenges, a highway only option would severely restrict passenger and freight access to the airport. (0204, 0204-M –2)

Public Comment: We studied the alternatives presented in the Draft EIS. The no-build alternative would strangle Dulles airport. We already have one of the worst traffic problems in the United States, and if it gets much worse, the businesses that made this region so strong will leave. (0204, 0247-T –1)

Public Comment: Traffic Systems Management has already been applied, with HOV lanes, car pool promotion, free bus service, expanded bus service, flexible work hours, telecommuting, better information systems, SmarTrip fare cards and Travel Management Associations. All have helped, but not nearly enough. They just do not have the necessary capacity or travel speed in congestion. (0013, 0013-L –14)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative.*

Public Comment: How does your plan compare to doing nothing if you include changes in behavior? In a sense what I have heard here tonight is that you assume that you need to increase the throughput, okay. On page S-23 of the EIS, it dismisses the possibility of doing nothing because it does not include changes in behavior, whereas doing nothing may encourage businesses to decentralize and move out to where the people are, or people to move in to where the businesses are and end up with a more cost-effective and environmentally beneficial system. (0166, 0166-T –6)

> ***Response:*** *The population and employment projections as well as the regional trends in land use presented in Chapters 3 and 5 of the Final EIS as well as the historical trends in development in the region do not support such a claim.*

Public Comment: The No Build alternative did not consider the application of commonly used, low-cost methods such as information systems at bus stops, posted schedules, and the construction of bus shelters. Accordingly, the projection for new riders was inflated. (0162, 2-01)

> ***Response:*** *The No-Build Alternative includes all existing highway and transit infrastructure and services within the corridor, and any that are committed to be implemented by 2025, aside from the Dulles Corridor Rapid Transit Project.*
>
> *The need for shelter improvements and better provision of information throughout the regional bus system (including bus transit in the Dulles Corridor) has been examined as part of WMATA's Regional Bus Study. This study is a comprehensive examination of existing bus service throughout the entire Washington metropolitan region. This study focuses on transit services provided by numerous jurisdictions, including Fairfax and Loudoun counties. The objective of the study is to identify a comprehensive bus service plan to meet future needs for the region, as well as associated facility improvements. These improvements could include physical or technological improvements that facilitate bus operations in congested environments. Potential traffic signalization changes to improve transit mobility/reliability are among the elements being evaluated. Findings can be found at http://www.wmata.com/about/expansion/bus_study.cfm.)*

BRT Vehicle Concerns

Public Comment: Doors could be cut into the left side of buses but this would reduce both seating and strength of the bus structure. Such a bus design would have to be tested at the Altoona Bus laboratory before being accepted. New bus designs do not work well until "shaken down". When General Motors first expanded their 35-foot standard bus to forty (40) feet, the first such buses cracked across the roof at the center doors. When the Urban Mass Transportation Administration tried to develop a new bus design, two of the five prototypes burned up. No one in the world would agree to manufacture the design. When MetroBus bought the first order of AM General buses about 1975, several of them burned up. The balance of the fleet wore out rapidly. We must not get into such situations. (0013, 0013-L –19)

***Response**: The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Under the BRT, BRT/Metrorail, or Phased Implementation alternatives, the proposed General Plans (June 2002) allowed for either conventional (right-) or left- door vehicle configuration. The Project Team was aware of and would have conformed to federal requirements for bus vehicle testing. The 60-foot articulated, low-floor, diesel powered vehicles that were under consideration would have been available from several manufacturers and in use at transit properties nationwide.

Need to Visit Existing BRT Systems

Public Comment: We request that the team study personally and visit places where bus rapid transit is in operation. The FAA knows where these places are, Miami, Honolulu, Hartford, Vancouver, Ottawa, Lima, and Bogotá. (0184, 0184-T –9)

Public Comment: We request that the study team personally visit places where Bus Rapid Transit is in operation to learn from their experiences, and review the current EIS with officials from the Federal Transit Administration who know the successful results from projects they have been involved in this country, such as in Miami, Honolulu, and Hartford, and in Canada, in Vancouver and Ottawa, and in Latin America, Lima, Curitiba, and Bogotá. (0162, 0162-T –12)

***Response:** The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Members of the Project Team both visited many of the places where BRT systems are currently used and did have extensive experience studying, designing, and implementing BRT systems throughout the world.

In addition, the Draft EIS was prepared on behalf of the Federal Transit Administration by the Project Team, and was reviewed and approved by this federal agency prior to its circulation for public review and comment.

Need for Additional BRT Support Facilities

Public Comment: Identification of Benefits of Additional BRT Stations/Parking Garages. Much of the ridership difference, particularly in the earlier years, between BRT and rail is that BRT has only one Tysons station and no parking garage. What BRT ridership increases would be achieved by adding a Route 123 or Tysons West BRT station and a parking garage? (0446, 0446-E -6)

Public Comment: States that consulting with VDOT on how to fit a bus lane into Tysons Corner could have developed into another alternative. (0255, 2-03)

***Response:** The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

During scoping and early public meetings, no party suggested an alternative with three BRT stations in the median of the DIAAH and in the locale of Tysons Corner, as the comment describes.

Providing the same BRT level of service in Tysons Corner as Metrorail would have reduced the cost and timing advantages associated with the BRT Alternative of the Draft EIS. Operating the BRT service on congested roadways in Tysons Corner to provide more direct connections to destinations would have increased travel times and offered little benefit over driving. Such a system would not have been an attractive travel alternative, and would not likely attract high ridership. However, Fairfax County and VDOT would have been unlikely to dedicate a lane for exclusive bus use, given that many roadways in Tysons Corner are expected to operate at or above capacity in the future, even after implementing capacity increases (see Chapter 6 in the Draft EIS).

Therefore, the only way to provide the same level of service and directness would have been to operate BRT on a grade-separated route through Tysons Corner. Both an elevated route and an underground route would have added considerable expense and construction time to the project, thereby diminishing two of the primary advantages of BRT in the Dulles Corridor. An elevated roadway would also have had the same degree of visual impacts as an elevated Metrorail alignment. Because a grade-separated alignment for BRT through Tysons Corner would have increased the cost, construction time, and impacts of the alternative, this was not considered an advantageous configuration for the BRT Alternative, especially given that it would still have required a transfer at West Falls Church, reducing overall ridership as compared to the Metrorail Alternative.

Given the forced transfer at West Falls Church, it would also not have been cost-effective to have a BRT station in Tysons Corner with a park-and-ride facility. Few travelers would have drove on congested roadways to access the BRT line in Tysons Corner, only to transfer to Metrorail a short time later. Rather, most travelers would have drove directly to Metrorail at existing park-and-ride facilities along the western end of the Orange Line.

BRT Access Ramp

Public Comment: They do think that there are some concerns with the way the BRT ramp comes looping from the Dulles airport access road and is accessing that garage structure. (0161, 0161-T –2)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS. Under the BRT/Metrorail and Phased Implementation alternatives, this ramp would have been needed to provide dedicated access for BRT vehicles between the DIAAH and the Tysons West Station.*

Equivalent Service to Metrorail

Public Comment: Questions whether the proposed BRT Alternative could actually provide equivalent service to that of Metrorail, especially in terms of frequency and service. (0157, 2-01)

Response*: The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Metrorail will provide an hourly passenger carrying capacity of 8,640 passengers during the peak period. This carrying capacity is based on 9 trains in the corridor per hour, with 8 cars per train, and a capacity of 120 passengers per car.

In order to provide this same capacity, 141 BRT buses would have to be run per hour, meaning a bus running approximately every 23 seconds. This calculation is based on a BRT vehicle capacity

of 61 passengers. Running buses at this frequency would be extremely difficult, if not impossible due to:

- *The extreme difficulty of adding enough bus bays at West Falls Church station (space constraints, cost, potential environmental impacts) to handle this number of buses; and*
- *Operational difficulties in the median of the Dulles International Airport Access Highway, including bus backups in the median and significant delays for buses being forced to wait in order to stop at stations/stops until buses in front of them pull out.*

Support for BRT Alternative

Public Comment: As another acceptable option, I would go for BRT if we can't afford Metrorail - which it appears we cannot, without taxing everyone to death. (0030, 0030-CC-3)

Public Comment: I don't see a lot of utility in building BRT as an interim measure- it should be an end in itself. (0076, 0076-CC-2)

Public Comment: BRT is cost effective- use it. (0038, 0038-CC-4)

Public Comment: Gosh, I almost forgot! There is a better way for this to happen. It's called Bus Rapid Transit. It is cheaper to build, cheaper to maintain and easier to implement (right now). And despite what someone said in the Ashburn session, it is not a demeaning way to travel…if all of the pieces are in place. Remember I said find a bus route sign, find a bus shelter, find a bus schedule!!! If you can't ---YES that is demeaning. But if done right it is a great, more flexible way to go. (0233, 0426-M –23)

Public Comment: Choosing an option [BRT] that only cost 10% of rail seems to be a no-brainer. With operating costs at 1/5 of metro rail's we have another no-brainer. We could put in 5 of these systems and serve other areas desperately in need of transit (I.e. Rt. 66 from Vienna to Manassas). (0294, 0294-E –2)

Public Comment: We believe BRT is an alternative that is far more cost-effective, flexible and quick in operation than metrorail. We have found many web sites showcasing successful examples of BRT, both in the U.S. and in other countries, where the system is performing far better than the EIS indicates it will. These web sites are posted on our web site, www.moveit.org, and most of them are also on the Federal Transit Administration's web site. (0138, 0138-T –1)

Public Comment: I strongly urge the Commonwealth of Virginia to reject the rail transit proposals as presented here tonight and support bus rapid transit (BRT) instead. (0112, 0269-M –1)

Public Comment: We support the BRT and not the rapid rail, for a number of reasons. (0252, 0252-T –1)

Public Comment: Utilizing buses instead of rail would be a better plan and less expensive in our opinion. (0267, 0267-L –2)

Public Comment: I attended the Dulles Rail hearing in Ashburn and I listened to the proposals. I came to the conclusion that BRT must be chosen as the locally preferred alternative. It is more flexible and so much less expensive. (0294, 0294-E –1)

Public Comment: The Dulles Corridor is ideally suited for BRT. Dedicated lanes EXIST. USE them!!! (0294, 0294-E –3)

Public Comment: It would only take 12 to 18 months to get a BRT system up and running in the Dulles Corridor. That would help solve community problems to and from Reston far sooner than metrorail could, at a fraction of the cost, and without the need to raise the tolls on the Dulles Toll Road. (0183, 0183-T –6)

Public Comment: Metro is planning to increase its fares and parking fees. That will actually drive away riders. Workers in our area should definitely consider and would definitely use an aggressively marketed BRT service. BRT would provide much-needed relief to those of us who travel in the Dulles Corridor. BRT is more flexible than the metrorail system. Once the $3.3 billion estimate for the project is spent for one rail line, more money has to be raised to meet the region's future needs after that. With BRT, a system can come up and running for far less money up front and more money would then be available to use for future projects as our region continues to evolve. And best of all, it would help solve our problems now and not 20 years from now. (0183, 0183-T –8)

Public Comment: We support construction of a high quality bus rapid transit (BRT) system which would mitigate these funding and design issues and would bring transit relief to the corridor much sooner, and more efficiently. In the future, once the ridership is proven and the funding is available, upgrading this BRT system to rail may be warranted, although at this point we do not feel the conversion to rail can be committed to. (0139, 0280-T –4) (0139, 0139-T –4)

Public Comment: It's not clear that we need the capacity of rail or even BRT, but BRT does appear to provide an expandable, quickly available start. I see the BRT choice costs 1/8th the cost of the train, and a small fraction of the others. This seems to be a no-brainer. Please do only BRT. This should allow dropping the toll entirely. (0155, 0155-T –2)

Public Comment: I am here as a proponent of BRT, but not the BRT in the plan, and a vigorous opponent of rail west of Tysons. And the reason is the cost of rail is approximately eight times that of BRT. What do we get for the extra money? My answer is we get absolutely nothing of value for the extra money. (0184, 0184-T –1)

Public Comment: Everyone agrees that we need rapid transit. Everyone agrees that we need it now. We believe that the bus rapid transit, or BRT, system is able to do the job quickly and more a whole lot less money. (0138, 0241-T –1)

Public Comment: BRT is very quick because all you're recall doing is expanding an existing system. Much of the infrastructure that you need is already in place. The greatest part of the route is down the Dulles road on the center lanes and it's already there. So you can - once you've ordered the buses, the BRT buses, you can be up and running very quickly. (0138, 0241-T –6)

Public Comment: Everybody agrees that we need rapid transit in the Dulles corridor. I think everybody agrees that we need it now. I think everybody who has looked at a material agrees that metrorail costs in the range of eight to 10 times more than BRT. And we believe that BRT has been seriously underestimated in the studies done as the EIS. (0138, 0169-T –1)

Public Comment: We know that BRT can do the job. It is very acceptable as a mode of travel, and it's a whole lot cheaper. It's a whole lot simpler. It builds on an existing express bus system. You don't have to go and create a whole new infrastructure, highly specialized, very rigid, the way the rail system is. You have a flexible, resilient system that is adaptable to changing needs, and the land use pattern that has emerged in the suburbs outside the beltway, particularly outside the beltway. (0138, 0169-T –4)

Public Comment: BRT has the following advantages over metrorail: BRT can be in operation within 18 to 24 months and in full operation within three years. MRL will not be in operation at Dulles airport we believe until at least 2015. Just look at what has happened to other transportation projects like the mixing bowl, the Wilson Bridge, and the big dig, for example. Everything takes a lot longer than was projected. (0138, 0241-T –5)

Public Comment: BRT would provide benefits much quicker, within a couple of years at a substantially reduced cost with better access for McLean residents. With BRT giving more immediate, cost effective benefits rail could be added at a later time if it is still make sense. (0233, 0426-M –27)

Public Comment: Briefly, BRT seems to have the following advantages over metrorail: Timing. The EIS projects that metrorail will be in operation by 2010. We believe that the more likely time to start carrying passengers from Dulles is 2015 to 2020. Until the last piece of track is laid and the last station finished, rail can't carry a passenger. BRT, on the other hand, builds on existing infrastructure and existing express bus system. With good management, it should be possible to deliver an operating system even faster than projected in the EIS. We believe that BRT can deliver substantially upgraded service in 12 to 18 months, with continuing improvements in the years ahead. (0138, 0138-T –2)

Public Comment: At well over $3 billion dollars, the Metrorail option is extremely expensive. Although it would undoubtedly be a tremendous asset to the region, BRT has many potential advantages that have not been considered. For example, BRT could be built for a fraction of that cost, leaving money left over for other important transit projects in the region. This could lead to a far greater improvement in the region's air quality and traffic problems than the proposed Metrorail extension. (0444, 0444-E –2)

Public Comment: I would prefer the Bus Rapid Transit (BRT) option instead of one of the rail or combined rail/BRT options. Much of the infrastructure is in place for the BRT and that which is still needed could be built quickly and for far less money than the rail option. (0401, 0401- L-1)

Public Comment: In summary, we believe that MetroRail is not a cost-effective or appropriate mode for the Dulles Corridor. If the DEIS were corrected to overcome the deficiencies noted above, as well as others, we believe that the competitive advantages of other modes such as BRT would be overwhelming. (0138, 0476-L –7)

> ***Response****: Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to the Project Team and were considered by decision-makers in the selection of the Locally Preferred Alternative. The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Need to Consider Elevated BRT

Public Comment: I support BRT. Consider, again, the elevated route for BRT through Tysons. (0038, 0038-CC-1)

Public Comment: Make this BRT model work on Dulles project and take lessons learned to do the same on I-66 to Manassas, Gainesville, Warrenton. Lessons: (0038, 0038-CC-2)
- Elevated BRT route
- "One seat" concept to merge bus into rail
- Special access rights for BRT on existing pavement. Even if that means taking HOV away

Public Comment: Questions why there are no BRT stations in Tysons Corner. The Draft EIS failed to consider an elevated busway in the same location as Metrorail. Cites Corridor Cities DEIS 14-mile elevated busway from Shady Grove to Clarksburg convertible to light-rail. Elevated busway through Tysons Corner would be 4-6 miles. (0112, 2-11)

Public Comment: Several speakers at the hearings have spoken favorably of bus rapid transit as a low cost alternative to metrorail and pointed to information on the internet which is said to support the BRT option. Today I reviewed that information that I could find and can comment on what I have seen. The small number of BRT systems that are described all require a separate busway to operate. This is the problem with using BRT in the Dulles Corridor. There is no separate busway or roadway for buses within Tysons Corner, which is the largest concentration of activity in the corridor. The BRT proposal solves this problem by ignoring the need to serve Tysons Corner. There simply is no service provided within the boundaries of Tysons Corner in the BRT plan. So for the many workers who live in this area and commute to Tysons Corner, BRT offers no help whatsoever. One of our goals in this process should be

to avoid building a system that does not serve major parts of the corridor, because to do so is poor planning and bad public policy. BRT simply does not serve the largest activity center in the corridor. (0144, 0261-T –2)

> ***Response**: The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*
>
> *An elevated BRT alignment thorough Tysons Corner had been considered during the development of the Dulles Corridor Transportation Study (June 1997), a Major Investment Study conducted by DRPT, but was not carried forward because it was not as cost effective as other alternatives.*
>
> *An elevated BRT could have served Tysons Corner better than a station at Spring Hill Road, and this service would likely have increased ridership. However, the elevated guideway in Tysons would have been more expensive and taken longer to construct (similar to an elevated Metrorail), and this would have eliminated the two primary advantages of BRT. Also, the forced transfer at West Falls Church would have remained; thus ridership would not have increased sufficiently to justify the increased cost and time of building an elevated BRT alignment in Tysons Corner.*
>
> *A "one seat" ride concept to merge BRT and Metrorail operations would not have been technically practical. Because the technologies are not compatible, it would not have been practical to run BRT vehicles on the same right-of-way with Metrorail vehicles.*
>
> *Exclusive or controlled lanes are part of the definition of BRT systems, and the Dulles Corridor Rapid Transit Project BRT 1 and BRT 2 alignment options would have used the controlled lanes of the Dulles Connector Road and when necessary the reserved lanes of the Dulles International Airport Access Highway to achieve the levels of service needed for reliable transit service.*
>
> *The I-66 Study has been beyond the scope of the Dulles Corridor Rapid Transit Project. The team conducting that study has been coordinating with the Project Team and can take advantage of the lessons learned in developing the BRT alignments for the Dulles Corridor Rapid Transit Project.*
>
> *The proposed BRT Alternative of the Draft EIS would have provided service to Tysons Corner, though this service would not have been as direct as that provided by the Metrorail Alternative. As outlined in Chapter 2 of the Draft EIS, and in the Transit Operations and Maintenance Plan (June 2002), the proposed BRT Alternative included feeder bus service that connected to all of the proposed stations. In Tysons Corner, feeder buses provided service between the Spring Hill Road Station (or Tysons-West*Park Stop) and the rest of Tysons Corner. Passengers would have transferred from the line-haul BRT service to this feeder service to reach their final destinations in Tysons Corner.*

Need to Consider Financial Advantages of BRT

Public Comment: Now make no mistake about it. When you select the Locally Preferred Alternative, you are setting aside all but that one alternative. If the selection is Metrorail, then the financial advantages of BRT are never going to be studied, and I think that would be a grave mistake because if our research - and our research is from government-produced sources, actual case studies around the world and particularly in this country - if that research is sound, then BRT is an innovative, flexible way to solve these problems. (0138, 0241-T –9)

> ***Response:** The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. BRT was eliminated from further consideration after the public and interagency review and comment on the*

Draft EIS. The selection of the Locally Preferred Alternative was based on the evaluation of all alternatives presented in the Draft EIS and the comments received during the public comment period.

Consideration of Less Costly/Environmentally Damaging Options

Public Comment: Third, surely there must be other options to be explored which would be less costly and more environmentally friendly. How about not increasing the FAR. How about requiring car and van pooling. Go with BRT only. Give other people a chance to come up with new ideas. The group pushing BRT/rail has a very narrow agenda and that agenda may not be in the best interests of the citizens of the Commonwealth. (0203, 0203-L –6)

Response: *During the Major Investment Study and alternatives analysis phase of the Dulles Corridor Rapid Transit Project, many transportation solutions, including travel demand management measures, such as car pools and van pools, were analyzed. It was determined that BRT and Metrorail or a combination of these modes would best serve the needs of the corridor. Therefore, these modes were included in the detailed evaluation presented in the Draft EIS.*

BRT Can Provide Comparable Service at Lower Cost

Public Comment: The bottom line is that, properly implemented, Bus Rapid Transit provides a level of service which is equal to rail in frequency and quality of service, at a lower fare box rate, and a much lower capital and operating expense. The ratio of cost for BRT as compared with rail is about 1 to 8, as the numbers in the EIS indicate. We have an independent confirmation of this ration based on the recently opened 61-station Bus Rapid Transit system in Bogotá, Colombia. Their system, which is considerably more elaborate than anything proposed for the Dulles Corridor, cost $240 million. Their estimate for an equivalent rail system is $2 billion. (0162, 0162-M –1)

Response: *The commenter is correct in stating that the Metrorail Alternative will be more expensive to build and operate than the BRT Alternative would have been. As described in Chapter 2 of the Draft EIS, the frequency and quality of service for both alternatives is comparable. However, as indicated in Chapter 8, the two alternatives were assumed to have the same fare structure, which would have been identical to that for the existing Metrorail system.*

Cost comparisons between BRT in Colombia and BRT in the Dulles Corridor have not been appropriate comparisons. Most Transmilenio platforms are accessed at grade. Dulles Corridor stations would have required pedestrian bridges and associated vertical circulation, which unlike Transmilenio, usually includes both elevators and escalators. Dulles Corridor BRT costs also would have included structured parking at certain stations, new acceleration/deceleration ramps for station access along the DIAAH, and Metrorail vehicle costs for the increased ridership on the Orange Line that would have resulted from the BRT Alternative.

In addition, the cost of construction varies between countries because construction practices—particularly labor costs—are very different. Other reasons for differences between the Transmilenio costs and the projected Dulles Corridor Rapid Transit Project costs have been related to the escalation of Dulles Corridor costs to year-of-expenditure dollars. Transmilenio began operation in December 2000, therefore published costs for that project typically represent dollar values in the late 1990s. Dulles Corridor costs reflect the assumed effect of inflation on the value of the dollar over the next five years. Therefore, the cost estimates between the two systems were not comparable.

It also was not appropriate to suggest that the ratio of cost estimates for BRT and rail systems in Colombia constitute independent confirmation of cost differences for these modes in the Dulles Corridor. Cost differences for the Dulles Corridor are related to a number of factors that may or may not apply to the "equivalent rail system" in Colombia. BRT in the Dulles Corridor primarily would have made use of existing roadways, and only requires a small maintenance and storage

facility. Metrorail will include more stations, up to two underground sections, numerous aerial structures, more parking structures, and require a large new service and inspection yard.

Build Upon Existing Bus Infrastructure

Public Comment: Metrorail doesn't really do the trick, but BRT does. BRT uses an existing system and builds on existing infrastructure. BRT has worked in other cities. BRT would substantially improve the flow of commuting traffic from Maryland to and from Northern Virginia. For example, workers could use a BRT line that would run from Rockville to Reston that would get workers to work on time and at a much lower cost than metrorail could ever provide. It would also cut time out of the commute that what would be estimated using the metrorail system. (0183, 0183-T –5)

Response: *The Draft EIS only addressed rapid transit improvements within the Dulles Corridor. Alignments between Rockville and Reston were beyond the scope of the study. Other transportation improvements (both highway and transit) outside the Dulles Corridor have been recommended in the Northern Virginia 2020 Plan, Statewide Transportation Plan, and local comprehensive plans and are being pursued by VDOT, DRPT, and others. This program of improvements has been intended to increase mobility and address the existing and potential future deficiencies in Northern Virginia.*

Reject Rail and Support BRT

Public Comment: After looking at the data that I've seen -- and I haven't read every bit of the EIS -- I really have to urge the Commonwealth Transportation Board to reject the rail transit proposals as presented and support bus rapid transit instead, unless there is some significant scaling back of the fixed rail proposal. I don't feel like there's enough data on new riders, actual new riders, for either BRT or rail service here. There's really no data on congestion relief for the toll road and other roads, and there's a lot of assumptions about land use densities. (0112, 0245-T –1)

Public Comment: A better solution would be to plan for a link to a bus system, rather than build the "build or bust" solution that has been recommended by the Project Team. (0294, 2-01)

Response: *Data on new riders for both the BRT and Metrorail alternatives were presented in Chapter 6 and Chapter 10 of the Draft EIS. Detailed ridership projections are also included in the* Travel Demand Forecasting Methodology and Results Technical Report (June 2002).

The ridership estimates, which were presented in the tables in the Draft EIS, were based on the regionally approved land use forecasts, which do not include the recently adopted density bonuses. Metrorail ridership was also estimated for the forecast year assuming that there is additional development around stations in Tysons Corner and Reston, as permitted under the Fairfax County Comprehensive Plan. However, these estimates were not used in determining the cost effectiveness measures presented in Chapter 10.

Chapter 6 of the Draft EIS presented the anticipated effects of the proposed Build Alternatives on regional roadways, including the Dulles Toll Road. None of the Build Alternatives were expected to result in reductions in congestion on most regional roadways. Traffic conditions in the vicinity of proposed stations were generally expected to worsen during the peak periods as transit patrons drive to and from these stations. However, each of the proposed rapid transit alternatives, in combination with the planned transit-oriented urban form, would have helped to increase overall mobility in the corridor, the counties, and the region.

Public Comment: I know that - I think Mr. Dittmeier said that the bus rapid transit really couldn't be used inside of Reston. However, if you had a single stop outside, you could redistribute with the internal circulation method. Let's keep "rapid" in the name. Fewer stops can create more opportunity. (0148, 0250-T –4)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

As described in Chapter 2 of the Draft EIS, the BRT Alternative would have consisted of up to four stations/stops in the Reston-Herndon area. Stations were located in the median of the DIAAH, and stops were located at park-and-ride facilities adjacent to the DIAAH and Dulles Toll Road. As then proposed, travelers would have accessed Reston Town Center and the Town of Herndon by transferring to a feeder system that would have served multiple destinations in these areas. This feeder system would have built on the existing bus service in the corridor, including Fairfax Connector routes and the Reston Internal Bus Service (RIBS).

BRT Capacity

Public Comment: The four urban legends, some of which we heard tonight, is that BRT cannot handle the projected demand for transit in the corridor. That is flat out totally incorrect. (0184, 0184-T-2)

Public Comment: The groups supporting rail do so for one of three reasons: first, they think that only rail has the capacity to carry transit demand in the Dulles Corridor (most definitely not true!) (0162, 0162-M – 2)

Public Comment: And the proponents of rail say, well, only rail has the capacity to carry the total load of people, and frankly the web sites show that's simply not true. BRT is shown to be in other cases, other existing operating systems, fully capable of carrying at least as many people as the maximum projected by the EIS. (0138, 0169-T –3)

Public Comment: Now I believe when I listened to the other speakers so far, the problems that Falls Church talks about, you don't have those with BRT because you can have more collection points. If you liberate yourself from the EIS assumption that there are a small number of stations, the fact is BRT stations are much less expensive to build, and most systems in Dade County, in Honolulu, and in the Trans Molino case, they have lots more collection points. They have a better distribution of the passengers to where people want to go. (0138, 0169-T –5)

Public Comment: I also learned from the internet information on BRT that some BRT systems operate with accordion buses, in other words, an elongated bus somewhat like a double trailer we see on the highway. It is apparent from viewing such a bus that this vehicle does not have the capacity of a six or eight-car metro train, yet we were told last evening that the two systems have the same capacity to move large numbers of people, as we would have here. This is obviously not accurate. (0144, 0261-T –3)

Public Comment: Disagrees with the carrying capacity methodology for the BRT Alternative. Claims the Metrorail Alternative would not have the traction power to run eight car trains, and that no eight car trains currently operate. Claims the 9,600 passengers per hour under the Metrorail Alternative is dishonest since it assumes eight car trains which cannot operate. Questions using TRB as policy for standing on buses. Points out that buses running on I-395 have straphandlers and standees. (0112, 2-12)

Public Comment: The study never considered the use of higher capacity buses. It also assumed that bus capacity was only the seating, whereas Metro operates at a typical capacity of 140 people per 80-seat car. (0162, 2-05)

Public Comment: Run capacity of BRT to equal rail. (0038, 0038-CC-3)

Public Comment: My main concern at this point is that the bus rapid transit system doesn't seem to have an appropriate operating concept and isn't a fair evaluation of its possibilities. (0255, 0255-T –1)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

The issue of BRT being able to handle the transit demand in the Dulles Corridor was explored as part of the Project Team's review of Dulles Plan B during the public comment period of the Draft EIS. Transportation systems must be designed to support the demand expected during the "peak of the peak," even though this may result in under-utilization of capacity for the rest of the peak period.

As described in Chapter 2 of the Draft EIS, the BRT Alternative would have used 60-foot, articulated, low-floor, diesel buses. For the analysis in the Draft EIS, BRT vehicles were assumed to have a capacity of 61 seated passengers. Standees would not have been allowed on high-speed bus service on busways and HOV lanes. The Transportation Research Board's Transit Capacity and Quality of Service Manual (1999) notes that, "High-speed bus service on busways and HOV lanes should not allow standees, so capacity calculations should assume that every passenger may be seated" (Page 2-41).

Other commenters have suggested that the Dulles Corridor project could have used the same vehicles in use in Bogotá, Colombia, which they indicated have 160 seats. However, the Transmilenio vehicles do not have 160 seats—they accommodate approximately 160 passengers (43 seated and 114 standing). This standee load is based on an area of 4 persons per square meter, or 2.7 square feet per person—a standard that most riders would find very uncomfortable (at this density contact with other persons is unavoidable).

As described in Chapter 2 of the Draft EIS, the operating plan for BRT would have resulted in approximately 80 BRT vehicles serving the eastern end of the corridor in the peak hour in the peak direction. With approximately 61 seats per vehicle, the peak-hour capacity provided by the BRT Alternative would have been 4,880 passengers. The Metrorail operating plan will result in 9 trains traversing the corridor in the peak hour in the peak direction. With 8 cars per train and a loading goal of 120 passengers per car per hour, the Metrorail Extension will provide capacity for 8,640 passengers during the peak hour. Therefore, Metrorail capacity in the Dulles Corridor would be nearly twice that of BRT.

The Project Team's analysis relative to Dulles Plan B also demonstrates that if vehicle size had been increased to 80-foot bi-articulated buses with approximately 80 seats (the largest BRT vehicles currently available), the maximum capacity that could have been provided by the BRT Alternative as then defined would have been 6,400 persons in the peak hour and peak direction (80 buses per hour serve the corridor during the peak period). This capacity would still not have been enough to meet the peak demand of approximately 7,000 persons for Metrorail.

Space considerations at West Falls Church would have limited the ability to increase the number of BRT vehicles operating in the corridor during the peak hour. At the then peak period flow rate, vehicles would have arrived at West Falls Church every 45 seconds, on average. More frequent arrivals would have likely resulted in delays as buses would have been forced to wait for an open bay until buses in front of them pulled out.

However, in other cities, where the same limitations on standees and the volume of buses would not apply, BRT could have much higher capacities. In some cases, BRT systems carry the same level of demand as rail systems.

However, capacity is not what truly would have limited the ability of BRT in the Dulles Corridor to serve the same level of demand as Metrorail. BRT would not have had the same "drawing power" as Metrorail because of a combination of other factors:

- *BRT would have forced travelers bound for Arlington and the Core to transfer at the Orange Line (or at Tysons West for BRT/Metrorail).*
- *BRT would not have provided a direct connection to Tysons Corner. It would have required travelers to transfer to another feeder system before reaching their final destination in Tysons Corner.*

However, the BRT operating plans did include capacity enhancements that would have been needed to meet the anticipated demand for BRT, such as bus platooning, and 'express' service patterns that do not stop at each BRT station.

Operating Benefits of BRT

Public Comment: Second, BRT is somehow viewed as a lesser quality type of operation. In fact, the opposite is probably possible. Well-designed bus vehicles will have higher maximum speeds, faster acceleration, smoother rides, quieter operation, they're more efficient, and they can be made to run on fuel other than gasoline. (0184, 0184-T –3)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

BRT vehicles would have had the performance characteristics similar to Metrorail. The noise and emissions output would have varied depending on the propulsion technology selected, but in no case are they superior to Metrorail. In addition, the top speed of BRT would have been be limited to the posted speed of the roadways, on which they operate, which is not as high as Metrorail's top speed.

Questioning Credibility of BRT Report

Public Comment:

- Do not be deceived by GAO report on "Bus Rapid Transit Shows Promise." Report was politically motivated and is full of errors and misrepresentations.
- Says that commenters that have suggested natural gas buses are better for air quality than Metrorail are incorrect because natural gas buses must burn fossil fuel that becomes exhaust. Also notes that a commenter's suggestion that BRT starts improving air quality sooner and is therefore better, is not a valid argument, because the BRT's four year jump start on Metrorail is like nothing compared to the fifty or ninety year life of the far superior Metrorail project. Cites additional statistics demonstrating that rail is more fuel-efficient than buses.
- States that many of the comments supporting BRT in Section 6.2.4.1 of the *Public Hearings Report* are ripe with unsupported assertions. Explains that emphasis on "cost" rather than "investment" is an example. Investment is an asset that must be amortized over many years and take into account service life and safety to equate it to cost.
- Metrorail opponents cite unknown websites as proving the superiority of BRT, but these websites are typically anti-rail think tank contrivances for vested interests. These websites do not reflect the real world. In Curitiba, the mayor says his BRT buses carry 280 people each to outdo rail transit. His buses are almost the same size as our Metrorail car which draws protests over 120 per car.
- Discusses benefits and deficiencies of busway in the Lincoln Tunnel. The commenter believes that the busway is better than no busway but it is not a good solution for the problem. The cost of that one bus station in current dollars is about a billion dollars. West Falls Church cannot handle it. (0013, 2-05)

Response: *Comments noted. The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Public Comment: Busway safety could be a very serious problem with left-handed operation in the stations, crossing in front of each other entering and leaving each station. (0013, 2-10)

Public Comment: States that the only operator to use crossovers had to go back and put in stop signs. States that the use of left-side doors is not appropriate. (0255, 2-02)

> ***Response*:** *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*
>
> *Under the BRT, BRT/Metrorail, or Phased Implementation alternatives, the proposed General Plans (June 2002) were allowing for either conventional (right-) or left-side door vehicle configuration. Crossovers would not have been required for buses with left-side doors. If a conventional door configuration would have been selected, crossovers would have been required to serve a center-platform station, and traffic-signal priority equipment and/or other operating technology might have been employed to avoid conflicts. Since buses operating on the Dulles International Airport Access Highway could have bypassed any median station, in-station passing lanes would probably not have been required.*

Public Comment: Disagrees with the carrying capacity methodology for the BRT Alternative. Claims the Metrorail Alternative would not have the traction power to run eight car trains, and that no eight car trains currently operate. Claims the 9,600 passengers per hour under the Metrorail Alternative is dishonest since it assumes eight car trains which cannot operate. Questions using TRB as policy for standing on buses. Points out that buses running on I-395 have straphandlers and standees. (0112, 2-12)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*
>
> *In preparing the Final EIS, the Project Team developed and evaluated the No-Build Alternative with the assumption that WMATA would be funding and implementing eight-car train operations to satisfy forecast demand prior to the Project. WMATA has been emphasizing to the Commonwealth of Virginia and to the Project's other funding partners the critical importance of the implementation of eight-car train operations. Through its Metro Matters program (see www.wmata.com/about/metro-mattersfactsheet.pdf), WMATA has successfully garnered agreements among its Compact member jurisdictions for the minimum funding of its urgent capital needs in order to sustain the Metrorail and Metrobus systems. WMATA continues to seek the Federal share of Metro Matters. Within the $3.3 billion Metro Matters program, there is over $600 million for the eight-car train operations. The Metro Matters procurement of 120 new rail cars will equip one-third of the Metrorail system with eight-car trains. Over time, WMATA will continue to procure new rail cars for higher number of eight-car trains to relieve future overcrowding and keep pace with ridership growth.*

Public Comment: States that is it inaccurate to suggest that express buses will not be studied as WMATA operates express buses in other corridors. (0112, 2-13)

> ***Response:*** *For the Wiehle Avenue Extension evaluated in the Final EIS, the Corridor express bus service, formerly referred to as 'premium bus', would be designed to mimic service provided by the rail system west of Wiehle Avenue to the greatest degree possible. Given this, passengers would board the express bus service at each of the express bus stops in the corridor, including Route 772, Route 606 (Dulles North Transit Center), Dulles Airport, and Herndon-Monroe. The operators of the Corridor express bus service. The corridor express bus service would be the*

continuation of the existing bus services in the corridor operated by Loudoun and Fairfax counties.

In response to this comment in the context of alternatives to the BRT or Metrorail Alternatives of the Draft EIS, the Project Team offers the following response.

WMATA does operate express buses but, for this project, utilization of point-to-point express services in place of BRT or Metrorail in the corridor was not deemed to be cost effective. Some commenters have suggested that because BRT is more flexible than a rail system, its operating pattern should be based on multiple "point-to-point" express services. However, it would have been very difficult to provide a cost-effective service for the Dulles Corridor using several, dedicated express routes due to the relatively dispersed land use patterns. For a point-to-point transit service to be as efficient as possible, it must be able to attract a large number of travelers within a relatively small area at the origin end that all want to go to the same destination (or multiple destinations within a small area). Travel time at the "circulation and distribution" end of the trip should not be more than 10 minutes, or the increased travel times make the dedicated service a less attractive travel alternative.

Public Comment: Questions the carrying capacity of WMATA's articulated buses and why they were not studied for BRT use? (0112, 2-14)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

The BRT vehicles that the Project Team used for planning purposes were similar to the articulated buses used by WMATA, though the BRT vehicles would have had higher seating capacities than the existing articulated buses. For that reason, BRT vehicles were used as the basis for operations planning in support of the Draft EIS.

Need to Reevaluate BRT Speeds

Public Comment: Average speed not clearly defined on page 107 of the Transit Operations and Maintenance Plan Technical Report. Use of 31 mph for BRT is low-balled since there are no stops in Tysons and no buses on city streets. BRT speeds should be based on Shirley Highway (I-395) HOV speeds. (0112,2-15)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

The most relevant input for operations planning and demand estimation is travel time, which is presented in the Transit Operations and Maintenance Report (June 2002). In addition, average speed can be easily calculated using the data provided. Run times for BRT were calculated utilizing allowable and likely speeds in the DIAAH, acceleration speed, and the requirements for vehicles accessing stations in the median from the left hand lane of the DIAAH. Using speeds from the Shirley Highway would not have been accurate because the Shirley Highway has no stations.

Incomplete Hearing Testimony

Public Comment: States that the transcript of his hearing testimony is incomplete. States that his comments on the experiences of actual BRT operators and effective BRT operating plans was left out. Cites that the City of Pittsburgh operates a busway into neighborhoods that has comparable capacity to

Metrorail. Believes that the response to his comment reflects the opposite of operations and experiences of every busway operator in North America. Suggests that the Project Team interview busway operators. (0255, 2-01)

> ***Response:*** *The Project Team reviewed the original testimony submitted by Mr. Stephens. Comments in his testimony included ridership, vehicle, and trip length information pertaining to the Pittsburgh East busway. These comments are addressed in Sections 6.2.2 and 6.2.4.4 of the Public Hearings Report (October 2002) and within this Appendix J.*

Need for Independent Analysis

Public Comment: Report did not consider alternatives that would have been result of truly independent analysis. In particular, the study never looked at a BRT system running along the same alignment recommended for rail. The commenter believes that the study was obviously biased towards rail. (0162, 2-02)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*
>
> *Both BRT and Metrorail were designed to primarily serve the east-west travel demand between existing and emerging activity centers along the Dulles Toll Road, and between these centers and the region's core. As described in Chapter 1 of the Draft EIS, both were intended to function as an extension of the existing Metrorail system, taking advantage of the direct connection this system already provides to Arlington and the region's core. In the context of the Dulles Corridor Rapid Transit Project, BRT was meant to be a complement to the existing regional rapid transit system, not a competing regional system. Therefore, BRT routes that provide direct connections between the Dulles Corridor and Arlington, Washington, D.C., or Maryland rather than connect to the existing Metrorail system at the eastern end of the corridor would not have been appropriate in the Dulles Corridor. Moreover, given that BRT vehicles would likely have had to travel on congested roadways to reach these regional destinations, it is doubtful they would have offered faster travel times than the existing Metrorail system, which operates on an exclusive guideway.*

BRT Capacity Understated

Public Comment: The commenter states that many successful BRT systems operate today with higher capacities. Should have been studied. (0162, 2-03)

> **Response**: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*
>
> *The BRT Alternative was developed to provide high-quality service akin to a rapid rail system. It was intended to provide rail-like service and amenities at a lower cost. The intent had been to evaluate a lower-cost, lower-impact alternative to see if could have provided the same level of benefit as a Metrorail Alternative.*
>
> *Every effort was made to leverage prior transportation investments in the corridor. The BRT Alternative made use of the relatively exclusive travel way in the DIAAH to provide rapid, limited-stop service for long-distance trips between the corridor and the region's core. However, operating the BRT service on congested roadways, particularly in Tysons Corner, to provide lower cost transit solutions would have increased travel times and offered little benefit over driving. Such a system would have not been an attractive travel alternative, and would not likely have attracted high ridership. In addition, Fairfax County and VDOT would have been unlikely to*

dedicate a lane for exclusive bus use, given that many roadways are expected to operate at or above capacity in the future.

Therefore, BRT would have needed to operate on a grade-separated route through Tysons Corner. Both an elevated route and an underground route would have added considerable expense and construction time to the project, thereby diminishing two of the primary advantages of BRT in the Dulles Corridor. Because a grade-separated alignment for BRT through Tysons Corner would have increased the cost, construction time, and impacts of the alternative, this was not considered an advantageous configuration for the BRT Alternative, especially given that it would still have required a transfer at West Falls Church, reducing overall ridership as compared to the Metrorail Alternative.

Potential for Dedicated Bus Lanes

Public Comment: Suggests that since WMATA can make buses run on K Street that buses on dedicated lanes can work in Tysons Corner. (0162, 2-04)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

As described in Chapters 2 and 6 of the Draft EIS, several roadway capacity improvements are planned for Tysons Corner over the next several years, including roadway widening and construction of grade-separated interchanges. These capacity improvements are needed to meet increasing demand for travel to, from, and through Tysons Corner. However, as shown in Section 6.1. of the Draft EIS, very few of these improvements are actually expected to improve the level of service on Tysons Corner roadways between 2000 and 2025. Many roadways are expected to experience worsening conditions, while others will remain at their current state of congestion.

Given that many roadways in Tysons Corner are expected to operate at or above capacity in the future, even after capacity increases, the roadway operators (including Fairfax County and VDOT) would have been unlikely to dedicate traffic lanes for transit service—especially considering that the highest transit mode share that an environment like Tysons Corner (an urban edge city) would have been likely to experience would have been approximately 12 percent (as evidenced by the mode share data presented for the two Build Alternatives in the Final EIS).

Contradicts Emissions Assumptions of Buses

Public Comment: One flagrant misstatement is that Metrorail is inherently lower pollution than buses. However, new technology for bus engines is virtually zero-emission, and Metrorail is powered by electricity at lower efficiency, moving greater masses. (0162, 2-07)

***Response*:** *The Draft EIS did not state that Metrorail is inherently lower in pollutant emissions than buses. New buses do have much lower emissions than older models, due to advances in engine design and emission control technology. The emissions associated with Metrorail are attributable to fuel combustion at electric power plants, discussed below. However, a Metrorail train can carry many more passengers than a bus. Depending on the service and ridership characteristics being compared, one might expect a bus to have lower emissions on a per-vehicle basis, but Metrorail to have lower emissions on a per-passenger or per-seat basis.*

The emissions that result from the demand for Metrorail were not described in the Draft EIS due to the conformity process required by the Clean Air Act and the requirements to account for mobile and stationary source emissions. Power plant emissions due to all existing and future

projected demands, including those for the Metrorail extension, are accounted for as part of the statewide emissions inventory and included in the SIP.

In addition, all power plants must submit to a strict permitting process by demonstrating compliance with all applicable emission limits and ambient air quality standards established by the U.S. EPA and the Virginia DEQ. Therefore, power plant emissions caused by power demand to operate Metrorail, or the rest of the region's electrical grid, are documented and regulated by the federal and State conformity process.

Emissions from all power plants located in the Metropolitan Washington Council of Governments region are accounted for in the SIP prepared by the MWCOG. Emissions from the Mount Storm facility in West Virginia would not be included MWCOG's SIP, but rather the West Virginia SIP.

Questions Decision Making Process

Public Comment: Appears the recommendations of the Project Team were a forgone conclusion. Report done simply to justify the preferred alternative. BRT casually tossed aside. Huge additional cost of rail not justified in recommendations, and therefore the credibility of the report is in question. (0488 01)

Response: *The Project Team did recommend and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

The Project Team recommended the Metrorail Build Alternative of the Draft EIS since it would:
- *provide better access to corridor activity centers;*
- *provide better access to regional activity center because a mode transfer would not be required;*
- *shorter travel times for trips within the corridor;*
- *provide the greatest increase in person throughput capacity in the corridor;*
- *attract the highest number of total riders and new riders;*
- *better support the comprehensive planning efforts of Fairfax and Loudoun counties;*
- *allow for more transit-oriented development to be focused in station areas;*
- *increase the overall mobility within the corridor, the counties, and the region;*
- *enhance air quality more than any of the other alternatives; and*
- *conform to the region's air quality plans by providing the greatest contribution to reducing emissions and improving the region's air quality.*

Although the BRT Alternative did measure higher over the Metrorail Alternative in terms of implementation time and costs, it could not have satisfied the long-term travel demand of the corridor and does not provide the necessary travel service through Tysons Corner.

Funding Options

Public Comment: Federal funding may not be available for rail. BRT is more feasible in terms of funding. (0488 03)

Response: *The Project Team did recommend and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

As stated in Chapter 8 of the Final EIS, DRPT and its funding partners are seeking $760.7 million in Federal funding for the Wiehle Avenue Extension through FTA Section 5309 New Starts program. This funding level represents 50 percent of the estimated project costs, consistent with FTA's recent practice for major transit capital investments. A total of $163.5 million in Federal

New Starts funding has been appropriated for the Project through fiscal 2004 to support project planning, environmental review, and engineering activities. An additional $20 million of New Starts funding for the project is expected in FY 2005. In addition to these appropriations, DRPT has requested that $600 million in additional New Starts funding be authorized for the Dulles Corridor Rapid Transit Project in the pending transportation reauthorization. A Full Funding Grant Agreement will be required to secure any authorized federal New Starts funding for construction of the Wiehle Avenue Extension. The terms of the FFGA, including the level and timing of federal funding participation, will be finalized following completion of preliminary engineering activities.

Selection of Metrorail Alignment in Tysons Corner

Public Comment: Recommended Tysons alignment follows the "cost is not an issue" philosophy of the entire report, and picked the most expensive option. (0488 04)

Public Comment: It is unfortunate that the T-2, T-5, T-10, and T-11 options are no longer being considered as the true loop operation they would have afforded, would have minimized transfers for intra-Tysons trips. I advocate resurrecting these options for consideration, but failing that, the T-4 option is by far the best Tysons proposal currently on the table as it offers the largest number of stations. (0134, 0134-T –5)

Response: *The Project Team recommended that the Metrorail Alternative of the Draft EIS follow Alignment T6 in Tysons Corner because it would:*

- *Provide for the highest ridership, highest number of new riders, and highest transit mode share for most corridor subareas;*
- *Be consistent with existing transportation infrastructure and planned improvements;*
- *Have fewer neighborhood effects than other alignments, especially relative to visual effects;*

and

- *Offer more operational flexibility due to its pocket track and center platform stations.*

Alignment T6 has four stations within Tysons Corner, three of which are aerial and one of which is underground. Alignment T6 has the highest ridership benefits with comparatively few impacts. However, it also has marginally higher capital costs in comparison to the other Tysons Corner alignments. Given that Alignment T6 would provide the highest ridership with the fewest impacts, the Project Team recommended carrying this Metrorail alignment forward as the LPA.

Alignment T9 would have had the same ridership benefits as Alignment T6 because it includes the same number of stations in the same locations. Alignment T9 was not recommended because it would have had greater visual effects than Alignment T6 because most of the alignment would have been aerial and the stations would have been larger in mass due to side platform stations. Moreover, Alignment T9 would have been without the Tysons West pocket track and therefore does not offer train turnback operations for what was then considered the interim terminal station. Alignment T9 might have conflicted with proposed transportation improvements in Tysons Corner, as conceived by VDOT if these improvements were approved and implemented.

Alignment T1 would have had similar impacts as Alignment T6, because the configurations of these alignments were similar. However, Alignment T1 was not recommended because it included fewer stations than Alignment T6 and provided less service area within the core of Tysons Corner.

Alignment T4 would have included more stations in the core of Tysons Corner and have had greater geographic coverage than the other Metrorail alignments. Therefore, the alignment would have had greater potential to foster the high level of development planned in Tysons Corner. However, because the four core stations on Alignment T4 were located on one-way lines, this alignment did not necessarily provide better travel path through Tysons Corner than Alignments

T6 and T9. For Alignment T4, many travelers using the one-way stations would have been required to transfer and double back to reach the station within walking distance of their destination. Alignment T4 would also have had much greater visual impacts than the other alignments.

Opposition to BRT

Public Comment: Bus Rapid Transit will not work well at all. The description of it as "rail like" is a misrepresentation. Buses can not run in labor saving trains, can not run direct to DC in the subway, or provide the safety of rail. The record will show that Bus Rapid Transit (BRT) has attracted hardly one-third of the riders predicted for it. (0013, 0013-L –15)
Public Comment: We cannot afford to risk failures like others have experienced. Fairfax Connector express bus service on the Dulles Toll Road #267 is now providing far superior service to that proposed by the BRT plan before us. Do not waste $350 million on a worse than useless busway. (0013, 0013-L –16)

Public Comment: BRT is not cost-effective.

A. Benefits of BRT are limited to line-haul through-trips in the corridor, and this can be served best without new bus stations in the median.

B. BRT is perceived as a threat to both the existing express bus system and timely delivery of rail service.

C. BRT costs too much in relation to the limited benefits.

D. BRT is not supported by most knowledgeable property owners, current transit riders, or community leaders.

E. At 80% Federal funding, BRT was marginally attractive until we learned the facts about costs, conversion problems, ridership, service, land development opportunities, likely 60% Federal share at best, etc. (0173, 0213-M –2)

Public Comment: I also believe that the so-called Bus Rapid Transit (BRT) options, either BRT all the way from West Falls Church to Loudoun County or rail to Tysons Corner combined with BRT the rest of the way to Loudoun County, will not meet the needs of Dulles corridor passengers. In my opinion, it is an inferior choice compared to the proposed rail system and will be a waste of both time and taxpayer's money. My rationale is as follows:

1. Fewer Rider Benefits - The proposed BRT system will not directly serve the central core of the Tysons Corner area, requiring passengers with that destination to transfer to another bus to finish their journey. The BRT system would also require a transfer at the West Falls Church Metro station for those passengers traveling to the Washington region's core. This would dramatically reduce, if not eliminate, the convenience and time-saving benefits of, and thus the incentives for, switching from a private automobile to transit.

2. Fewer Passengers Projected - Due in large part to the reduced travel benefits just mentioned, the BRT system is projected to carry far fewer passengers than the proposed Metrorail options. The comparison of projected opening year new riders is especially significant: using the high end of the BRT and Metrorail traffic estimates in the Draft EIS, the BRT is expected to carry only 14% of the traffic that the rail system would carry. These new riders represent vehicles taken directly off of the Dulles corridor's roads, and thus the BRT system would have much less of an impact on reducing congestion in the corridor than would Metrorail.

3. BRT To Rail Transition Issues - Particularly troubling was the comment in the Draft EIS that conversions of the BRT stations in the median of the Dulles Airport Access Road to accommodate rail service will require up to 18 months to accomplish. What would happen to BRT service during this period? I am deeply concerned that any hiatus in service would destroy virtually all of the momentum gained to that point in growing rapid transit ridership in the Dulles corridor. Furthermore, I am also concerned that some opponents of rail service in the corridor would use such an hiatus, together with the

worry that the costs incurred to establish the BRT system would be wasted, as an excuse not to proceed with building the rail phase of the project.

4. Most Passengers Prefer Rail - Polls have indicated that a vast majority of the residents in the Dulles corridor prefer the rail options over the proposed BRT system, and moreover they want the rail service with minimal delay. Given these expressed desires of the local citizenry, it makes no sense to consider the BRT option, and even the phased BRT/Metrorail option has little appeal since it is projected to cost almost $200 million more to construct than the most expensive Metrorail-only option. (0071, 0214-M –2)

Public Comment: BRT does not serve Tysons Corner. BRT cannot serve Tysons Corner because BRT buses get stuck in the congested traffic and cannot meet schedules. When congestion occurs, it is necessary to move to rail in order to get around the congestion on the roads. For that reason, BRT is not an option for other congested areas in Northern Virginia. The buses will simply be stuck in the traffic. (0144, 0144-T –5)

Public Comment: We heard a lot on the issue of BRT, but I have not heard any explanation of how BRT is going to serve Tysons Corner because they cannot serve Tysons Corner, which is our largest business center in the region. BRT can't move in congested traffic, which is the problem at rush hour at Tysons Corner, and that is why we need to move to rail because in transportation, once your roads are congested, you need to move to rail to move people. (0144, 0190-T –3)

Public Comment: Bus rapid transit has merit in some situations, but the Dulles corridor is not one of them. BRT works best when there is a dedicated right of way with stops in high density residential areas and major destinations. The right of way in the Dulles corridor is too far removed for meaningful pedestrian access, requiring shuttle bus and parking facilities, and as the DEIS indicated, development in that with BRT and around it is unlikely, contrary to a Metrorail extension. Establishment of BRT would actually add to the commute times of many, since it would require a transfer. Fairfax Connector and other bus lines, including commuter service from Loudoun and WMATA, already pick up residents in their neighborhoods or job destinations and make direct connections with Metrorail, using the Dulles Access Road. (0186, 0186-T –2)

Public Comment: BRT is not cost-effective. The benefits of BRT are primarily linehaul, through trips in the corridor, and these types of trips can be served best without stopping at new bus stations along the way. BRT is perceived as a threat by many in the community to both the existing express bus system and to timely delivery of the rail service. BRT costs too much in relation to the limited benefits. In fact, in my judgment, the costs exceed the benefits. BRT is not supported by most knowledgeable property owners, current transit riders, and that's a strong intuitive feeling I sense by the current transit riders, or by most community leaders. At the start of the study, at 80 percent Federal funding, BRT was marginally thought to be attractive, I think, generally in the community until we learned the facts about the costs, the conversion problems, ridership, low ridership, poor service, land development opportunities that come with it, the lack of them, and likely 60 percent Federal share at best. (0173, 0173-T –5)

Public Comment: Two of the three BRT alignments provide no station stop at Route 28. Furthermore, BRT would attract fewer than half the total riders and less than a third of new riders than metrorail. (0175, 0175-T –3)

Public Comment: Third, construction of the BRT all but removes the incentive on public officials to continue seeking means and funds to provide rail transit in the Dulles corridor beyond Tysons Corner. Once the BRT improvements are constructed and placed into operation, they more than become sunk costs, they represent physical reminders of monies already expended and justification for not spending more, particularly during times of fiscal uncertainty and shrinking Federal assistance. We don't believe that the BRT facilities will in fact be temporary facilities. We would encourage you to select the rail-only option, and are happy to provide more particularized impacts in our written comments. (0135, 0135-T –7)

Public Comment: The rate of Federal participation with BRT is only marginally higher than with rail. This increment simply does not justify settling for a transit system which does not meet our needs. (0175,

0175-T –6)

Public Comment: We don't think bus rapid transit represents any kind of improvement. If you are a bus user, you know that the second transfer just about kills your interest in taking a ride. (0141, 0243-T –1)

Public Comment: Bus is a mistake causing further congestion w/o much benefit. (0048, 0048-CC-1)

Public Comment: BRT will be a failure-- it is hardly different than existing express service- not worth the cost. (0062, 0062-CC-2)

Public Comment: The other transit alternatives have serious deficiencies in terms of permanent design and the ability to attract sufficient ridership to make any difference in the level of service in this area. The Bus Rapid Transit (BRT) option and the combination of BRT/Metrorail alternative will not provide the needed roadway capacity in the near term in the most cost-efficient manner. (0014, 0014-L –4)

Public Comment: Everything with BRT would be a waste of time and money. BRT would not substantially increase ridership over the short term and the DEIS shows that it would ultimately detract from the number of riders by 2025 if a rail-only option were chosen. Plus, BRT operation and maintenance costs would cut into the available funds for rail. It just doesn't make good long-term sense to go with BRT. (0034, 0109-E –2)

Public Comment: Conversely, I oppose the BRT as proposed because, one, it offers fewer rider benefits simply because it does not serve the core of Tysons Corner and transfers would be required for passengers to get there; two, because of that, fewer riders are projected compared to what has been shown for the rail option. The comparison of opening year new riders is especially significant. Using the high end of the BRT and metrorail traffic estimates in the draft EIS, the BRT is expected to carry only 14 percent of the traffic that the rail system would carry. These new riders represent vehicles taken directly off of the Dulles corridor's roads, and thus the BRT system would have much less of an impact on reducing congestion in the corridor than would metrorail. (0071, 0215-T –3)

Public Comment: The "BRT Alternative" could handle only a small percentage of the future transportation demand we will see in the Dulles Corridor. A system that provides only for BRT and does not ultimately include rail transit will not receive support from the Airports Authority and the majority of the commercial landowners in the corridor who otherwise could be counted upon to help finance transit improvements. Without their support, the general public would have to assume the majority of the financing burden. Would they accept this? (0088. 0211-M –3)

Public Comment: BRT, as defined in the DEIS, is not cost effective. The benefits of BRT are limited primarily to line-haul through trips in the corridor, and this market can be served best without constructing new bus stations in the median of the Dulles highway. BRT offers few if any benefits to current bus transit users in the corridor. In fact BRT is widely recognized as a threat to existing express bus service by regular current transit users. They remember the fact that a significant amount of neighborhood express bus service to West Falls Church was cut back and diverted to the new park-and-ride lots when they opened. And they understand that new BRT stations in the median of the Dulles highway would be likely to cause more diversions of neighborhood express bus service to those stations. (0478, 0484-E –6)

Public Comment: BRT will do almost nothing to improve transit service to Tysons, and like the situation cited above regarding neighborhood service, some existing buses that now directly serve Tysons could end up being diverted to the bus station in the median that would serve Tysons, thus requiring another transfer for many riders. (0478, 0484-E –7)

Public Comment: When this PE/NEPA process began, BRT was fairly widely seen as being, at best, marginally attractive as an interim service with the promise of 80% Federal funding and the promise that we could get rail sooner, with over-the-weekend conversion of the stations from bus to rail operation. This marginal acceptance of BRT has completely disappeared now that we have learned the facts about the high costs of BRT, the complex and time-consuming conversion problems, the poor prospects for bus

service improvements and ridership increases, the lack of any significant transit-oriented land development benefits for the community, and the fact that funding for BRT is now seen as being 60% Federal at best. (0478, 0484-E –9)

Public Comment: Bus Rapid Transit - Since the proposed Bus Rapid Transit (BRT) will provide little improvement over the current express bus system if buses must share "the regular traffic lanes" in most cases with other vehicles and do not have a dedicated roadway, we see little or no improvement over the current express bus service. Rationale: According to the description provided for the BRT alternatives, these buses would operate in the regular traffic lanes "except in the eastbound direction on the Dulles Connector Road, when buses are permitted to use the shoulder during the a.m. peak periods and during periods of severe congestion, when such use does not present a safety hazard to general-purpose traffic." (0402, 0402-L –7)

Public Comment: Although the outset of the PE/NEPA process, Bus Rapid Transit (BRT) was seen as being marginally attractive as an interim service, further exploration of this possibility has proven it not to be a viable option. The BRT is not cost effective; could threaten existing express bus service; would increase the number of transfers required for many riders; could potentially absorb significant amounts of funds used now for local and express bus service; and, most significant, would likely threaten the timely delivery of rail service in the corridor. (0478, 0484-E –4)

Public Comment: Toss bus rapid transit in the trash. It's not cost-effective. You will be throwing the buses away after, at the most, eight years. Rail is more cost-effective and BRT threatens rail service. I don't support BRT because of the need to change and the number of stops. So Dulles BRT is unworthy of a great city and area. (0181, 0181-T –2)

Public Comment: When I first began studying the Dulles Corridor 12 years ago, I first felt that buses would be the way to go because of the appeal of the low cost alternative. But after studying and becoming aware of the size and complexity of Tysons Corner, Reston, Herndon, CIT, Dulles Airport, the new Air and Space Museum that's on the way, and Loudoun County, I changed my mind. I came to realize that in planning the Dulles corridor, we are dealing with a nationally and internationally recognized are that will be increasingly important to our area, our region, the Nation and the world in this century. (0144, 0144-T –1)

Public Comment: Transfers from/to multiple buses and trains is not attractive to most people. (0515, 2-03)

> ***Response****: Comments noted. Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to the Project Team and were considered by decision-makers in the selection of the Locally Preferred Alternative. The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Public Comment: The BRT Alternative could handle only a small fraction of the number of airline passengers, airport workers and other commuters projected during the first decade of the system's operation. With this in mind, the Metropolitan Washington Airport Authority and many of the largest commercial real estate owners in the Corridor have strongly advocated immediate development of the full rail system. The financial and technical support of both of these groups is essential to any implementation of a Dulles Corridor transit system. (0204, 0204-M –3)

Public Comment: Nor can the BRT alternative handle the increasing number of passengers using the airport. It's not just the access road that will carry the buses to and from the airport; it's also Tysons Corner, the greenway and the toll road. Who wants to be behind one of those buses going through Tysons Corner at rush hour? Who wants to be on one of those buses going through Tysons Corner at rush hour and trying to get to a flight at Dulles airport? (0204, 0247-T –2)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Daily boardings for the proposed Dulles Corridor stations were shown in Table 6.3-10 of the Draft EIS. As shown in the table, the Metrorail and BRT alternatives would have attracted similar levels of boardings at the Dulles Airport Station. Metrorail will provide greater capacity at the Dulles Airport Station, because this alternative will provide uniform capacity throughout Dulles Corridor. BRT routes, on the other hand, had been tailored to provide the level of capacity need to meet peak demand at various points throughout the corridor.

BRT vehicles for the BRT 1 alignment option would have remained in the Dulles International Airport Access Highway, serving Tysons Corner via a median station near Spring Hill Road. Regular buses used for the feeder service would have operated on local roadways in the core of Tysons Corner, as they do today. For the BRT 2 and BRT 3 alignment options, BRT vehicles would have exited the DIAAH, operated on Route 7 for short distance, then run along Tyco and Spring Hill roads. These alignment options also would have included regular buses providing feeder service along local roadways in Tysons Corner.

Comparison of Impacts

Public Comment: BRT of any kind has nearly the same impact as rail, but much lower appeal & service. (0073, 0073-CC-2)

Response*: The social and environmental impacts from any of the Build Alternatives of the Draft EIS were anticipated to be minor, especially given the length and complexity of the project. BRT would have been much less expensive than Metrorail but would have had significantly less overall passenger capacity then Metrorail.*

Increase in Number of Bus Stops

Public Comment: The BRT will only increase the number of bus stops along the corridor. (0075, 0075-CC-2)

Response: *The BRT Alternative of the Draft EIS had a smaller number of stations and stops than the Metrorail Alternative (primarily because it does not penetrate Tysons Corner). All Build Alternatives of the Draft EIS had included operating plans for a feeder and corridor bus network which included routes feeding into BRT stations or stops within the corridor, as well as regional routes running the full length of the corridor.*

Need to Separate Transit Solution from Traffic Stream

Public Comment: The Dulles Toll Road will reach traffic saturation in the future and Tysons Corner already has trouble that way. Public transportation must be free of such traffic to perform economically and satisfactorily. Buses can not be free of it. (0013, 0013-L –7)

Response: *As presented in the Draft EIS, one of the key advantages of both the BRT and Metrorail Alternatives relative to the No-Build Alternative would have been that BRT would have had and Metrorail will have exclusive right-of-way and thus be separated from general traffic. This would have helped the BRT services from getting caught in traffic (it should be noted, however, that Fairfax Connector Express Services in the corridor do run in the HOV lanes of the Dulles Toll Road, which allows the buses to avoid the worst congestion along the highway).*

Support for the Metrorail Alternative

Public Comment: I have been a believer in rail for a long time, and I think the time is demonstrably here when we need to get rail built. We need to show in America that rail can be built rapidly again, and this is, I would argue, the signature project being in our Nation's capital, connecting the premier international airport with the premier international city. (0083, 0192-T–1)

Public Comment: The need for the Dulles Corridor Rapid Transit Project is here. The full rail alternative is the only sound long-term investment that makes sense, especially considering the environmental impact of even more cars or buses on our roads. I should know. I started working at the Washington Dulles Task Force in 1982 when only 2,000,000 passengers were using the airport. Today there are as many as 16,000,000 passengers using Dulles with a projection of 30,000,000 by 2020. There is no time to waste in approving an environmentally friendly full rail service from Falls Church to Route 772 in Loudoun County. (0394, 0394-L –4)

Public Comment: In general, passengers would find it so much easier to travel back and forth to Washington, D.C. and especially the Tysons Corner area. I urge you to put forth a plan that would provide rail service to Dulles Airport and also to Tysons Corner. (0234, 0234-L –2)

Public Comment: I support fully the Metrorail Alternative; that is, a complete rail transit service running on a dedicated roadbed, from West Falls Church past Dulles Airport and beyond. (0004, 0004-L –1)

Public Comment: Most voters and taxpayers support MetroRail. When more people ride transit, the cost of living goes down and the air gets cleaner. Congestion is minimized for all and avoided for many. Property values are increased. These values are worth real investment capital. (0013, 0013-L –25)

Public Comment: A Dulles Corridor rapid transit rail system would be a wonderful way to help ameliorate the growing transportation issues in the Northern Virginia area. While this will have an immediate impact on the people who live and work in the Northern Fairfax County and Loudoun County area, it will be of great benefit to everyone who flies into or out of Dulles Airport - visitors as well as residents. We hope the project can move forward quickly. (0436, 0436-E –1)

Public Comment: Considering all costs, safety, congestion, air quality, mobility and the quality of life, all measures support MetroRail to Dulles and Loudoun County. Other alternatives will cost more overall and provide less. (0013, 0013-L –38)

Public Comment: The benefits of Dulles Rail now include:

- Providing commuters with an attractive alternative mode of travel.
- Enhancing the quality of life and attractiveness of the corridor for businesses and residents.
- Providing a high-quality, high-capacity transportation choice for residents, visitors, and employees.
- Enhancing the capacity of the corridor to move people among major activity centers and facilities and significantly improves the accessibility of the corridor.
- Creating a significant return on investment to the state and local government from increased economic activity and property values. The higher capital costs of rail are more than offset by increased tax revenues to state and local governments.
- Providing the opportunity to create attractive, community-enhancing, pedestrian-friendly, mixed-use developments around the Metrorail stations.

Building Metrorail to Dulles Airport and beyond now completes the long-planned vision of multi-modal facility in the Dulles Corridor using the served median of the Dulles Airport Access Road. (0154, 0225-M –7)

Public Comment: I wanted to let you know how much I support the proposed Metro Rail extension to Dulles Airport. I strongly believe that building more roads will not help alleviate Northern Virginia's growing traffic problems. But I do believe building Metro Rail to Dulles will. (0008, 0008-E –1)

Public Comment: I want to say three things: That I support the metrorail alternative. I believe that the BRT system as defined in the draft EIS is not a cost-effective system. (0173, 0173-T –1)

Public Comment: First, we support going to rail now as the locally preferred alternative in the DEIS, as opposed to choosing one of the BRT options. BRT does not run through Tyson's Corner and is not an efficient alternative that would meet the area's transportation needs. (0233, 0426-M –41)

Public Comment: I fully support the proposal to construct Metrorail to Dulles Airport. In the event that funding is not available upfront for this option, I support the two-step approach consisting of Metrorail to Tysons Corner and BRT to Dulles followed by the construction of Metrorail from Tysons to Dulles Airport. (0118, 0118-E –1)

Public Comment: My wife and I own a home close to the proposed route and strongly support the idea of a metro rail connector between Dulles and the District. (0009, 0009-E –1)

Public Comment: MetroRail all the way is the only acceptable, useful, prudent alternative. With many real advantages and almost no real disadvantages other than devising the optimum funding mechanism. DEIS page 5-24 says it best: "MetroRail service will deliver the highest ridership, more than twice that of Bus Rapid Transit, the highest number of new riders, more than three times that of BRT, and will result in a higher percentage of people using transit. (0013, 0013-L –24)

Public Comment: Rail option is clearly superior & needed. (0048, 0048-CC-2)

Public Comment: The owners of the Loudoun Station property would like to endorse the "Metrorail Alternative" that is proposed for the Dulles Corridor within the DEIS. Rail is the only transit option that will improve capacity of the existing roadways in the corridor with the effect of opening four new lanes in the Dulles Corridor. (0014, 0014-L –3)

Public Comment: If we are to maintain the vibrancy of Northern Virginia's economy, we must stay ahead of the traffic congestion curve. The only way to do that is to build Dulles rail now. Any delays in building rail will only drive up the cost of the project, further promote congestion, and deprive commuters of the only real long-term solution to the region's traffic and environmental problems. (0154, 0154-T –5)

Public Comment: I hope that an extension of the orange line subway, in the farther areas of No. VA., would be very worthwhile. (0063, 0063-CC-1)

Public Comment: Personally, I would like to see the (pure) Metrorail alternative developed. (0078, 0078-CC-2)

Public Comment: As it has done elsewhere, the investment in rail will enhance property values in the corridor. Rail also will encourage higher quality development and heightened economic activity in the transit station areas, which will result in higher tax revenues for state and local governments. At DynCorp, we like being near the shops and services of Plaza America and look forward to more retail offerings for our employees as result of transit-oriented development around the Reston Town Center Metrorail station. (0233, 0426-M –33)

Public Comment: I am a personnel manager for a company located in the Lake Fairfax Business Center. We know that rail is the only option that realistically will be utilized by our staff. In addition, we look forward to being able to attract a more diverse work force from distant locations, including Washington, DC. Currently, transportation options limit severely that opportunity. (0125, 0125-E –3)

Public Comment: Our statement is rather simple and precise. As a community [The Pavilion Condominiums], we recognize the enormous value and need for expanded public transit in this area. We take no exception to the intent of the Dulles Corridor Rapid Transit Project, and in general we would favor the all-rail option. (0126, 0126-E –1)

Public Comment: From a land use and transportation perspective, the Metrorail Alternative can best achieve the land use and transportation goals of the County on the Loudoun Station property. (0014, 0014-L –7)

Public Comment: I support the full rail alternative as proposed in the Draft Environmental Impact Statement providing service from Falls Church to Route 772 in Loudoun County be selected as the Locally Preferred Alternative. This alignment will best serve the region by maximizing ridership while offering convenient access to Tysons Corner, Reston, Dulles International Airport, and Loudoun County. I do not believe that any of the other alternatives proposed in the DEIS would offer our region the same level of service, convenience, and economic growth. (0418, 0418-L –1)

Public Comment: The choice needs to be for Metrorail all the way. BRT is a waste of money! Most people will not ride it, and to build it will only waste enormous sums of money and will be a huge missed opportunity. The current high level of ridership on Metro will tell you how great of a system it is. Buses will never get this, and to think they will ever do much of a dent in transportation needs in this region is a fantasy. (0110, 0110-E –4)

Public Comment: Environmental criteria are met in any of the alternatives according to the EIS; ridership levels are highest with the full metro rail option. Our goal should be to capture the highest level of ridership because of the possible air quality impacts from the use of automobiles in the out years of 10 to 20 years from now. (0287, 0287-T –1)

Public Comment: This system is greatly needed and long overdue. I feel that a Metrorail system would be the best alternative. It would be better accepted and more greatly used than a bus system. 0116, 0116-E -1)

Public Comment: We add the important argument that the rail alternative is the only alternative that is compatible with the vision for the future of the communities of the corridor, as expressed in the Fairfax County Comprehensive Plan, in the results of the recent Reston Charrette, and in many other planning documents for the Reston area. (0478, 0484-E –2)

Public Comment: The projected costs of a rail-only option are substantial, and our members will bear a large portion of the funding responsibility, including potential sales tax and real estate tax increases, as well as potential increased tolls paid by our employees and customers. This issue is of great concern to our members, including the effect on the state and region's ability to fund other, key transportation improvements. But we also recognize the benefits to the region's transportation system, particularly along the Dulles Corridor, of a rail-only system that results in the greatest number of transit riders. (0450, 0450-E –3)

Public Comment: Reston Association recommends Metrorail, with modifications, as the Locally Preferred Alternative because: Metrorail provides far greater long-term capacity. It better meets the ridership demands stemming from future commercial, residential, and airport growth and development; Providing a seamless mode of transportation, it attracts more than twice the ridership of BRT, resulting in getting more vehicles off our roads; It will contribute to the continuing vitality of the corridor; It saves money over the "Phased" alternative. Furthermore, the "Bandwagon" effect that is now occurring in support of the Metrorail Alternative increases the likelihood that the system will be built. (0233, 0426-M –2)

Public Comment: I fully support the rail system thru Tysons & along D. Corridor, both as a real estate agent to my clients and a resident of the Tysons area! (0050, 0050-CC-1)

Public Comment: Rail access to Dulles Airport is an obvious given if "International" has any meaning. We are way behind most other large International service regions and must improve our people and product distribution efficiency. We are being extremely nearsighted, however, in not planning for the near

future by suggesting that rail service be primarily on-grade in high-density (and future high-density) areas. (0441, 0441-E –1)

Public Comment: Because of the specific impact of this project on our members and all businesses in Reston, Herndon and along the Dulles Corridor, we have been very methodical in our review. We have surveyed our members in order to get their feedback on the locally preferred alternatives and received a significant response with an 11.5% return rate and an overwhelming majority of respondents favoring rail throughout the corridor. As a result of our process of surveying, committee research work and Board of Directors comment, the Greater Reston Chamber of Commerce formally supports that the locally preferred option should be rail with further enhanced bus service in the interim. (0450, 0450-E –2)

Public Comment: I support building rail to Tysons, Dulles, and Eastern Loudoun as soon as possible to help relieve traffic congestion, to provide and option to driving and to stimulate Smart Growth in the Dulles Corridor. Please build this project as soon as possible. (0381, 0381-E –1)

Public Comment: We have studied the DEIS and the various supporting technical reports and we have concluded that the "Metrorail Alternative," which we are calling "Dulles Rail Now," offers the greatest net benefits -- weighing all the many tangible and intangible benefits vs. the capital and operating costs. Or, in other terms, Dulles Rail Now is the most cost-effective alternative in terms of overall benefits per dollar of investment. Finally, we believe that Dulles Rail Now is the most important new link that should be added to the regional rail system because, in addition to directly serving the region's international airport, it will directly serve the two largest business centers of Virginia, which are also the two largest activity centers of the region outside of downtown Washington. (0478, 0484-E –3)

Public Comment: WEST GROUP PROPERTIES LLC supports the full extension of rail for the following reasons:

- The complete extension of Metrorail from Falls Church to and beyond Dulles Airport to Loudoun County will provide greatest benefits for economic growth to the Dulles Corridor and the region.
- The world's capitol of democracy should have an international airport serviced by state of the art mass transit, not by a bus system.
- A seamless Metro system will be utilized by the residents of Fairfax County to their places of employment within the Dulles Corridor. WEST GROUP PROPERTIES LLC does not believe that the same can be said for a bus/rail system that would require transfers between the two modes to reach a final destination within the Corridor. (0233, 0426-M –46)

Public Comment: WEST GROUP PROPERTIES LLC supports the full Metrorail alternative as articulated in the Draft Environmental Impact Statement that provides for the extension of rail service from East Falls Church to Route 772 in Loudoun County and we urge the Board of Supervisors to support full Metrorail as the Locally Preferred Alternative. (0233, 0426-M –45)

Public Comment: While Bus Rapid Transit provides promising ridership levels, it does not match those of rail nor does it provide the level of service or permanency needed to anchor and guide transit oriented development. In view of this we support the rail option because it will produce both the highest ridership levels and the greatest support for Smart Growth. (0142, 0219-M –3)

Public Comment: Full Metrorail should be the Locally Preferred Alternative. The BRT alternatives do not produce any real benefits. It was initially financially attractive when the Federal contribution was 80%. Now that it has dwindled to only 60% its one positive has disappeared. In fact we here already have what could be called "BRT-Light" with the current service. This can become "Neo-BRT" by having the ability of paying fares prior to boarding; increasing the frequency of service; and even putting articulated busses on the line. (0208, 0208-M –1)

Public Comment: We represent some landowner in the Tysons Corner area at the Tysons West station. About 22.5 acres altogether. These are the properties that are known as Security Storage, Templeton Oldsmobile, Cherner Lincoln-Mercury, and Peacock Buick. And it is the location also of what has been talked about this evening as the 2000-car parking garage and the temporary BRT transit stop. These four

landowners have gotten together and have looked at this analysis as a group, and have really come out in support of rail now. They are looking at a rail-only alternative and would prefer that to the BRT. (0161, 0161-T –1)

Public Comment: I support the full rail alternative, providing service from Falls Church to Route 772 in Loudoun County, as proposed in the Draft Environmental Impact Statement and Proposed General Plans for the Dulles Corridor Rapid Transit Project. Selection of full rail as the locally preferred alternative will best serve the region by not only maximizing ridership, but also by providing the most convenient access for businesses and residents to and from Tysons Corner, Reston, Dulles Airport and the rapidly growing Loudoun County. I do not believe that any of the other locally preferred alternatives would be able to provide our region with the level of service, convenience or economic growth that the full rail alternative would. (0393, 0393-L –1)

Public Comment: The full rail alternative is the only sound long-term investment that makes sense, especially considering the environmental impact of even more cars or buses on our roads. There is no time to waste in approving an environmentally friendly, full rail service alternative from Falls Church to Route 772 in Loudoun County. (0393, 0393-L –5)

Public Comment: As someone who grew up in the suburbs of New York and whose family commuted by rail into the city each day, I know how vital the Dulles Corridor Rapid Transit Project is for Northern Virginia commuters. While bus service would be less expensive and could service the same routes, there is no doubt in my mind that only rail will be utilized sufficiently to help alleviate severe traffic congestion on our roads. That is why I support the full rail alternative as proposed in the Draft Environmental Impact Statement. Service from Falls Church to Route 772 in Loudoun County should be selected as the Locally Preferred Alternative. This route will not only maximize ridership (which I predict will be much higher than forecast), but will also offer convenient access to business and residents in Tysons Corner, Reston, Dulles Airport and rapidly growing Loudoun County. (0394, 0394-L –1)

Public Comment: So what I'm arguing for is that we put aside all the issues of contention, build the rail line, get it in there, you'll find that it might only cost $300 million to do it. (0083, 0192-T –4)

Public Comment: At this Hearing we had the opportunity to get the information we were interested in by talking to a number of your representatives. We were particularly concerned with the noise levels and the location of the Station closest to our residence at Lillian Court. Based on what we heard and saw we want to go on record in support of Metrorail to Tysons and on to Dulles - the sooner the better. (0395, 0395-L –1)

Public Comment: The Northern Virginia Roundtable, a membership organization of chief executives from Northern Virginia's largest companies and institutions, supports the selection of rail as the locally preferred alternative for the Dulles Corridor Transit Project. A full rail system from West Falls Church to Loudoun County along the Dulles Corridor is our ultimate and unqualified goal. This is a policy the Roundtable re-affirmed as recently as 2000. (0396, 0396-L –1)

Public Comment: This firm represents a group of landowners at the proposed Tysons West Transit Station. These landowners control 22 acres of land and are identified as the Security Storage site, Templeton Oldsmobile, Peacock Buick and Cherner Lincoln Mercury dealerships (the "Owners"). These properties are located on the north side of Route 7. The Security Storage site and Templeton Oldsmobile dealership are located on the west side of Tyco Road, while the Peacock Buick and Cherner Lincoln Mercury sites are located to the east of Tyco Road. The Owners have been working together to analyze the various alternatives proposed in the Draft Environmental Impact Statement. On their behalf, I would like to voice their support for the Metrorail alternative over the Bus Rapid Transit or Phased Implementation alternatives. The growing traffic problems in the Tysons Corner area need to be addressed and rail provides efficient transit service. Rail is the best way to increase transit ridership and to reduce trips on the road and will also be a catalyst for planning future growth in Tysons, ensuring a vibrant transit-related mixed-use center. (0400, 0400- L-1)

Public Comment: On behalf of Tysons Corner, LLC and Tysons Corner Property, LLC (the "Owners"), the owners of Tysons Corner Center (the "Center"), and Wilmorite Property Management, LLC ("Wilmorite"), the manager of the Center, I write to apprise you of our comments and concerns about the Draft Environmental Impact Statement ("DEIS") for the Dulles Corridor Rapid Transit Project that examines the possible extension of transit service through Tysons Corner to Loudoun County. The Owners and Wilmorite are strong supporters of the extension of rail service to and through Tysons Corner. The proposed transit extension affords an important opportunity to enhance the pedestrian environment in the area and provide additional transportation options for employees and customers of the Center. We very much look forward to having a Tysons Central station adjacent to the Center. As evidence of our support, we actively are participating in the efforts of LEADER to determine appropriate funding mechanisms to construct and operate the rail service, and will continue to lend our support and counsel as necessary and appropriate. (0406, 0406-L –1)

Public Comment: The Action Committee for Transit (ACT), the voice of the transit rider in Montgomery County, Maryland, strongly supports the proposal to build rail in the Dulles Corridor to Dulles Airport. We feel that the option that will best serve the region's need is heavy rail. (0428, 0428-E –1)

Public Comment: The Chamber's commitment to increased transit opportunities and transit-oriented development remains steadfast. Like many in the community, we have supported the concept of rail service through Tysons Corner and along the Dulles Corridor, but have been without the benefit of more detailed information on the costs, impacts and alternatives that are necessary planning tools when undertaking a project of this magnitude. The DEIS gives us some of that information, and we have been reviewing and assessing the information over the past several weeks. (0450, 0450-E –1)

Public Comment: As a landowner in Loudoun County, we strongly support the provision of mass transit to Eastern Loudoun County, and are in favor of the Rail option presented in the DEIS with a station located in the median of the Dulles Greenway between the Route 607 (future Route 411) and Route 772 interchanges. Subject to the approval by the Loudoun County Board of Supervisors of the pending land use case, the Trustees have voluntary agreed to dedicate 12 acres for the transit support activities immediately to the west of the proposed Route 772 station. (0451, 0451-L –2)

Public Comment: Rail/BRT: The CMCF supports the DEIS alternatives for rail to Route 772 terminal, as it provides the highest anticipated ridership for the study area, and is consistent with the land use planning of the surrounding properties. If BRT is selected or BRT/Rail pursued, the CMCF has documented in the current land use proffers with Loudoun County that the site yield will vary. (0451, 0451-L –9)

Public Comment: At DynCorp, we think that the investment in rail is a good business decision. It is good for employers, good for employees, and good for local and state governments. Regional forecasts project that the Dulles Corridor will continue to grow at nearly double the rate of the rest of the region. With growth comes congestion. Rail is the only mode with the demonstrated capacity to handle the increasing demand for travel in the corridor. (0233, 0426-M –31)

Public Comment: Rail provides our employees with an attractive, stress-free commute option. The ability to use rail transit to get to work is an important employee amenity. It will be a useful recruitment tool and will enable use to have improved access to the regional labor pool. It will also be easier for visitors and other businesses that provide services to us to access our offices. We feel that rail transit will give our Dulles Corridor location a competitive advantage. (0233, 0426-M –32)

Public Comment: As you have heard our Chairman Ken Plum say, the Dulles Corridor Rail Association supports moving directly to rail transit in the Dulles Corridor. The demand for travel is growing. Population and employment growth in the corridor is projected to be double that of the rest of the region even without the transit related land use changes adopted by Fairfax and Loudoun Counties. Passenger trips at Washington Dulles International Airport are projected to increase from 20 million today to 37 million in 2010. The Dulles Center of the National Air and Space Museum will get three to five million visitors per year when it opens in December 2003. (0141, 0443-E –1)

Public Comment: We need rail now. This is an investment in our future not a cost. (0141, 0443-E –17)

Public Comment: We are strongly in favor of either of two options: the metrorail option or the phased option (as long as there are guarantees that the BRT portion of the phased option will eventually be converted to metrorail). Between the two, we rank the phased option higher than the metrorail option. But we would be happy with either. (0226, 0226-E –1)

Public Comment: We are strongly opposed to the other two options: combined option (metro through Tysons and BRT the rest of the way) and the BRT option. (0226, 0226-E –2)

Public Comment: I am here tonight in support of the metrorail as the alternate foundation of the Dulles Corridor Rapid Transit. (0250, 0253-T –1)

Public Comment: A first class rail system is achieved when complemented by reliable and clean bus system. Again, metro bus, with its 29 years of experience, stands tall as a proven regional provider. With the flexibility to meet demands by adding rail cars or bus runs, metrorail becomes the obvious solution to meet local growth. (0250, 0253-T –5)

Public Comment: To begin, I strongly support the introduction of Metrorail service in the Dulles Corridor. I believe that construction should begin as soon as possible, allowing for the start of rail service by no later than 2010.

This is most important because:

1. Residential And Business Development Have Increased - The rapid growth of residential and business development in the Dulles corridor can now support fast, direct, efficient and environmentally-friendly Metrorail service connecting the corridor to the Washington region's core and, eventually, to other suburban areas as well.

2. Dulles Airport Passengers Have Increased - The growth at Washington Dulles International Airport itself, as both an air service gateway to the Washington area and a major employment center in its own right, has produced additional rail passenger demand in the corridor.

3. Traffic Congestion Has Increased - Instituting rail service in the Dulles corridor is also needed to deal with growing levels of traffic congestion, notwithstanding the recent addition of more bus service connecting outlying areas to Tysons Corner and the West Falls Church Metro station.

4. Support The Summer Olympic Games - Although it is of lesser importance to the day-to-day workings of our region, it is vital that rail service be extended to Dulles Airport if the Washington region is to succeed in its efforts to win the rights to host the 2012 Summer Olympic Games. This is due to the need to ensure mobility throughout the Washington region while the Games are in progress as well as the airport's status as the primary international gateway to the National Capital region. (0071, 0214-M –1)

Public Comment: The EIS process we have been through has convinced me that, despite some very difficult challenges ahead and some questions that have not been completely answered, this project does in fact make sense and should be undertaken. Therefore, I strongly advocate the immediate development of the full Rail Alternative. I strongly urge all affected state, local, regional and federal officials to expedite their final review of this phase of the EIS, and to move quickly into the final planning, design and construction phases necessary to make the project a reality. Let's get on with building a rail transit system in the Dulles Corridor. (0088, 0211-M –20)

Public Comment: Yes, there is a considerable challenge in providing more early-year funding allocations needed to advance the Rail Alternative more rapidly than would have been required by the other options. This challenge can be met. While a highway lane has a rather finite capacity, the rail system once in

place can continue to expand ridership well beyond the demand estimates for the year 2025 used by the consultant. Therefore, because of the overall project cost savings, the greater economic benefits, the greater load carrying capacity, and the operational logic of the Rail Alternative, this option is well worth pursuing. (0088, 0211-M –6)

Public Comment: I support the "Metrorail Alternative."
A. I agree with the Dulles Rail Now Coalition statement and all the many reasons others offer (capacity, ridership, new riders, accommodation of long-term growth, mobility for all, importance of rail to the international airport serving our national capital, etc.).
B. Rail Now is the only alternative that is compatible with the future vision we have for Reston, Herndon, Tysons, and other communities.
C. Rail Now is the most cost-effective alternative in terms of benefits/dollar invested.
D. Dulles rail is a crucial link in the regional system. (0173, 0213-M –1)

Public Comment: The Trust endorses Metrorail as most desirable among the alternatives considered in the Draft EIS and recommends that rail be endorsed as the Locally Preferred Alternative. All other options are unsatisfactory. Two of the three BRT alignments provide for no station stop at Route 28. Furthermore, BRT would attract fewer than half of the total riders, and less than a third of new riders, than Metrorail. (0175, 0202-L –1)

Public Comment: We support continued efforts to complete the project, and we prefer that it be a rail only project from the start. It is clear that rail will attract the greatest number of people from their cars, and that should be the overriding criteria, to reduce vehicle miles traveled. In fact, we do not see that sort of analysis in the report and it should be included. Doing so will demonstrate the value of the project to the region. (0188,0217-M –1)

Public Comment: Reston Interfaith supports the rail option as outlined in the Draft Environmental Impact Statement. Our interest in and support of this option is not based on any expertise on environmental impact or transportation projections. Rather, it is based on our work experience and familiarity with the needs of low-income and working families in Fairfax County. We are especially concerned with the working poor who often cannot afford to live near their work site and depend on public transportation to get to and from work as well as needed social services. (0193, 0238-M –1)

Public Comment: In Reston Interfaith's review of the Draft Environmental Impact Statement, we note that continued bus service, especially on feeder lines, remains critical for low-income families, but the Impact Statement states that Metrorail will provide a better level of accessibility for minority and low-income populations (page S-24 of Executive Summary). (0193, 0238-M –2)

Public Comment: The Committee for Dulles strongly recommends that the full Rail Alternative be selected from the beginning. (0204, 0204-M –1)

Public Comment: Once again, the Committee for Dulles has steadfastly advocated rail to Dulles since the organization was first conceived more than 35 years ago. Today we strongly urge all affected state, local, regional and federal officials to expedite their final review of this phase of the EIS, and to move quickly into the final planning and design phases necessary to make the Dulles extension of the rail transit system a reality. (0204, 0204-M –15)

Public Comment: The Reston Association recommends Metrorail, with modifications, as the Locally Preferred Alternative: Metrorail provides far greater long-term capacity. It avoids a transfer from Bus Rapid Transit. It will contribute to the continuing vitality of the corridor. It saves money over the "Phased" alternative. Furthermore, the "Bandwagon" effect makes it likely it will be built. (0210,0210-M –1)

Public Comment: Our general feelings are that we need metrorail the entire way, of the system will be insufficient before it is even implemented. (0226, 0226-E –3)

Public Comment: I am in support of a Metro Rail going through the Tysons Corner area in order to promote a cleaner environment, to provide alternate transportation options for residents, and to alleviate traffic congestion. (0229, 0229-E –1)

Public Comment: Yes, there are many people who are concerned about the costs, and they are daunting. But I also would say that the problems of clean air are daunting as well, and I fear that if we don't make the effort to use all our ability to consider the rail option, we will foreclose that option for many, many future years. (0242, 0242-T –1)

Public Comment: DATA recommends the full rail alternative, Metrorail. West Falls Church to Loudoun County as outlined in the draft environmental impact statement. (0244, 0244-T –1)

Public Comment: It is said best in the report. Metrorail service will deliver the highest ridership, more than twice that of BRT, the highest number of new riders, more than three times that, if not more, than BRT, if I could add a little side comment, and will result in a higher percentage of people using transit. When more people ride transit, the air gets cleaner, and that's a very important issue for us in this region. When more people ride transit, I think the quality of life improves. Congestion is minimized for all and avoided completely by many. Property values are ultimately increased based on parallel experiences in similar projects around the country. These values go a long way to enhance the real investment capital required to make this alternative work. (0244, 0244-T –2)

Public Comment: Boston Properties, with over 15 million square feet either planned or completed in the area, is highly supportive of this system and in particular the full Metrorail Alternative. (0003, 0246-T –1)

Public Comment: We support the rail alternative because of its high capacity to move riders, because it avoids the disruptions and delays associated with the conversion from BRT to rail, and because it avoids the costs of such conversions. Rail offers the greatest opportunity to maximize ridership and to minimize vehicle miles traveled. (0248, 0248-T –1)

Public Comment: Joining with the diverse coalition today, we strongly support a rail alternative over the bus rapid transit options for the Dulles project, provided that we get the land use right. 0251, 0251-T –1)

Public Comment: It seems there's a lot of people with groups and interests, so I would like to just go on record as saying that a resident of Sterling Park, I know we've had a few other residents from the Sterling Park area, I am very much in support of this, the full Metrorail build option. (0265, 0265-T –1)

Public Comment: From what we have learned here today and from our own experience, we know that the most accessible and efficient manner of transportation, and most accessible in terms of persons with disabilities, is rail. Our colleagues in Fairfax County and in Loudoun County want to see rail all the way out to Loudoun County. (0157, 0157-T –2)

Public Comment: We support continued efforts to complete the project, and we prefer that it be a rail-only project from the beginning. It is clear that rail will attract the greatest number of people from their cars and that that should be the overriding criteria, to reduce vehicle miles traveled. (0158, 0158-T –1)

Public Comment: As a community, we [The Pavilion and The Villages] recognize the enormous value and need for expanded public transit in this area. We take no exception to the intent of the Dulles Corridor project, and in general would favor the all-rail option. (0126, 0199-M –1)

Public Comment: So Reston has much to gain from the coming of metrorail. (0141, 0167-T –2)

Public Comment: While BRT provides promising ridership levels, it does not match those of rail, nor does it provide the level of service or permanency needed to anchor and guide transit-oriented development. In view of this, we support the rail option because it will produce both the highest ridership levels and the greatest support for smart growth. (0142, 0142-T –6)

Public Comment: Finally, I recently attended the Reston charette that brought experts from the West Coast. There were three planning experts brought in to advise Reston on its future in light of these transit options. After looking at the possibilities, these independent planning experts unanimously advised the Reston community to go directly to rail for the whole corridor as soon as possible. Their expertise confirmed what many of us had come to believe, that in planning the Dulles corridor we will create the best quality of life if we go to rail. (0144, 0144-T –11)

Public Comment: The rail-only option constructed in segments as funds become available, similar to the manner in which the existing metrorail system was constructed, represents the least disruptive attractive option and preserves the opportunities for transit-oriented redevelopment. (0135, 0135-T –2)

Public Comment: For the record, I'm an attorney with Cooley, Godward in Reston, here tonight on behalf of Wilmorite Property Management, the new owner of the Tysons Corner Center. Tysons Corner Center is supportive of the extension of rail service to and through Tysons Corner. Wilmorite and Tysons Corner Center believe that rail service has the potential to create enhanced transit options for employees and customers of Tysons Corner Center. (0143, 0143-T –1)

Public Comment: I recently attended the Reston charette where three independent planning experts from the West Coast were brought in to advise Reston on its future in light of the Dulles transit options. After looking at the possibilities, these planning experts unanimously advised the Reston community to go directly to the rail option for the whole corridor as soon as possible. Their expertise confirmed what many of us had come to believe, that building seamless rail in the Dulles corridor now will create the best quality of life possible in our communities for the new century. (0144, 0190-T –4)

Public Comment: I'm here representing the Ellison Heights-Mount Daniel Civic Association, a community of 200 homes. Before I enumerate our concerns about the EIS, I would like to tell you that most of my neighbors support rail to Dulles and Tysons, believing it is critical to an effective area wide transportation network. (0145, 0145-T –1)

Public Comment: We support the rail alternative here tonight over bus rapid transit provided we get the land use right. (0149, 0149-T –5)

Public Comment: We strongly support a rail alternative over the bus rapid transit option for the Dulles transit project, provided we get the land use right. (0149, 0180-T –4)

Public Comment: Our support for the Dulles Rail project, or any transit project for that matter, has always been contingent upon real plans to focus development within 1/4 and 1/2 mile of the transit stations in high quality, new urbanist designed communities. Joining with this diverse coalition today, we strongly support a rail alternative over the bus rapid transit options for the Dulles project - provided we get the land use right. While there has been progress on addressing the land use issue, much work remains to be done. (0149, 0205-M –1)

Public Comment: TYTRAN is on record as early as 1995 with a board-approved resolution supporting rail to Dulles project. (0152, 0152-T –1)

Public Comment: The Reston Association recommends metrorail with modifications as the Locally Preferred Alternative. Metrorail provides far greater long-term capacity. It avoids the transfer from bus rapid transit. It will contribute to the continuing vitality of the region, and it saves money over the phased alternative. Furthermore, the bandwagon effect makes it likely it will be built. (0170, 0170-T –1)

Public Comment: I agree with the Dulles corridor, the Dulles Rail Now Coalition statement 100 percent, and for many of the reasons others offer for that [Metrorail] alternative. The high capacity, the ridership, number of new riders, the avoidance of transfers, the accommodation of long-term growth, mobility for all, the importance of rail to the international airport serving our national capital and so on. (0173, 0173-T –2)

Public Comment: I would add rail now is the only alternative that's fully compatible with the future vision we have for Reston, Herndon, Tysons and other communities, based on the comprehensive plan, the outcome of the Reston charette that's been referred to, and many other local plans and vision statements that we have for the area. (0173, 0173-T –3)

Public Comment: The trust endorses metrorail as the most desirable among the alternatives considered in the draft EIS and recommends rail be endorsed as the Locally Preferred Alternative. All other options are unsatisfactory. (0175, 0175-T –2)

Public Comment: I strongly support the Dulles rail project. I believe it is most important that an express rail line be extended to Dulles in the timeliest of manners. However, this is an extraordinary financial cost to the public and the citizens of Fairfax County. (0179, 0179-T –1)

Public Comment: I am for rail. Not a phased rail, but rail all the way at once. (0181, 0181-T –1)

Public Comment: Now the rail that will go out to Dulles is going to be a subway rail, not the same thing as the VRE, but rail is very successful. People like to use it. The parking lots at VRE, for instance, are just overflowing with people, and so they are voting with their parking spaces that rail is a good idea. (0185, 0185-T –1)

Public Comment: Now I realize that the Dulles Airport rail will be much more expensive than VRE because we are not renting space, we have to buy space and do the whole infrastructure bit. But, anyway, I would say that we need to go forward with rail. For many people, it will save a lot of time. You will add time to your life if you ride rail, for most people, and this translates into more time from your family and friends, and I think it is probably the best solution. (0185, 0185-T –2)

Public Comment: A metrorail connection to Dulles will permit much easier access to jobs in the corridor, as well as the airport itself, than the current system. (0186, 0186-T –5)

Public Comment: The success of the current express bus service in the corridor foretells the success of heavy rail extension, particularly since the right of way exists for most of the corridor. (0186, 0186-T –6)

Public Comment: We have a long history of supporting transit in general and have supported aspects of this project in the past. We support continued efforts to complete the project and prefer that it be rail-only project from the start. We believe that rail will attract the greatest number of people from their cars and that should be the overriding criteria, to reduce vehicle miles traveled. In fact, we do not see this sort of analysis in the report, and it should be included. (0188, 0188-T –1)

Public Comment: Reston Interfaith's mission is to promote self-sufficiency and support people in need of shelter, affordable housing, child care and other community services. Reston Interfaith supports the rail option as outlined in the Draft Environmental Impact Statement. Our interest in and support of this option is not based on any expertise on environmental impact or transportation projects. Rather, it is based on our work experience and familiarity with the need of low-income and working families in Fairfax County. We are especially concerned with the working poor who often cannot afford to live near their work site and depend on public transportation to get to and from work, as well as needed social services. (0193, 0193-T –1)

Public Comment: In review of the Draft Environmental Impact Statement, we note the continued bus service, especially feeder lines, remains critical for low income families, but the impact statement states that metrorail will provide a better level of accessibility for minority and low income populations. (0193, 0193-T –2)

Public Comment: In summary, Reston Interfaith supports the rail option, especially as it pertains to the transportation needs of lower income Fairfax County families and will continue to advocate for the need to include affordable housing in the higher density residential development that the rail option will initiate. (0193, 0193-T –4)

Public Comment: I am a director for the Reston Citizens Association. On behalf of RCA, I urge the immediate development of the Metrorail Alternative. The Reston Citizens Association has passed no less than five resolutions ranging from August 23rd, 1999 through the most recent resolution this week. The Reston Citizens Association supports development of the Dulles rail transit system as soon as feasible and urges that the Commonwealth Transportation Board and all other decision-making bodies involved in the Dulles Corridor Rapid Transit Project adopt the Metrorail Alternative as defined in the EIS. (0196, 196-T –1)

Public Comment: I support the Dulles Rail alternative for the Dulles Corridor for many of the reasons stated by previous speakers. Dulles Rail is an essential component of the region's and nation's transportation infrastructure. Also, from my perspective, the sooner Dulles Rail becomes constructed and operational, the sooner the governing bodies can shift attention to I-66 Rail extended from Vienna to Centreville, currently under environmental review. (0197, 0197-M –1)

Public Comment: It [Rail] would also be expensive, but worth it. The Washington area should always allocate enough money as it needs in a changing time. (0063, 0063-CC-2)

Public Comment: We support continued efforts to complete the project, and we prefer that it be a rail only project from the start. It is clear that rail will attract the greatest number of people from their cars, and that should be the overriding criteria, to reduce vehicle miles traveled. In fact, we do not see that sort of analysis in the report and it should be included. Doing so will demonstrate the value of the project to the region. (0158, 0223-M –1)

Public Comment: The Dulles Corridor Rail Association has shown that a commitment to "Dulles Rail Now" addresses issues that the League of Women Voters has been exploring for 40 years, that is, high quality service to the greatest number of passengers; sound land use planning that encourages mixed-use, people-friendly, transit-oriented development; and dedication to environmental quality through air and water protection measures. For these reasons we add our support to the Dulles Corridor Rail Association in their campaign for Dulles Rail Now! (0206, 0206-M –2) (0206, 0264-T –1)

Public Comment: I would like to reemphasize that the Loudoun County Board of Supervisors unanimously, nine to zero, encourages you to select the Metro Alternative and that you select Site 15 for the rail yard on the Dulles property. (0258, 0258-T –2)

Public Comment: First I would like to start by saying that we are fully in support of Metrorail rapid transit as the plan calls for. (0260, 0260-T –1)

Public Comment: I live very close to the Ballston metro. I remember Ballston 25 years ago. It has made an enormous difference. An investment of approximately $660 million in Metro has paid off in more than $4 billion worth of development. It in every measure is better. (0263, 0263-T –1)

Public Comment: The point I would make here is that Metro is not a cost, it's an investment. It's a damned good investment. And the payoff -- it's a lot of cost now, I will give you that. You need to think in life cycle costing. The initial cost is enormous. But if you do it right, the payoff -- the payoff is better than any other investment you can make. You're going to have to pay for transportation, that's a given, whether it's going to be roads and congestion, or you're going to put in the rail and you're going to eat the cost for a while, but your children will thank you for having the foresight to do it, because the payoff -- the payoff is indisputably the best option you have. (0263, 0263-T –3)

Public Comment: I am here tonight in support of Metrorail as the ultimate foundation to the Dulles Corridor Rapid Transit. I believe this because of different reasons. To begin with, Metrorail has a 98 percent reliability track record, which rates number one in the country. It is clean, safe and well governed. Furthermore, wherever Metrorail goes, prosperity follows, making it a serious asset to businesses and local economy. It is also friendly to the environment as Metrorail makes it attractive for commuters to ride in style and arrive on time, forgetting about their fossil fuel polluting vehicles. (0278, 0278-T –1)

Public Comment: Metrorail makes sense; it is safe, clean and a proven solution to rapid growth. Please get me out of pollution and traffic gridlock. (0278, 0278-T –3)

Public Comment: I support the Metrorail alternative. From what I have read, I suspect that this will be selected as the locally preferred alternative. (0290, 0290-L –1)

Public Comment: I strongly support the MetroRail Alternative which would extend Metro the length of the Dulles Corridor. Sooner the better. (0291, 0291-L –1)

Public Comment: I believe the rail option will be the most beneficial to the region. The cost to extend Metro will not go down. The sooner we commit to rail the sooner it will happen. Rail will provide the quickest option for emergency evacuation of local working residents in DC to the Dulles Corridor. In an emergency after rush hour it takes a minimum of an hour to an hour and a half to get bus drivers back. In bad weather (heavy snow, rain) rail is the most efficient and safer option. We are now a major private employment region. Many private employers do not have snow days. (0301, 0301-CC-1)

Public Comment: MetroRail now. Metro Stations will become destinations- that is dining and entertainment locations. (0075, 0075-CC-1)

Public Comment: Metro Rail now - from West Falls Church to Rt 772, through Tysons Corner and the Dulles Airport Access Road. (0039, 0039-CC-1)

Public Comment: I will not be able to attend the public hearings next week, but would like to register my strong support for the Metrorail alternative. The orange Line Metrorail is already a going concern and will provide a quick and efficient means to get to Dulles from downtown and points in between. Coming the other way, Metrorail will provide a good alternative to automobile commuting from the Dulles Corridor to Tysons Corner and beyond. (0115, 0115-E –1)

Public Comment: Here are some of the reasons LEADER supports Dulles Rail now:

- § Of all the alternatives in the DEIS, only Metrorail will deliver the capacity to meet the projected need … more than four times as many new transit trips.
- § Metrorail is projected to carry 9,600 passengers, a 60 percent increase in "person throughput" over the Dulles Toll Road which can only handle 2,300 passengers per lane per hour and BRT which has a comparable capacity.
- § Rail can accommodate growth. As demand grows, a single rail line (one direction) will be able to handle 50,000 passengers per hour using eight-car trains with three-minute headways. (0154, 0225-M –6)

Public Comment: That leaves rail to Dulles now. The Committee for Dulles strongly urges that this be the alternative selected. Only this alternative meets all the needs at Dulles airport and can serve the needs of Loudoun County. (0204, 0247-T –4)

Public Comment: I strongly prefer the metrorail alternative that provides for early construction of metrorail facilities throughout the corridor. I believe this approach is best because it addresses an already pressing transportation need. It will get us to the ultimate goal of providing rail service most quickly, and it will ultimately result in getting us to the ultimate goal at the least total project cost. Also, it will obviate the need to design, build, operate, perfect, and educate the traveling public on the use of a bus system that is destined to be replaced as soon as possible. Thus, I also hope that the immediate construction of metrorail will be determined to be the Locally Preferred Alternative. (0194, 0194-T –2)

Public Comment: I came to understand that we must take the long view in planning the Dulles corridor and that long view requires that we build rail now all the way out the corridor. (0144, 0144-T –2)

Public Comment: Whereas, TYTRAN supports the extension of rail through Tysons Corner to Dulles airport, on an alignment that includes the appropriate number of stations to encourage ridership, provides the greatest access for pedestrians, coordinates the existing roadway in Tysons Corner, provides additional parking solutions for commuters, and provides employees with the most cost-effective and time-saving mode of transportation with the fewest number of stops and transfers. (0152, 0152-T –2)

Public Comment: We're designing a mixed use project that embodies all of the elements that go into just that, a mixed use project, but it is focused on the metro station, and so we really would like to make three very simple statements tonight, and the first of those obviously is were the mixed use project designed specifically to surround the 772 metro station, we, Comstock Homes, very strongly support the arrival of rail, not just to Dulles Airport, but further into Loudoun County. (0256, 0256-T –1)

Public Comment: These are the reasons to do Metrorail, and forget BRT:

- § Metrorail service generally results in the shortest travel time, especially for reverse commute trips and those that begin and end in Tysons Corner.
- § Metrorail service will deliver the highest ridership (more than twice as much as BRT), the highest number of new riders (more than three times as many as BRT), and will result in higher percentage of people using transit.
- § Metrorail would provide a seamless "single-seat" link between Dulles Airport and the region's core, and provides facilities commensurate to the status of this international airport.
- § Metrorail service would provide a much greater increase in the capacity to move people through the corridor than either BRT or Combined BRT/Metrorail.
- § Metrorail would have higher growth potential in station areas along the corridor due to planned increases in allowable densities at rail stations, and better contributes to the objectives of adopted county master plans.
- § More members of the business community, area neighborhood residents, and civic organizations have expressed support for Metrorail than for any other choice.

Metrorail would provide the best opportunity to capture previous investment made in the regional infrastructure. (0110, 0110-E –5)

Public Comment: I leave it to others more directly involved to comment on the best alternative for the Tysons area, except to say that I hope that one of the least costly alternatives is ultimately selected. (0194, 0194-T –5)

Public Comment: When I'm going to argue for is that we just go right ahead and build the railroad from East Falls Church where I live out to Dulles, and let each individual community fight over their station and their problems on their own basis. If they don't want traffic, they don't have to build a station. If they want a wooden platform with umbrellas, they can do that. There are many issues at stake here, and they are big issues. (0083, 0192-T –2)

Public Comment: Metrorail knows transit. It has a 98 percent reliability track record, making it the number one rapid transit system in the country. Metrorail is known for its clean, safe and well-governed system. Metrorail has set the benchmark for efficiency and operations that other cities such as Atlanta and Los Angeles try to emulate. (025, 0253-T –2)

Public Comment: On behalf of Clover Sunrise Limited Partnership, owner of two commercial properties along the Dulles Airport Access Road corridor identified as Tax Map 17-3 ((8)) 5A and 5B, I would like to voice my support for the Metrorail alternative. I believe Metrorail is the best method for increasing transit ridership in the corridor. Bus Rapid Transit (BRT) or a phased BRT/Metrorail option are not suitable options due to the necessity for transfers and the projected ridership. We urge your implementation of the Metrorail option. (0413, 0472-L –1)

Public Comment: Rail now is, I believe, after thoroughly studying the document, I think I have been through that document more than anybody who is not a member of the team, is the most cost-effective

alternative in terms of benefits per dollar invested. And I feel quite confident in that judgment as a professional. (0173, 0173-T –4)

Public Comment: But in conjunction with changes in land use, Dulles rail can reduce regional traffic. Most urgent to us is connecting the Orange Line to Tysons Corner and creating the right mix of uses, including affordable housing and good pedestrian-oriented design. (0149, 0149-T –2)

Public Comment: The Draft EIS correctly states that "improved bus service can add only ten (10) percent to throughput" but MetroRail will add "sixty (60) percent to throughput". The added throughput is vital to the economy and mobility of the area. (0013, 0013-L –8)

Public Comment: Second, the Greenway supports full implementation of rail rather than a phased approach. Our reason for this is simple. If we are going to suffer disruption from construction, we want to get it over with. (0257, 0257-T –7)

Public Comment: With reference to the rail project in the Dulles Corridor, LINK recommends that the Virginia Department of Rail and Public Transportation move directly to rail rather than beginning with BRT with rail to follow. (0005, 0005-L –1)

Public Comment: I am writing as a representative of several properties in Tysons Corner, interested in and impacted by, the proposed transit alternatives between West Falls Church and Dulles Airport. The properties include tax map 29-4 ((9)) 12B owned by 8180 Greensboro LLC, Tam Map 29-3 ((15)) 12A owned by 8200 Greensboro LLC, and Tax Map 29-3 ((1)) 63B owned by Clover Tysons LP. Together these properties total 8.9 acres. These property owners support the Metrorail options as the most appropriate transit alternative. We firmly believe that Metrorail implemented now - without Bus Rapid Transit or phased implementation - is the only transit alternative which will adequately serve the Tysons Corner area. It is the best alternative for increasing transit ridership and taking vehicles off the road in Tysons and throughout the corridor. It also offers the fastest most convenient connection to both downtown Washington and Dulles Airport. (0413, 0413-L –1)

Public Comment: As others have mentioned, there is also BRT to metrorail transition issues, and as far as I am aware from articles and polls I have read, most Dulles corridor residents support and prefer rail. (0071, 0215-T –4)

Public Comment: I strongly support the full rail option. I support building the full length of it from the beginning, bypassing the BRT phase. There are many reasons for that, and there are some reasons why it is very expensive, but I still think it is the best option, and try to cover that in more detail in my paper. (088, 0172-T –2)

Public Comment: I strongly support rail, and I support rail now, as opposed to the BRT option first, and then rail. I think we currently have a very good express bus system that could be expanded. And then we could gradually go into an all-rail solution. (0284, 0284-T –1)

Public Comment: Overall, though, for reasons that are explained herein in greater detail, TMS supports the extension of heavy rail, without a BRT component, through Tysons Corner and along the Dulles Corridor. While a combination of BRT and Metrorail, either as a permanent solution or as part of a Phased Implementation plan, may have short-term financial advantages, the significant increase in ridership, cost effectiveness and seamless nature of a full rail extension seem to outweigh the benefits of combined BRT/Metrorail. In addition, the rail-only option provides the greatest amount of flexibility in the land uses and redevelopment opportunities around the transit stations, particularly in areas like the Tysons West station, which currently has low-rise, low density sprawling development that is inconsistent with transit-oriented development. Finally, we believe the construction of BRT all but removes the incentive for public officials to continue seeking means and funds to provide rail transit in the Dulles Corridor beyond Tysons Corner. Once the BRT improvements are constructed and placed into operation, they become more than mere sunk costs; they represent physical reminders of money already expended

and provide justification for not spending additional funds, particularly during times of fiscal uncertainty and shrinking federal assistance. (0135, 0391-L –2)

Public Comment: Go straight to the metro rail system. The public does not want a bus rapid transit system. (0070, 0070-CC-1)

Public Comment: Go straight to full Metro rail implementation, don't bother with BRT. (0043, 0043-CC-2)

Public Comment: I strongly prefer the Metrorail Alternative that provides for early construction of Metrorail facilities throughout the corridor. I believe this approach is best because it addresses an already pressing transportation need, it will get us to the ultimate goal of providing rail service most quickly, and it will undoubtedly result in getting us to the ultimate goal at the least total project cost. Also, it will obviate the need of design, build, operate, perfect, and educate the traveling public on the use of, a bus system that is destined to be replaced as soon as possible. Thus, I also hope that the immediate construction of Metrorail will be determined to be the Locally Preferred Alternative. (0194, 0216-M –2)

Public Comment: Rapid transit is needed as soon as possible. Skip Bus Rapid Transit! (0080, 0080-CC-1)

Public Comment: I strongly support the Rail Alternative. I support building rail for the full length of the project from the beginning, bypassing the BRT phase. (0088, 0211-M –1)

Public Comment: In asserting this position, the Committee for Dulles is very mindful of the challenge in making available greater early-year funding allocations than would be necessary if the more cautious BRT mode was implemented first. Nevertheless, because of the total cost savings over the life of the project, we urge construction of the full rail mode from the beginning. (0204, 0204-M –6)

Public Comment: As the owner/developer of property located in the Woodland Park mixed-use development located south of the Dulles Airport Access Road (DAAR) between Monroe Street and Centreville Road, I would like to state our support for the extension of Metrorail to Dulles Airport. We are in favor of developing Metrorail to Dulles over the proposal for Bus Rapid Transit or the phased implementation alternative. Metrorail will be the most effective means of reducing vehicle miles traveled in the DAAR corridor and will result in more transit ridership than other options. Metrorail will provide an efficient link to Dulles International Airport, Tysons Corner and Washington, D.C., which will encourage economic development opportunities in the corridor and mixed-use projects near transit stations. (0237, 0237-L –1)

Public Comment: Let me start out by saying that TMS Limited Partnerships is supportive and excited about the opportunity to bring transit service to Tysons Corner and Dulles corridor. But we have some concerns. First and foremost, we recommend that the draft EIS and ultimately the final EIS recommend a rail-only option, with no phased implementation of BRT. BRT facilities at Tysons West near the TMS property, whether it's part of a BRT rail option or phased implementation, are impediments to pedestrian-oriented, transit-friendly redevelopment. They are cost-inefficient, and quite frankly, eliminates the incentive to construct future rail service along the corridor. (0135, 0135-T –1)

Public Comment: The Reston Citizens Association has further resolved that there be no interim Bus Rapid Transit project prior to the implementation of the full rail system; that there be no decrease in direct bus service from Reston neighborhoods to the West Falls Church Metrorail Station; that upon completion of the Dulles rail transit system, local bus service should be expanded throughout the community, especially during the commuter hours to service the rail station; and that direct, safe pedestrian access be provided to the rail stations from all principle directions to the maximum extent feasible. (0196, 0196-T –2)

Public Comment: I would recommend that you go straight for full Metrorail implementation. Don't bother with the Bus Rapid Transit. (0043, 0276-T –2)

Public Comment: The Greenway supports full implementation of rail rather than a phased approach. Our reason for this is simple - if we are going to suffer disruption from construction, we want to get it over with. (0257, 0268-M –4)

Public Comment: I am in favor of going directly to rail rather than a BRT-to-rail option. I believe the disruption of service required to transition from BRT to rail will be detrimental to users of public transportation. (0273, 0273-L –1)

Public Comment: Rail now will avoid the problem of phased implementation. If we have phased implementation, one station will have to be the end of the line. If it's Tysons West, as has been mentioned, the DEIS calls for using much of the available land in that area for highway ramps, parking garages and drop-off areas. This land will be forever lost to smart growth development. I have heard proposals that Wiehle Avenue be the end of the line. It would face similar problems. The best solution is to go to rail immediately and avoid these impacts. (0144, 0144-T –7)

Public Comment: I wish to make a point, as far as stating that I believe that you should do the rail system now. I don't believe it will work or be beneficial to put in a bus system- the BRT system. The added expense that's needed, that causes the system to be developed, but it isn't going to have to be dropped as you finally do put in the Metrorail will be expensive. (0081, 0285-T –1)

Public Comment: Rail only- opponents of transit always argue that transfers inhibit use: don't force transfers at Falls Church! (as does any bus scheme). (0073, 0073-CC-1)

Public Comment: Rail only option, please. Interconnection with existing Metrorail system will provide seamless travel in the corridor. (0062, 0062-CC-1)

Public Comment: I most prefer Metrorail because of the possibility of an integrated system without the appearance of switching transportation modes en route. (0076, 0076-CC-3)

Public Comment: Building metrorail to Dulles Airport and beyond now completes the long-planned vision of the multimodal facility in the Dulles Corridor, using the median of the Dulles Access Road. The Dulles rail extension is the only alternative that can effectively serve Tysons Corner and provide a seamless extension of metrorail all the way from the terminus in Loudoun County through Dulles International Airport to downtown Washington, D.C. (0154, 0182-T –3)

Public Comment: Support rail in the Dulles Corridor; support a seamless system in the corridor although this may lead to two Orange Lines in the future - one to the airport and one along I-66 to Centreville and points west. Then what? (0086, 0086-CC-1)

Public Comment: I strongly support the Metrorail option in the Dulles Corridor because, number one, it serves -- it better serves the Tysons Corner area; number two, it offers seamless service connecting to the existing Metro system at West Falls Church for passengers traveling to the region's core; and number three, it offers greater capacity and will carry more passengers to ease -- better ease congestion in the corridor. (0071, 0215-T –2)

Public Comment: It [Metrorail] is the only alternative that can effectively serve Tysons Corner and provide a seamless extension of the Metrorail system all the way from a terminus in Loudoun County, through Dulles International Airport to downtown Washington, D.C. (0154, 0225-M –8)

Public Comment: Among the things that influenced my thinking and that are found in the DEIS as well are the following: One, the system that we build needs to be seamless with the Metro system. Rail is the only alternative that does that. A change of modes, meaning a change from bus to rail, within the system will lose ridership. Dulles Airport needs to be on the Metro system for the benefit of departing and arriving passengers. (0144, 0144-T –3)

Public Comment: I have listened to all the testimony at the three hearings that you have conducted. By far the most frequently expressed opinion is that we should build seamless rail now all the way out the corridor. This is the opinion that I share after 12 years experience working on these issues. (0144, 0261-T –1)

Public Comment: The Metropolitan Washington Council AFL-CIO believes that a Metrorail extension in the Dulles Corridor makes more sense than the other alternatives. It will increase transit trips by a much higher percentage than any other alternative, and thereby alleviate more traffic congestion than any other alternative in the corridor. A seamless extension of the metrorail system will not require additional transfers which drives riders away. (0186, 0186-T –1)

Public Comment: Dulles International Airport serves international and national passengers and persons with disabilities are among them. A rail option would make that more accessible. (0157, 0157-T –3)

Public Comment: I am a United Airlines flight attendant. I live in Falls Church City and fly out of Dulles Airport. I am very much in favor of having a Dulles corridor rail system. Since I travel back and forth at least once a week, sometimes twice, it would be so convenient for me to board at West Falls Church and arrive at Dulles without having to fight the traffic and parking before getting to work. (0234, 0234-L –1)

Public Comment: The metrorail project can be stopped at Tysons, which concerns us greatly. We think we need a regional system, one that goes at least to Dulles Airport and beyond. (0138, 0138-T –5)

Public Comment: Having seen the growth come here, I'm not at all against growth. To the contrary, I think growth is a natural part of life. Unfortunately, I believe our transit options have not kept up with the growth that we have had here, and I do believe, in my heart, that extending Metrorail all the way to Dulles Airport, and having a large unified system with downtown Metrorail is a long overdue proposal. I feel that it should be constructed, because I believe it will not only help people in transportation issues, but it will help environmentally, as well. (0036, 0275-T –1)

Public Comment: As a region, it is very important that we complete the Dulles connection and have all three of our area's great airports accessible by rail. If hosting the 2012 Olympic games can serve as a catalyst to make that happen, the Chesapeake Region 2012 Coalition is all for it, and we promise to do all we can to bring home the gold. (0153, 0153-T –4)

Public Comment: I support extension of rail to Dulles Airport at the earliest possible time. (0125, 0125-E –1)

Public Comment: My family has lived here in northern Virginia for eight generations. In my life I have seen much of the growth occur. The construction of Metro rail to Dulles airport is long overdue. I feel that Metro rail should be fully built…first. (0036, 0036-CC-1)

Public Comment: We need effective mass transit, Metro rail to Dulles airport is part of that solution. (0036, 0036-CC-3)

Public Comment: I just want to "go on record" as saying that the Dulles Metro Station is a great idea. Please build Metro all the way to Dulles. We may be the only major metropolitan area in the world without a train stop at our biggest, busiest airport. (0108, 0108-E –1)

Public Comment: #2) The train should go directly into the airport the way Reagan National does. People should not have to change to a bus with all their luggage, which requires waiting and getting on and off 2 systems. This extra hassle will cost riders who will take taxis or other means. The direct connection to Reagan National airport is excellent and works so smooth, that it should be copied with Dulles. (0110, 0110-E –2)

Public Comment: Dulles Airport is the crown jewel of our region. Its role as Washington's premier and international airport is secure. The globe's most important capitol deserves first class transit like Metrorail to ensure public access to its air terminal. (0175, 0202-L –4)

Public Comment: The Airports Authority is willing to donate the median strip of the Dulles access road, but the Airports Authority is looking for rail to be extended to Dulles airport. This has not been mentioned yet, and I think this is a very important point. (0144, 0144-T –8)

Public Comment: Dulles Airport is the crown jewel of our region. Its role as Washington's premier and international airport is secure. The globe's most important capital deserves first-class transit like metrorail to ensure public access to its air terminal. It is time the Dulles Corridor takes its rightful place among the preeminent thoroughfares of the world. It is time for metrorail to Dulles. (0175, 0175-T –7)

Public Comment: The members of Board of Directors of LEADER are committed to putting their resources and their position in this region on the line to make Dulles Rail a reality. The only thing they ask in return is that delays in this project be minimized and that the ultimate product serves the most people possible. (0154, 0225-M –4)

Public Comment: When one thinks about future growth in the Dulles Corridor, realizing that over the next 20 years volume on the already congested Dulles Toll road could double, and reflecting on how long it has taken for this project to reach this stage, the urgency of moving to rail as quickly as possible becomes clear. If we are to maintain the vibrancy of Northern Virginia's economy, we must stay ahead of the traffic congestion curve. The only way to do that is to build Dulles Rail now! Any delays in building rail now will only drive up the cost of the project, further promote congestion, and deprive commuters of the only real long-term solution to the region's traffic and environmental problems. (0154, 0225-M –5)

Public Comment: My feelings are simple: build it sooner rather than later…spend money on rail that will truly help with traffic for many years to come not on half a solution that will postpone the problem…put in stations at regular intervals. that will serve the largest populations, not where they are convenient to build. (0009, 0009-E –2)

Public Comment: PLEASE build this project as soon as possible. The better integrated this project is to the current Metro system, the better. We need to integrate Tysons/Dulles and downtown Washington, DC as soon as possible for business, the environment and to improve our quality of life. (0017, 0017-E –2)

Public Comment: The Herndon Dulles Chamber of Commerce, representing over 700 businesses and/or individuals in the Dulles Corridor, strongly supports the implementation of Rail to Dulles and to Loudoun County (Metrorail Alternative) as early as possible. (0027, 0027-L –1)

Public Comment: I support building rail to Tysons, Dulles, and Eastern Loudoun as soon as possible to help relieve traffic congestion, to provide an option to driving and to stimulate Smart Growth in the Dulles Corridor. Please build this project as soon as possible. (0016, 0016-E –1) (0017, 0017-E –1) (0018, 0018-E –1) (0019, 0019-E –1) (0022, 0022-E –1) (0023, 0023-E –1) (0024, 0024-E –1) (0025, 0025-E –1) (0026, 0026-E –1) (0097, 0097-E –1) (0099, 0099-E –1) (0100, 0100-E –1) (0101, 0101-E –1) (0102, 0102-E –1) (0103, 0103-E –1) (0104, 0104-E –1) (0105, 0105-E –1) (0106, 0106-E –1) (0107, 0107-E –1)

Public Comment: I am an enthusiastic supporter of Metrorail and I seriously encourage the decision-makers to implement Metrorail to Dulles as soon as possible. (0034, 0034-CC-1)

Public Comment: Please go with full rail immediately! (0068, 0068-CC-1)

Public Comment: Support starting the metro rail alternative, now (before the Olympics arrive - !) (hopefully this aids that bid) (0046, 0046-CC-1)

Public Comment: I support the rail-only option and feel the schedule should be accelerated if possible. The traffic congestion in this area will only get worse with time and the longer this project is delayed the more detrimental effect it will have in this region's economy. (0091, 0091-CC-1)

Public Comment: The American Lung Association of Virginia is in support of moving forward as quickly as possible with the development of rail in the Dulles Corridor. The American Lung Association of Virginia believes this option has the greatest potential to improve the quality of the air in the region. (0198, 0198-L –1)

Public Comment: I strongly support the introduction of rapid transit in the Dulles Corridor. I believe that construction should begin as soon as possible, allowing for the start of rail service by no later than 2010. This is most important because, number one, residential and business development have increased in the corridor. Washington Dulles International Airport passengers and employment have also increased, and last but not least, traffic congestion in the corridor has increased rather dramatically as we have -- most of us probably see day in, day out. (0071, 0215-T –1)

Public Comment: The Chesapeake Region 2012 Coalition supports rail to Dulles completed by 2012 or sooner. The existence of rapid rail transit to Dulles is in fact an important component of our mass transit public transportation focus Olympics and para-Olympics games bid. (0153, 0153-T –1)

Public Comment: Succinctly stated, the board of directors of LEADER favors the alternatives outlined in the Draft Environmental Impact Statement that will deliver the maximum level of metrorail service in the corridor as quickly as possible. (0154, 0182-T –1) (0154, 0154-T –1) (0154, 0225-M –1)

Public Comment: As a property owner in Fairfax and Loudoun Counties, I support the Dulles Corridor Rapid Transit Project. I encourage taking steps to expedite the development of the project through Tysons Corner, Reston, Herndon, Dulles Airport and into Loudoun County. I support maximizing the efficiency of the project by including the maximum number of stops/stations along the route. I think it is critical that each stop/station have maximum accessibility to encourage maximum use. (0095, 0095-CC-1)

Public Comment: Supports the extension of Metrorail to Dulles Airport. (0502, 2-01)

Public Comment: Supports building Metrorail to Tysons Corner, Dulles Airport, and Eastern Loudoun County to help relieve traffic congestion, to provide an option for driving, and to stimulate Smart Growth in the Dulles Corridor. Project should be built as soon as possible.(0503, 2-01)

Public Comment: In favor of a rapid rail system through Tysons Corner, however, it must be put underground. (0504, 2-01)

Public Comment: Supports building Metrorail to Tysons Corner, Dulles Airport, and Eastern Loudoun County to help relieve traffic congestion, to provide an option for driving, and to stimulate Smart Growth in the Dulles Corridor. Project should be built as soon as possible. (0505, 2-01)

Public Comment: Supports Metrorail.(0506, 2-01)

Public Comment: Supports Metrorail. (0507, 2-02)

Public Comment: Supports the Metrorail Alternative over the BRT Alternative. (0509, 2-01)

Public Comment: Supports and eagerly awaits the addition of rapid transit to provide access in the Dulles Corridor. Favors the alternative that would bring Metrorail through Tysons Corner, to the Dulles Corridor, and Loudoun County in the least amount of time. (0157, 2-04)

Public Comment: Supports Metrorail to Tysons Corner. (0511, 2-01)

Public Comment: The statement goes on to say the coalition supports rail now. We will work with the region's elected leadership to bring rail to the Dulles corridor by 2010, sooner if feasible. (0131, 0163-T – 3)

Public Comment: Rail only- opponents of transit always argue that transfers inhibit use: don't force transfers at Falls Church! (as does any bus scheme). (0073, 0073-CC-1)

Public Comment: I am here tonight in support of the metrorail as the alternate foundation of the Dulles Corridor Rapid Transit. (0250, 0253-T –1)

Public Comment: On behalf of Clover Sunrise Limited Partnership, owner of two commercial properties along the Dulles Airport Access Road corridor identified as Tax Map 17-3 ((8)) 5A and 5B, I would like to voice my support for the Metrorail alternative. I believe Metrorail is the best method for increasing transit ridership in the corridor. Bus Rapid Transit (BRT) or a phased BRT/Metrorail option are not suitable options due to the necessity for transfers and the projected ridership. We urge your implementation of the Metrorail option. (0413, 0472-L –1)

> ***Response:*** *Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to the Project Team and was considered by decision-makers in the selection of the Locally Preferred Alternative. The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. Alignments T1, T4 and T9 were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Concerns of Tysons Self-Storage

Public Comment: Each of the BRT/Metrorail and Phased Implementation alternatives for Tysons Corner (T1, TT6, T9, and T4) includes the construction of an aerial bridge to convey buses from the DAAR to the proposed Tysons West Station and associated parking garage. The DEIS indicates that this bridge would be part of a 2,200-foot highway to provide BRT buses direct access to the DAAR without the need to enter traffic along Route 7 (possibly to avoid the surface transportation impacts of the adjacent 2,000 vehicle parking structure). The DEIS further indicates that the bridge would begin southwest of the DAAR across the adjacent automobile dealership property and proceed northeast across the Property in the area of the existing northeast entrance to the Tysons Self Storage facility before lowering BRT buses into the dedicated lanes of the DAAR. Our engineers have reviewed the DEIS and related exhibits and concluded that a bridge abutment would be necessary to support the bridge as it rises over and across the eastbound lanes of the DAAR. According to these same engineers, the bridge abutment most likely would need to be constructed on or near the northeast entrance to the Property to be most effective. The construction of an abutment to support the aerial bridge would disrupt internal circulation and eliminate the northeast entrance to the storage facility, which is the only one available to moving trucks and similar vehicles, the Fairfax County-owned sanitary sewer pumping station discussed below) and fire trucks. Without this northeast entrance, patrons of Tysons Self Storage would no longer be able to access their units via truck or automobile, which effectively would force Tysons Self Storage to cease operations. (0135, 0391-L –4)

Public Comment: In addition to the access concerns presented by the proposed BRT bridge, other direct challenges result from this bridge design. These challenges include the possible relocation of numerous telecommunications, storm water and sanitary sewer facilities and easements, as well as the need for construction and other easements to permit assembly of the bridge facilities. At this point, as best we can tell, the DEIS has not addressed these issues, particularly the location to which the numerous sanitary sewer, storm water and other public works infrastructure would be relocated. (0135, 0391-L –11)

Public Comment: Specifically, the TMS Property currently is burdened by some 16 public utility easements, including the location of a sanitary sewer pumping station and forced main, as well as

ingress/egress easements needed to maintain the public facilities. The location and size of these easements are shown on Exhibit D. All of these easements and related public infrastructure are directly in the path of the proposed aerial bridge and bridge abutment. There is nowhere on the TMS Property to which to relocate this tangled web of cables, pipes and similar infrastructure, either permanently or temporarily, to accommodate construction of the bridge and supporting abutment. The Property is fully developed as a storage business with seven (7) drive aisles no more that 20 feet wide separating the storage units and a perimeter driveway roughly 23 feet wide. Several of these drive aisles already have storm water management pipes that drain runoff from the west onto the Property, which is the low point for this area of Tysons Corner. Relocation of any of these utility lines and easements, including the ingress/egress easements, In order to accommodate a bus bridge would be very expensive, and necessarily would include a full displacement of Tysons Self Storage. (0135, 0391-L –12)

Public Comment: In our view, WMATA and the Project Team have not sufficiently explored or explained the impacts of the proposed BRT bridge on the existing utility easements on the TMS Property. Indeed, our communications with the Fairfax county Department of Public Works and Environmental Services have indicated the County would find the proposed BRT Bridge alignment and location unacceptable. Accordingly, the Project Team should consider alternative designs that avoid the need to disrupt these utility lines and the taking of the TMS Property. (0135, 0391-L –13)

Public Comment: How did/does the Project Team plan to address the substantial numbers of critical utility lines and associated easements located on the TMS Property: through relocation or simply ignoring them? (0135, 0391-L –21)

Public Comment: Has the Project Team determined the extent of the actual area needed for the ground and aerial easements, as well as for construction clearing, grading and staging? If so, what are they? (0135, 0391-L –22)

Public Comment: As is evident from the map attached as Exhibit A, the Property's single access route to a public street is via a fire lane that begins at Route 7 and runs through the middle of Koons Toyota and along the edge of the body shop for the Templeton Oldsmobile to the south. Tysons Self Storage does not own this access road but is the beneficiary of ingress/egress easements from Toyota Motor Sales USA. Inc., the owner of the Koons Toyota property (the "Toyota Property"), and Templeton and Templeton Partnership, the owner of the Templeton Oldsmobile property (the "Templeton Property"). A copy of the ingress/egress easement is attached as Exhibit C. Thus, in order to access Tysons Self Storage, patrons must cross the Toyota Property and the Templeton Property; there is no other ingress/egress available. From the Templeton Property, the storage facility property has two entrances. The entrance in the southwest corner can accommodate only automobiles, small trucks and SUVs due to the narrow entranceways and passages. The northeast entrance is the only area able to accommodate storage trucks, moving vans and similar large vehicles delivering or picking up stored materials. Because of the narrow drive aisles between the rows of storage units, the northeast entrance also facilitates internal circulation within the Property in conjunction with the perimeter driveway. Construction of transit-related facilities or any other activity that has the effect of shutting down or restricting the use of either the perimeter driveway or the northeast entrance will prevent all types of vehicles - cars and trucks alike - from circulating through the Property and accessing the storage units. (0135, 0391-L –3)

Public Comment: Based on our analysis of the Property and the information contained in the DEIS and associated Technical Reports, we believe the BRT bridge structure represents and unwise and unnecessary physical invasion and full taking of the Property. Moreover, even though the DEIS suggests that the bridge infrastructure would be interim in nature under a Phased Implementation approach and could be removed entirely once BRT service is replaced with rail in future years, we highly doubt that the bridge and related facilities ever would be dismantled. More importantly, though, the impact of the bridge on TMS and the Property is permanent once construction of the bridge commences; displacement of Tysons Self Storage is not an interim condition. (0135, 0391-L –5)

Public Comment: Further, the acquisition of the adjacent Templeton Property, on which a parking structure and stormwater management facility would be constructed under the DEIS, would terminate the

access easement rights available to TMS. In other words, the acquisition of the Templeton Property would land lock the TMS Property, effectively terminating the Tysons Self Storage business. (0135, 0391-L –7)

Public Comment: Concerned that a proposed aerial bridge from the proposed Tysons West Station to the DAAR to serve BRT buses in the Phased Implementation and BRT/Metrorail alternatives would restrict access and have a substantial economic impact to the Tysons Self Storage facility and TMS. (0135, 2-01)

Public Comment: Concerned that construction of the subject BRT bridge as part of the Phased Implementation Alternative would result in a complete taking of the TMS property. Believes that it would be nearly impossible to construct the BRT bridge that would not impact both the circulation and the operation of the Tysons Self Storage buildings. (0135, 2-02)

Public Comment: Refers to page 440 of the *Public Hearings Report*, which indicates that only the TMS property (Parcel 11) would be affected by the surface and aerial easements for the BRT bridge. This precludes relocating any portion of those easements to adjoining properties in a manner that would permit the TMS property to continue operating Tysons Self Storage as a going concern. Questions how the Project Team can retain flexibility to not restrict access to the TMS property while, at the same time, preclude relocation of the easements to adjoining properties. States that there is no flexibility if no other options exist. (0135, 2-03)

Public Comment: Again requests confirmation that no bridge would be constructed across the TMS property if the Metrorail Alternative is selected as Locally Preferred Alternative. Stated that the response on page 487 of the *Public Hearings Report* did not answer his question. (0135, 2-04)

Public Comment: Our primary concerns, though, relate to the devastating impact of a potential aerial bridge that would connect the Tysons West transit station to the DAAR as part of several BRT and Metrorail alternatives. Attached as Exhibit B is a graphic included in the DEIS showing the location of the proposed road and BRT bridge. Construction of the proposed BRT bus bridge would displace Tysons Self Storage and result in an complete taking of the TMS Property. To avoid such a devastating effect, we contend that the locally-preferred alternative for the Tysons West station should be a design that minimizes impacts on existing businesses, is cost effective and provides the greatest potential for transit-oriented redevelopment. (0135, 0391-L –1)

Public Comment: Further, we suggest that, if a connection to the DAAR must be constructed to serve BRT/Metrorail facility at Tysons West, consideration be given to locating these facilities offsite in a manner that does not affect the use, operation and viability of Tysons Self Storage and the TMS Property. (0135, 0391-L –9)

Public Comment: The DEIS indicates, and WMATA officials have stated, that the proposed road and aerial bridge from the Tysons West Station parking garage to the DAAR is only provided under the BRT/Metrorail and Phased Implementation alternatives. Accordingly, our understanding is that the bridge would not be constructed under the Metrorail alternative. We would appreciate confirmation of this since some of the drawings in the General Plans leave this question open. (0135, 0391-L –19)

Public Comment: We also have concerns that the DEIS does not explicitly address whether the proposed bus bridge is to be constructed to serve the parking structure if the rail-only option is selected. As noted below, we request that WMATA clarify the scenarios under which the bus bridge is to be constructed as part of the "intermodal" facilities planned for the rail-only Tysons West station. (0135, 0391-L –10)

Public Comment: Generally notes that many of the comments addressed in the *Public Hearings Report* received only cursory responses as part of the Project Team's analysis and important issues remain open-ended and unresolved. Believes that the Project Team should have responded to his comments in a more comprehensive fashion. As an example, the commenter states that the Project Team defers an

investigation of the relocation of the BRT bridge to the Preliminary Engineering stage, well after the Locally Preferred Alternative is selected. (0135, 2-06)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS. Therefore, the Project is no longer affecting the TMS Property nor Tysons Self-Storage.*

Need for Passenger Amenities

Public Comment: The most frequent outbound destination for riders along the new rail line will surely be Dulles Airport. In light of this, the following measures are necessary: Install overhead luggage racks in the rail cars that will be operated on the new line. Today, a passenger with luggage on a crowded train often hinders the movement of other passengers. You should assume that rail will be popular with Dulles flyers and plan accordingly now. (0290, 0290-L –4)

> ***Response:*** *The most frequent destination of the selected LPA, the Metrorail Extension, will be Tysons Corner. Metrorail vehicle technology was described in Section 2.3 of the Draft EIS. Other than the Dulles Airport Station itself, it is not anticipated that Metrorail stations or trains on the Orange Line, or elsewhere on the Metrorail system, will incorporate facilities specifically intended to accommodate airport passengers with luggage. However, station facilities already in place, such as the accessible fare gates and oversized elevators, do provide some accommodation for passengers with luggage.*
>
> *The Dulles Airport Station design is presented in the final General Plans (Final EIS Volume V). This station will have a direct underground connection to the main terminal, and will have a special wide platform to provide plenty of space for passengers with luggage. Space has been allocated in this station for airport information, additional accessible fare gates, and luggage cart rental and return immediately adjacent to the station entrance.*

Potential Greenway Impacts

Public Comment: The impact of this mass transit project on the greenway goes far beyond the simple concept of using existing greenway median for rail lines. The construction impact, relocation of travel lanes, operational impacts, use of extensive portions of greenway land for storm water management ponds, transfer power switching stations, tie breaker stations, rail control rooms, above-grade pedestrian walkways, utilities such as electrical, water, telephone and fiber optic cable, are a major source of concern for the Greenway. (0257, 0257-T –1) (0257, 0268-M –1)

Public Comment: Consequently, although the greenway recognizes its commitment to make existing median available for mass transit for this project, nothing beyond the use of the existing median can be taken for granted. (0257, 0257-T –2) (0257, 0268-M –2)

Public Comment: Storm water management ponds, tie breaker stations, transfer power switching stations and the like, should be relocated on land acquired by the project sponsors outside the Greenway right of way. If the redesigned project cannot eliminate all these impacts other than the use of the existing median, the Greenway as a private property owner would expect to be compensated for any use of its land. (0257, 0257-T –5)

Public Comment: Do not be held hostage by TRIP. It was required of the Greenway when they received their franchise that they provide for Metrorail in the median. This commitment must be upheld. (0013, 2-08)

Response: *The Comprehensive Agreement between TRIP II and the State Corporation Commission of the Commonwealth of Virginia requires that TRIP II dedicate the median of the Dulles Greenway to rail. As stated by the Project Team in a separate meeting referenced above, this dedication of the median of the Dulles Greenway will have attendant effects, some of which TRIP II must bear. These effects will be considered as DRPT continues its coordination with TRIP II on the Project's overall effects to this private toll road and on the development of a comprehensive agreement for the Project. The Project Team can clearly respond that the Project cannot be solely within the existing median and therefore will require the relocation of Greenway lanes at the Route 772 Station, Route 606 Station, and the junction of the revenue tracks with the yard lead tracks.*

During preliminary engineering of the Full LPA, a Metrorail Extension, a master agreement will be negotiated between the DRPT and TRIP II, with WMATA as a signatory. These agreements will specify the rights and responsibilities of the various parties concerning the parameters of building, operation, and maintenance of the Metrorail Extension.

The locations shown in the final General Plans for stormwater management ponds are preliminary and will be further evaluated as the engineering proceeds to determine their final locations. Efforts will be made to minimize impacts to the adjacent areas in terms of their location and to provide safe access points for all facilities in conformance with applicable design criteria. The ancillary facilities of Traction Power Substations and Tie Breaker Stations were relocated outside of the Dulles Greenway right-of-way onto private land or Dulles Airport property.

Need to Eliminate Beltway Clearance Considerations

Public Comment: The need for added Metrorail investment to provide more Beltway clearance is not valid (identified as continuing coordination in Section 7.4.8). Eliminate this extra, unnecessary cost. It is agreed there is no room to widen the Beltway. It is not an economically viable project. Do not provide for it unless VDOT fund the added cost, or unless VDOT agrees to restore the I-66 median for transit that they improperly took a few years ago despite official protest. (0013, 2-07) ***Response:*** *The Metrorail alignment will be higher in its crossing of the Capital Beltway in anticipation of a future three-level reconfiguration of the Route 123 interchange.*

Comparison of Highway Widening to Mass Transit

Public Comment: Questions the cost comparison of widening the Dulles Toll Road to building the Metrorail Alternative. Concerned about the expense of acquiring buildings and land for Metrorail. Questions whether the Dulles Toll Road could be widened to the equivalent capacity anticipated from the Metrorail Alternative without raising tolls? (0464, 2-02)

Response: *The Project Team developed and evaluated Build Alternatives for the Dulles Corridor Rapid Transit Project that were transit improvements. The widening of the Dulles Toll Road would be considered a roadway project, and has been therefore beyond the scope of this transit project. In additional, there is little, if any, available land on either side of the Dulles Toll Road to accommodate an additional lane of traffic or enough lanes to carry the capacity of the Metrorail Alternative.*

Need to Resolve Outstanding Issues

Public Comment: Concerned with the number of outstanding issues still remaining in the corridor. A process is needed to resolve these issues and coordinate with stakeholders and agencies throughout the design process. The Board of Supervisors should be involved in the design process. (0387, 2-01)

Response: *The Project Team will continue to coordinate with VDOT, MWAA, and the counties to resolve any outstanding issues during preliminary engineering. The Fairfax County staff has participated in the Project via the Technical Working Group of agencies and jurisdictions, via the public hearings on the Draft EIS and Supplemental Draft EIS and via the post-hearing conference on three Project facilities. The Project Team has briefed the Transportation Committee of the Fairfax County Board of Supervisors and participated in its hearings on Comprehensive Plan amendments and a transportation improvement district.*

Overcrowding Issues

Public Comment: How will all of the people who take DartRail into West Falls Church fit onto the overcrowded Orange Line trains? (0489 2-01)

Response: *To meet market demand, WMATA has a Capital Improvement Plan (November 2002) for Metrorail system capacity and service reliability. The CIP will increase train consists from six to eight cars, reconfigure the Blue and other Lines, and change the headways of all Lines, other than the Red Line, from six to seven minutes. As a result, the number of cars through the Rosslyn portal will be increasing. In 2004, the number of inbound Orange Line cars through the Rosslyn portal during the peak hour is 120. In 2011, with the opening of the Wiehle Avenue Extension, the number of cars, including those of the new Extension, will increase to 140 cars in order to satisfy higher ridership due to growth and to the Extension. The 20 additional cars will be procured by the WMATA Metro Matters program and by the Project.*

As described in Section 6.1 of the Final EIS, WMATA measures train loading by passengers per car (PPC) and by the number of passengers 'passed-by' on the platform, i.e., passengers unable to board a crowded train. WMATA has an objective of 120 PPC during the peak hour. WMATA operation planners estimate that the Orange Line PPC is currently 100 PPC, at the point where the trains have maximum loading - between Courthouse and Rosslyn. Table 6.1-12 of the Final EIS indicates that this loading will increase to 107 to 124 PPC in 2011 with the opening of the Wiehle Avenue Extension. (The maximum load point moves between Rosslyn and Foggy Bottom). Thus, the above addition of 20 cars will not match the higher ridership, but the train loading will be near the WMATA objective of 120 PPC. Beyond 2011, WMATA will continue to procure new cars to meet the market demand; thus, more and more trains will be eight-car consists.

Compliance with Americans with Disabilities Act

Public Comment: What type of vehicle will be used and how will access for persons with disabilities be provided and maintained? (0157, 2-02)

Public Comment: The selected alternative must be fully accessible to and usable by persons with all types of disabilities. All new transit facilities and vehicles should be accessible in accordance with federal statutes under the Americans With Disabilities Act of 1990. (0157, 2-03)

Response: *The selected LPA is the Metrorail Extension. The vehicle will be a Metrorail car. All Project facilities and Metrorail cars will comply with ADA Accessibility Guidelines.*

Park-and-Ride Capacity and Access at Stations

Public Comment: Concerned about parking at Tysons West, Route 606 Station, and especially the lack of parking at the Route 772 Station. Coordination efforts should also include Fairfax County. (0141, 2-01)

Public Comment: Requests that the Project Team look at the unconstrained parking demand at Tysons West. The commenter requested this information in his public comments, but it was not included in the *Public Hearings Report*. Also need to analyze unconstrained parking at other stations. (0387, 2-05)

Public Comment: States that the project has failed to provide sufficient parking at new stations and makes wild assumptions regarding bicyclists and walkers. (0112,2-16)

Public Comment: Desires additional surface connections to/from the stations. They would obviate any limitation imposed by the available parking at the stations. (0255, 2-04)

Public Comment: The parking issue was never confronted. Parking shown is inadequate to support ridership projections. (0162, 2-10)

Public Comment: I do have 2 major concerns: 1. Parking and Access: Will I have to pay to use the Dulles Toll Road to get to the new Dulles Metro stop? Will there be enough parking? Lots of folk who would normally use Vienna, like me, would turn to the Dulles stop. The WMATA should have a good idea of what the rider numbers are and how they "normally" change over time before plans are laid and carried out. (0108, 0108-E –2)

Public Comment: Adequate multistory parking facilities will be needed at each facility station - Wiehle, Reston, Monroe, and CIT Route 28. (0043, 0043-CC-4)

Public Comment: The system is going to be sharply limited by the amount of parking you put in. I'm personally familiar with the scrambles that WMATA has been making to get parking on the Orange Line, simply to get more people on the system. (0255, 0255-T –6)

Public Comment: Take a more detailed look at parking at all stations, particularly the end stations, to determine if the parking needs and particularly the Reston Town Center and at the other end of 772 are sufficient to meet future needs. (0244, 0244-T –7)

Public Comment: It is essential that there is a sufficient parking. It is impossible to find parking at the Vienna & Dunn Loring Metro Stations. Transit ridership would increase if there were sufficient parking. (0039, 0039-CC-2)

Public Comment: Adequate metro/rail station parking garages needed! (0046, 0046-CC-3)

Public Comment: We note, however, that the proposed 2000-car parking structure proposed for the Tysons West station under every rail option, represents a self-defeating aspect to the transit plans in certain respects. It invites additional substantial traffic to the intersection of Tyco Road and Route 7, which already has a level of service F during both the AM and peak periods, while creating a physical barrier to pedestrian-friendly, transit-oriented redevelopment. (0135, 0135-T –3)

Public Comment: We request that parking demand be projected into the future at the various transit nodes along with a financing and land use plan, based on the experience in the I-66 corridor. (0162, 0162-M –22)

Public Comment: Why are there only 13,000 or so parking spaces planned for the entire line, but you estimate 33,000 new riders? How can you provide sufficient ridership without enough parking? (0112, 0382-L –9)

Public Comment: Based on the limited information available, it's clear that the surface facilities proposed for nearly all of the stations are inadequate to meet the projected demand. It seems unbelievably foolish to spend up to $3.3 billion on a transit system only to have its potential artificially constrained due to a shortage of parking and bus facilities which are comparatively inexpensive. If we learned anything in the planning of the first 103 miles, it was the realization that adequate parking, especially in the suburbs, is essential if the transit system is to be effective in attracting riders. Reassess the station programs needed to accommodate the projected demand and provide the facilities necessary. (0387, 0387-L –10)

Public Comment: I have to take and pick up my daughter at the West Falls Church Metro Station each

day this summer because there is not one parking space available due to the heavy use of the present Metro system. I certainly hope ample parking will be provided in the final plans and that the stations will be designed to be attractive and convenient. (0394, 0394-L –2)

Public Comment: There is a major need for adequate multi-deck parking facilities at stations that would serve either the BRT or rail options. I am surprised that the Draft EIS does not provide for such facilities as part of each station. The Metro Rail system is a classic example of inadequate parking being provided at various stations. This, in turn, has meant the system's management has played catch up over the years to build the parking facilities that could have been built years ago. While some might argue initial ridership projections did not support larger parking facilities at Metro Rail stations, that should not be the case for the Dulles Corridor project. Metro Rail's experience and your rider ship projections should be evidence enough that adequate parking facilities should be part of the initial construction. (0401, 0401- L-4)

Public Comment: Tysons West Station - Metrorail & BRT Options. As stated earlier, the amount of parking provided at this stations seems to be significantly less than the projected parking demand. Why? It's foolish to constrain the ridership potential of the transit system simply because insufficient parking is provided. The parking supply should be equal to the projected parking demand at a minimum and based on WMATA's experience at other suburban stations, provision should be included in the plan for additional future expansion. (0387, 0387-L –42)

Public Comment: We have banked a lot of density credits in ground level parking and only a few in trees. Build parking structure, save the trees. (0170, 0170-T –15)
Public Comment: County and Reston Center for Government and Industry Architectural Review priorities should be to maintain or improve the visual quality of the station areas. We have banked a lot of density credits in ground level parking and only a few in trees. Build parking structures, save the trees. (0210, 0210-M –9)

Public Comment: Adequate structured parking has been a problem in some of the less planned stations. Let's not let it be a problem here [in Reston]. (088, 0172-T –7)

Public Comment: Adequate multi-story parking facilities will be needed at each Fairfax and probably Loudoun facility, such as Wiehle, Reston, Monroe, CIT, Route 28. Without those, people won't be able to get to it. 0043, 0276-T –4)

Public Comment: Adequate structured parking must be planned at each station from the very beginning of the rail transit extension. All affected jurisdictions must work closely with VDRPT, VDOT and WMATA to plan effectively for adequate structured parking opportunities at all transit stations. Parking needs will vary from station to station. The Reston Town Center station and the Route 772 station in Loudoun County may serve primarily as destination stations with limited opportunity for long-term commuter parking. Nevertheless, the parking needs of these station areas must be given special attention. The language in the Loudoun County Comprehensive Plan that specifically prohibits transit related parking at the Route 772 station even though this station is the system's terminal station in Loudoun County particularly concerns me. While it is understandable that commercial, residential and public uses should be emphasized at this station, the total prohibition of transit-related structured parking at this location will prove detrimental to reasonable access to the transit system, and result in serious "bootleg" parking violations in the neighborhoods surrounding the station. (0088, 0211-M –14)

Public Comment: Finally, we would like to see a realistic estimate of the increase in parking demand that will be associated with implementation of BRT and/or expansion of rail service [at West Falls Church]. (0145, 0452-E –10)

Public Comment: Parking At Route 772 and Reston Parkway Stations - Although I assume that it was an oversight, the Draft EIS showed no significant amount of parking at either the Route 772 or the Reston Parkway stations [for T6]. It is inconceivable to me that these two major stations in the Dulles Corridor would not require at least 2,000 parking spaces each, particularly given the rate at which Metro is adding

new parking garages to its current stations. And whether it is due to an oversight or not, this omission should be corrected prior to the next step in this process. (0071, 0214-M –4)

Public Comment: We urge both affected jurisdictions to work closely with VDRPT and WMATA to plan effectively for adequate structured parking opportunities at all transit stations. Parking needs will vary from station to station. The Reston Town Center station and the Route 772 station in Loudoun County may serve primarily as destination stations with limited opportunity for long-term commuter parking. Nevertheless, the parking needs of these station areas must be given special attention. We are particularly concerned by the language in the Loudoun County Comprehensive Plan that specifically prohibits transit-related parking at the Route 772 station even though this station is the terminal station in Loudoun County. While we agree that commercial, residential and public uses should be emphasized at this station, we believe that the total prohibition of transit-related structured parking will prove detrimental to reasonable access to the transit system, and result in serious "bootleg" parking violations in the neighborhoods surrounding the station. (0204, 0204-M –11)

Public Comment: More Parking At Tysons West Station - As the only proposed Dulles Corridor Metrorail station east of Wiehle Avenue that would have any parking, I believe that the projected number of parking spaces at the Tysons West station (1,960) will be inadequate to meet the expected demand [for T6]. This will be the closest station with parking for a large number of people who live in the general vicinity of Tysons Corner as well as those who live north of the Dulles Airport Access Road and east of Reston. For this reason, I would suggest that at least 3,000, and perhaps 4,000 or more, would be a better number of parking spaces at this location. (0071, 0214-M –5)

Response: *Table 6.3-3 of the Final EIS describes the Project's park-and-ride program. The selected LPA is a Metrorail Extension that has the following park-and-ride capacities:*

STATION	*SPACES*	*YEAR*
Tysons West	*500*	*2011*
Wiehle Avenue	*2,300*	*2011*
Herndon Monroe	*3,500*	*2015*
Route 28	*2,000*	*2015*
Route 606	*2,750*	*2015*
Route 772	*3,300*	*2015*
Total	***14,350***	***2015***

These park-and-ride facilities are in structures, as shown in the General Plans.

The Project Team did look at unconstrained demand for parking at all stations and then adjusted this parking capacity based on site constraints, land use plans, and cost. Consultation with local government was also an integral part of the sizing of parking facilities. The estimated unconstrained demand for park-and-ride at Tysons West Station is over 2,000 spaces. The actual number of spaces planned at Tysons West is 500 spaces. A park-and-ride facility was not included at the Reston Parkway Station because the Fairfax County Comprehensive Plan discourages parking at that station, and because of space constraints.

The results of travel demand forecasting show mode of arrival for each station in the corridor. These forecasts show that there are large numbers of passengers accessing stations by walking, cycling, bus and Kiss & Ride. The higher number of trips also reflects the fact that automobiles may carry more than one passenger and that a space may be used more than once during the day. All stations will be accessible from the local street network so riders will not have to use the Dulles Toll Road to access stations. With regard to walk/bike access to stations and the number of passengers accessing stations via this mode, the demand forecasting model takes into account the quality of access paths, distance to the station, and population and employment densities. The modeling process for calculating pedestrian and bike access is based on experience in the Washington region as well as from rail projects throughout the country.

Public Comment: It's very unclear how the station facility programs were developed. The Travel Demand Forecasting technical report appears to assume a predetermined parking program without any regard to the parking demand projections presented in the appendix. The technical report appendix presents parking demand projections but no information is provided as to their derivation. The number of parking spaces proposed for each of the park & ride and kiss & ride facilities appears to bear very little relationship to the parking demand numbers included in the ridership technical report appendix. (The technical report appendix doesn't say whether these demand figures are constrained or unconstrained by the parking supply). There is slightly more information provided on the bus bay program but not enough information is provided as to how the number of routes serving a particular station relates to the number of bus bays provided. (0387, 0387-L –9)

> ***Response****: Design of the park-and-ride facilities at each station was based on an iterative process. Unconstrained demand for park-and-ride was first estimated utilizing the demand forecasting model. Given this understanding of demand, concept facility programs were developed that attempted to meet this demand. However, other considerations besides demand played a role in the program development. This included site constraints, overall cost, and local land use plans. Once initial programs and park-and-ride capacities were developed, new demand estimates were developed to reflect the fact that people driving may be able to go to another park-and-ride facility if their first choice is full. Provision of bus facilities followed the same process. Wherever space availability allowed, an attempt was made to provide a bus bay for each service to a station (for the purposes of passenger convenience). If this was not feasible, the most bays possible short of this number were provided.*

Route 28 Station

Public Comment: Questions the methodology used for determining ridership and parking requirements at the Route 28 Station. He states that the response to comment on page 322 of the *Public Hearings Report* does not quantify the component of the potential total station ridership that would originate from the North Centreville-Chantilly area. This quantification is necessary to avoid underestimating ridership requirements including the number of current Metro riders that would forego a commute to Vienna metro accounting for a shifting of existing riders between stations as well as riders new to Metro. Would like further explanation on how the Draft EIS methodology accounts for these variables. (0483, 2-01)

Public Comment: THE 28 STATION DESERVES MORE SCRUTINY. The DEIS fails to recognize that the Route 28 station would benefit commuters living in Northern Centreville and Chantilly about 5 miles from the station. As a result the DEIS may underestimate potential ridership and parking requirements. These commuters will no longer have to drive 12 miles to Vienna Metro. The FEIS should recompute ridership and parking requirements for the Route 28 station in light of usage from existing communities in Northern Centreville and Chantilly. (0197, 0197-M –2)

> ***Response****: The demand forecasting model estimates ridership at each station based on total population in the vicinity of stations and total travel times to passenger destinations. This travel time includes time spent accessing the station (which incorporates distance and speed), time spent waiting for the train or bus, the time spent on the train or bus itself, and time accessing the final destination. If the total travel time from Route 28 for potential passengers from Chantilly and northern Centreville is competitive with, or better, than the same trip from the Vienna station on the Orange Line, this will be reflected in the number of riders utilizing the Route 28 Station.*
>
> *Specifically, the demand forecasting model utilized for the Dulles Corridor Rapid Transit Project relies on a range of variables that are used to determine the number of trips that will be made on the new transit line, as well as what station will be used to access the rapid transit line. The most important variable in this range of variables is total travel time from origin to final destination.*
>
> *Travel time is calculated based on a number of factors. The travel demand forecasting model contains an electronic version of the entire transportation network in the Washington region. For*

the roadway network, a travel speed and travel time is calculated for each link in the network based on the type of roadway the link is (i.e., local street, regional arterial, limited access highway, etc.), roadway capacity, and traffic volumes. Further, the region is divided into Transportation Analysis Zones (TAZs), which are geographic units that have relatively standard populations relative to one another. The number of trips made to and from a TAZ is based on the mix of land use (residential versus commercial), the total number of jobs, and the total residential population in the TAZ. For each trip generated from a TAZ, the model analyzes a series of alternative paths to the final destination and then selects the shortest path (based on travel time) to the destination. In the first iteration of this process, trips are assigned to mode such as automobile or different modes of transit. In the second iteration rail transit trips are further broken out by mode of access and access point (mode of access includes auto, bus, bike, pedestrian. The access point is the station where the trip boards Metrorail.

This process of evaluating shortest path is done for each trip being generated from TAZs in the North Centreville-Chantilly area. This means that for those trips that will utilize the proposed transit system, the model will analyze the shortest access path to the Metrorail system. For passengers in the North Centreville-Chantilly area, this will include an analysis of accessing the Orange Line at Vienna versus alternative Dulles Line stations, including Route 28. The access point with the shortest travel time path for the trip will be selected by the model (it should be noted that the total number of trips to each station by automobile will be constrained by the parking capacity at each station). This same shortest path methodology is applied to each trip generated in the region, and has been tested and validated in previous uses of the regional model as well as on rail projects throughout the United States. For the Draft EIS, the model results for North Centreville-Chantilly show that 48% of rail trips generated from the area will go to Herndon-Monroe, 35% to Route 28, and 17% to Route 606.

Reston Parkway Station

Public Comment: Over the years many Reston organizations have endorsed “four corners access” in Reston. The commenter would like to see more work done to provide this access. Would like a see a statement leaving open the opportunity to work with Fairfax County, and would like to see more work being done. What specific changes in the currently designed station make feasible these options in a phased development program? (0141, 2-03)

Public Comment: We should locate the station at Reston Parkway in such a way that it can capitalize on all the existing real estate that the international center and the Sheraton and Plaza American and Sallie Mae represent. Thus far, we are a little bit too far away from that. (0171, 0171-T –2)

Public Comment: Requests (as originally stated on page 476) that the project team evaluate several options for providing “four corners access” to the Reston Station. (0494 2-01)

Public Comment: Provided a benefit-cost analysis to the project team, which demonstrates that the “four corners access” would yield large benefits, contrary to the response on pages 476 and 477 of the *Public Hearings Report*. (0494 2-02)

Public Comment: There are three basic options, in decreasing order of priority, for achieving "four corners access" at each of the three stations (all assuming movement of the platforms as close as possible to the bridges):

1. Access under the bridges
2. Access over the bridges
3. Access at a signalized crossing on the bridges

The sketches that follow show how each of these three basic options might be achieved at the Reston Parkway station. In each of the three options, the eastern end of the platform would be moved eastward about 300 feet or slightly more, bringing it within slightly more than 400 feet of the existing Reston

Parkway bridge. This can be done without modifying any of Metro's critical standards described above, but may require slight changes in highway standards for clearances and shoulder widths near the bridges. Exhibit 1 shows the recommended approximate new location for the Reston Parkway station platform, the two mezzanines, and the new pedestrian connections on both sides of the Reston Parkway bridge. All three of these basic options listed above would have essentially the same plan view as shown in Exhibit 1. Note that the currently planned pedestrian connections to the west mezzanine would not have to be changed for any of the three options. Exhibit 2 shows the profile view of the recommended new station configuration for Option 1, which would provide access to the station to and from the east side of Reston Parkway by way of a pedestrian walkway under the Reston Parkway bridge. Note that this option involves lowering the new track profile by about 20 feet under the existing Parkway bridge in order to provide vertical clearance under the Reston Parkway bridge above the trains for the pedestrian connection. This would require reconstruction of the center pier supports for the bridge and construction of substantial retaining walls for the depressed track section for over 1000 feet. What has been ignored in this exhibit is the need to reduce costs by balancing cuts and fills, which might require raising the track profile somewhat at both ends of this exhibit. Exhibit 3 shows the profile view of the new station configuration for both Options 2 and 3, which would raise the new track profile to make access to the east side of the Reston Parkway bridge easier if such access could be better provided at grade through a new signalized pedestrian crosswalk in the middle of the bridge, or by way of a new pedestrian overpass across the Reston Parkway bridge. Summary Option 1, involving east-side access under the Reston Parkway bridge, is the preferred option because it can provide the most convenient and direct access to the station platform, and therefore will encourage greater transit ridership. However, it is probably also the most costly because it requires lowering of the track profile to provide space above the trains for the pedestrian underpass. This will require building of long retaining walls and reconstruction of the center pier supporting the Reston Parkway bridge. Option 2, involving east-side access on a pedestrian overpass across the Reston Parkway bridge, is less desirable because it requires greater vertical movement for pedestrian access. Option 3, involving east-side access across the Reston Parkway bridge at a signalized crosswalk, is also less desirable because of the less safe and attractive pedestrian crossing, the delay it causes for pedestrian access to the station, and the modest amount of interference that a well-coordinated signal for the crosswalk would have with motor vehicle traffic. All three options should be further evaluated for each of the three Reston area stations in terms of preliminary design, costs, and pedestrian convenience and safety. The option of staging the development of the stations, so that four-corners access might be provided later through new second mezzanines, should also be evaluated for each of the three stations. (0478, 0484- E-27)

Public Comment: For almost ten years now, community leaders have been steadily and consistently advocating that direct, safe, and convenient pedestrian and bicycle access be provided to the Reston stations from all four quadrants of the Dulles Toll Road interchanges. Unfortunately, despite numerous specific proposals for how this might be achieved, no acceptable way of accomplishing this goal has been developed by the Project. As we approached the DEIS hearings, we have focused more detailed attention on the technical challenges involved, and with hearings, we have focused more detailed attention on the technical challenges involved, and with the assistance of Mr. Ik Hong, Metro's manager of extension projects, we have now developed the attached preliminary conceptual engineering recommendations for accomplishing this. (0478, 0484-E –14)

Public Comment: During the FEIS and rail PE process we need hard work on…Improved grade-separated pedestrian access to stations from all 4 quadrants of all 3 Reston area stations. (0173, 0213-M –3)

Public Comment: And, incidentally, I would certainly support the comments of others, including Joe Stowers, who indicated the need or at least a preference for providing access from all four quadrants. (0194, 0194-T –4)

Public Comment: Four quadrant station access is the optimal situation. However, since this might not be achievable initially without delaying the basic project start, station access from both sides of the corridor must be at a minimum. I would recommend that the pedestrian bridges should be wider and permit them to be used as a way of accessing not only the stations, but also serving as a dedicated way for

pedestrians to get from one side of the corridor to the other. A long time community objective. The entrances to the stations could be closed [dare I say gated?] when Metrorail is not operating, but the bridges should remain open to permit pedestrian to cross the corridor 24/7. (0208, 0208-M –2)

Public Comment: References the Washington Airports Task Force's proposal for air rights development over the Reston Parkway Station to conclude that pedestrian crossings above existing bridge levels may be preferred over lower level crossings (i.e., pedestrian underpasses). (0494 2-03)

Public Comment: Would like the following questions answered pertaining to the "four corners access."

- What is the best way of accomplishing the objective of achieving four corners access, either as part of the initial project or in a phased development plan?
- How far eastward can the station platforms be moved in order to reduce walking distances from the east side of Reston Parkway and Wiehle Avenue without modification of Metro standards and without moving the currently planned points of access?
- What is the best way of providing a pedestrian linkage below the Reston Parkway and Wiehle Avenue bridges?
- What are the approximate costs of each option if done in the most cost-effective manner?
- What specific changes in the currently proposed station designs should be made in order to make these options feasible in a phased development program? (0494 2-04)

Response: *As detailed in Chapter 2 of the Draft EIS, numerous alternatives, including alternate configurations for the Reston Parkway Station, had been studied prior to conducting the detailed evaluation of BRT and Metrorail that was presented in the Draft EIS. An alternative that would have involved shifting the Reston Parkway Station nearer to the Reston Parkway overpass and providing access to the four quadrants of the interchange was eliminated from more detailed consideration in the Draft EIS because these changes would have increased the costs and impacts of the project, without providing additional benefits over the locations evaluated in the EIS. These reasons were explained fully in the Final Alternatives Analysis Report (May 2001). Some findings are summarized below.*

The previous analysis indicated that lowering the profile of the Metrorail alignment beneath the Reston Parkway overpass would have undermined the pier footing supporting the bridge, requiring the complete reconstruction of the overpass. This change would have resulted in considerable construction impacts on the transportation system, including temporary but long-term lane closures, traffic detours, travel delays, and diversion of traffic onto alternate routes that were already over-burdened. Congested travel conditions in the Reston community would have been substantially worsened during reconstruction of the overpass. In the long-term, because the density bonuses allowed in the Fairfax County Comprehensive Plan would be centered on the station platform location, providing direct access to all four quadrants of the Reston Parkway interchange would not have increased the ridership potential at the Reston Parkway Station. Shifting the station closer to the overpasses would have ultimately reduced future ridership potential somewhat because the size of the interchange footprint at this location would have reduced the amount of developable land within walking distance of the stations.

As noted in the Final Alternatives Analysis Report (May 2001), *pedestrian access to the four quadrants could be provided by landscaped walkways and crosswalks, possibly with an all-walk phase on the signal timing to allow pedestrians to safely cross. However, improvements to the local streetscape and walkway network that are not directly linked to the Metrorail station itself would be under the jurisdiction of Fairfax County and the Virginia Department of Transportation. The design of the Reston Parkway Station will be part of continuing coordination with Fairfax County. As currently designed, the Reston Parkway Station does not preclude construction of access to adjacent overpasses as suggested in this comment; however, at this time no specific provisions are planned to accommodate it.*

The alternatives proposed by the commenter have several technical constraints. First, moving the Reston Parkway Station 300 feet east would have required extensive reconstruction of the

DIAAH and possibly the Dulles Toll Road near the bridge piers at Reston Parkway. The proposed shift would have also precluded the future construction of the third lane of the DIAAH in each direction.

Second, the horizontal configuration proposed by the commenter would not have worked geometrically. To use the absolute minimum curve radius allowed by WMATA (755 feet), the length of the spirals would have to have been reduced (as indicated in the commenter's Exhibit 1). However, the existing spiral lengths are already at the minimum allowable length (100 feet). A reduction in spiral lengths would violate WMATA Design Criteria and would not permit safe vehicle operations.

Third, the proposed profile for the commenter's Option 2 (a pedestrian connection under the Reston Parkway Bridge) would have introduced an 1,800-foot length of retained cut and would have impacted the support structure for the Reston Parkway Bridge. Severely lowering the rail profile would have required extensive underpinning of the Reston Parkway bridge piers, and would not have allowed room for the planned third lane on the DIAAH without a major reconstruction of this bridge. As noted above, such reconstruction would have had substantial impacts on the community.

The pedestrian bridge and station are designed so that pedestrians may cross from one side of the corridor to the other without entering the station proper and without paying a fare. However, it is anticipated that during the few hours that the station is not open, the entrances to the pedestrian bridge and vertical circulation devices would be secured due to security and vandalism concerns. Should the local government desire the bridge to remain open 24/7, WMATA, as the operator, may request that the local government be responsible for maintenance and operation of the entrance and pedestrian bridge facilities.

Access Across Reston Parkway

Public Comment: One issue that we will be watching with particular concern is access planning for the rail station. Our company, along with several others with thousands of employees, is located east of Reston Parkway. In order to access the station, employees will have to cross Reston Parkway, a wide roadway with high-speed traffic. Once rail has been determined as the locally preferred alternative, more detailed station area planning studies, including access planning, need to be undertaken to develop good access from areas east of the Reston Parkway Bridge. (0233, 0426-M –34)

Response: *DRPT is the Project's sponsor and initial owner. However, the responsibility for modifications of sidewalks and trails as part of station access is with Fairfax County, Loudoun County, Town of Herndon, City of Falls Church and VDOT. DRPT will, though, coordinate with these jurisdictions and agencies during preliminary engineering and final design to determine the improvements for station access beyond the station site plans, as well as their ownership and maintenance. Close communication would also occur with the Fairfax County Non-Motorized Transportation Committee, private landowners and developers and other stakeholders. The Fairfax Countywide Trails Plan and the Loudoun County Trails plan have been and will be consulted. Comprehensive pedestrian circulation beyond the station site plans may be implemented in conjunction with other planned developments, County, and/or State projects and/or as elements of the Fairfax Countywide Trails Plan and the Loudoun County Trails plan.*

Access from the east side of Reston Parkway – referred to as the "four-quadrant" access concept - was considered in technical memoranda prepared during Initial and Intermediate screening. The findings were that relocating the Wiehle Avenue and Reston Parkway stations to support four-quadrant access would have greater construction-period impacts, reduce shoulder widths on the Dulles Toll Road and DIAAH, require major reconstruction of the existing overpasses, and result in significantly higher construction costs. Based on this analysis, the concept was not carried forward.

Economic Benefits of Metrorail

Public Comment: Wherever metrorail goes, prosperity follows. Metrorail is a tangible and measurable asset for both businesses and local economies. (025, 0253-T –3)

Public Comment: Metrorail serves as an icon in local employment. It stands as one of the largest and most stable employers for many area residents. Metrorail employees and their families use the system and shop and spend their money with our local businesses. (025, 0253-T –4)

> ***Response***: *The Project Team agrees that rail transit has been shown to have positive effects on property values in the vicinity of transit stations. As described in Chapter 5, accessibility, particularly that provided by rapid, high capacity transit, is a critical aspect of local economic development and has been shown to have positive effects on property values in the vicinity of stations.*

Reliability of Metrorail

Public Comment: Metrorail knows transit. It has a 98 percent reliability track record, making it the number one rapid transit system in the country. Metrorail is known for its clean, safe and well-governed system. Metrorail has set the benchmark for efficiency and operations that other cities such as Atlanta and Los Angeles try to emulate. (025, 0253-T –2)

> ***Response:*** *Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to the Project Team and were considered by decision-makers in the selection of the Locally Preferred Alternative. The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative.*

Traction Power Station Conflicts

Public Comment: Rural Estate is strictly residential use requiring 2 to 5 acres per dwelling unit. The fact of the matter is the Golf Park is an aberrant use that required a special governmental action. That special action in no way enlarged the underlying Master Plan use for this property. It remains as planned, RE. The proposed action of locating a Traction Power substation along with holding ponds on this residential property is in direct conflict with the Master Plan. The traction station will be a visual intrusion and could have both short-term and long-term impacts. This visual intrusion impacts the rural residential aesthetic character of this land. Proposing an industrial use on rural estate residential land is totally inappropriate and could ultimately create serious local citizen opposition to any rail option. (0148, 0463-L –2)

Public Comment: The transit rail facilities from the Golf Driving Range should be relocated to a more appropriate site like the commercial and VDOT properties located to the west of Hunter Mill Road. (0148, 0463-L –5)

Public Comment: It is unclear why the traction power substations proposed in the Draft EIS must be located on private property or the places proposed in the Draft EIS, especially in the Mid-Corridor. The adverse impact of these structures does not appear to be addressed.(0510, 2-03)

> ***Response:*** *The locations of Traction Power Substations (TPSS) and Tie Breaker Stations (TBS) are preliminary. As stated in Chapter 2 of the Final EIS, these ancillary facilities were sited based on systems engineering requirements, environmental, and right-of-way constraints. In addition, a power analysis was conducted to determine the number and size of substations required and the optimal spacing for these stations. The location of these ancillary facilities will be evaluated during preliminary engineering. For proposed locations, efforts will be made to minimize impacts to the adjacent areas in terms of their access, architectural treatment, and landscape screening. Substation enclosure designs will be further developed during preliminary engineering and final design. Individual sites will be taken into account, and enclosure design will be context-sensitive.*

Location of Major Service & Inspection Yard

Public Comment: The issues here in Loudoun County at your two transit stations, I think we agree that the site at 606 that's in the transit-related employment center, should not be a service and inspection yard, that that yard should most properly be on the airport. (0141, 0243-T –2)

Public Comment: The rail Yard [7] would lie in 13.6 acres of floodplain and 17.41 acres of RSCOD, river and stream overlay district. The maintenance building would be in the floodplain. A small amount of wetland would also be destroyed. Floodplain would be altered. Its elevation would rise 0.6 feet. (0248, 0248-T –7)

Public Comment: The County Transportation Plan provides for the Greenway loop road. Rezonings have been approved in reliance upon that road. The construction of the bridge across the Dulles Greenway is committed to by the Greenway developer. Greenway loop road right of way, however, is drastically consumed by rail yard 7, thereby destroying that road. (0248, 0248-T –8)

Public Comment: I think what I am beginning to see is that this little stretch of land, the easement that runs between Mercure Park and our property, is very desired, not only by the metrorail statement location Y-20, but also Virginia Dominion Power wants to run power lines down there. That particular area of our community is adjacent to the edge in Broad Run River, and we have plans on the -- a general site plan to build a walking path that wraps around the community and comes up to our rec center. It is our belief that this path will become much less aesthetically pleasing with power lines and rail yard and tracks leading to that rail yard running right there. Essentially this would put these rail tracks within a hundred yards of approximately 60 homes, not to mention being within 1000 yards of the majority of this entire community. (0260, 0260-T –3)

Public Comment: We are already facing additional runways at Dulles and the Virginia Dominion Power issue with the overhead power lines, and we would like to request that the Y-20 location just be struck completely from consideration. (0260, 0260-T –4)

Public Comment: The specific issue that I am here to speak on behalf of is to oppose the rail yard service and inspection area of Y-20. We favor Y-7 or Y-15, preferably Y-15. (0260, 0260-T –2)

Public Comment: Rail Yard 7 consumes land planned for a transit node which will pay real estate taxes. A rail yard is tax exempt. (0248, 0248-T –10)

Public Comment: The transit node planned for that site [Yard 7] would generate substantial ridership. A rail yard would provide almost none. (0248, 0248-T –9)

Public Comment: Site #20 Maintenance Yard: The option for maintenance land south of Broad Run Floodplain on the Westwind/606 property would limit the opportunity to establish the connector road crossing envisioned in the County CTP for Westwind Drive. Therefore, for the purposes of access to the areas west of the Dulles Greenway, as commented at the public hearings by the County Board of Supervisors representative, CMCF recommends that site #15 on the Dulles Airport property be chosen for maintenance facilities. (0451, 0451-L –7)

Public Comment: Three locations are indicated for the Metrorail Service and Inspection Rail Yard sites including one on Washington Dulles International Airport property. We certainly think that Site 7, which is developable land adjacent to one of two transit stations in Loudoun County, should be reserved for transit-oriented development. The site is designated a transit-related employment center in the Loudoun County Comprehensive Plan. The proposed mixed-use development would provide employment, increased property values, sales and income taxes -- significant benefits to the state and County and increased transit ridership and fare revenues - a significant benefit to the rail system. Site 7 is a premier location, a gateway to Loudoun County, and as such an inappropriate site for a rail yard facility. (0141, 0443-E –9)

Public Comment: Rail Storage and Maintenance Yard: Enclosed is a copy of a Memorandum from Wetland Studies and Solutions, Inc. dated July 25, 2002. This document reports the impact on certain environmental resources at the 3 sites identified in the DEIS for consideration for the location of the rail storage and maintenance yard. The document clearly shows that Yard 7 has by far the greatest adverse environmental impact. It is a massive intrusion into the RSCOD and is not a permitted use in such an area in Loudoun County. We ask that it be withdrawn from consideration. (0248, 0447-L –6)

Public Comment: States that the Project Team's facts do not support the claim that, in comparison to Site 7, there would be a greater potential for effects on the natural environment at Sites 15 and 20. Notes that while a Metrorail crossing would be allowed in the River and Stream Corridor Overlay District (RSCOD), a rail yard is not. Statement on page 489 of the *Public Hearings Report* that the Greenway Loop Road does not yet appear in the regional transportation plans is incorrect. The road is shown in the Countywide Transportation Plan on page 594 and inexplicably shows Yard 7 as "Good", Yard 15 as "Poor", and Yard 20 as "Fair" with respect to effects on wetlands. A study done by Wetlands Solutions, Inc. shows wetland areas for the sites: Yard 7, 0.25 acres; Yard 15, 0.62 acres; and Yard 20, 1.3 acres. (0248, 2-01)

Public Comment: I would like to reemphasize that the Loudoun County Board of Supervisors unanimously, nine to zero, encourages you to select the Metro Alternative and that you select Site 15 for the rail yard on the Dulles property. (0258, 0258-T –2)
Public Comment: Strongly supports the selection of Metrorail Alignment T6 and Yard Site 15 as the Locally Preferred Alternative.(0141, 2-04)

Public Comment: I would also like to note two additional reasons to support our case. One is obviously the property value decreases that we would be facing by having this kind of rail running within 100 yards of 60 homes, the majority of which those homes are not sold yet, and people moving in there probably are not even aware of this, and I am very pleased to see the Board of supervisors here looking out for the interests of future owners as well as myself. (0260, 0260-T –5)

Public Comment: The second main issue is my wife and two children are here tonight. I have a seven and five-year-old who are greatly curious little boys, and I'm sure that they would be curious about climbing over and trying to play on what I consider to be pretty dangerous rails that probably would not be fenced in the same as the main lines, as this is just a little access trail back to the rail yard [Y-20]. (0260, 0260-T –6)

Public Comment: The second main issue is my wife and two children are here tonight. I have a seven and five-year-old who are greatly curious little boys, and I'm sure that they would be curious about climbing over and trying to play on what I consider to be pretty dangerous rails that probably would not be fenced in the same as the main lines, as this is just a little access trail back to the rail yard [Y-20]. (0260, 0260-T –6)

> ***Response***: *Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to the Project Team and were considered by decision-makers in the selection of the Locally Preferred Alternative (LPA). The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner and with Yard Site Y15 on Airport property as the Locally Preferred Alternative. The LPA will be constructed in two phases, the first being the Wiehle Avenue Extension.*
>
> *With respect to wetland impacts, Site 7 was shown as 'good' in the Public Hearings Report (October 2002) because the Project Team could have designed that yard so that wetland impacts would be minimized or avoided. For the selected Site 15, however, wetland impacts will not avoided.*

West Falls Church Yard Improvements

Public Comment: I am concerned about many things with this Metro yard [West Falls Church]. I think we have more than our share of noise & "runoff" from the station & yard here. I sincerely hope it won't get worse. (0230, 0230-L –1)

Public Comment: In addition, BRT cannot serve Tysons Corner in any efficient way. A hybrid plan to extend rail to Tysons Corner and run BRT to Dulles is further flawed, since it incorporates no new Metro vehicle service facility. The facility at West Falls Church is already near capacity and it seems unlikely there would be room to store or service additional cars to run a Tysons loop and at the same time expand service on the Orange Line. (0186, 0186-T –4)

Public Comment: MetroRail to Tysons Corner only with Bus Rapid Transit beyond to Loudoun County is not a viable option as it has all of the problems of Bus Rapid Transit noted above. The greatest MetroRail investment is for subway and elevated construction in Tysons Corner which is part and parcel of this alternative. There would be no shop or yard for such a truncated extension. West Falls Church Storage and Inspection Yard is full. Its expansion would pose severe economic, environmental and geometric problems to no advantage. (0013, 0013-L –21)

Public Comment: I am writing to express my concern that the current Metro maintenance yard might be expanded to accommodate some sixty additional metro cars. This is the West Falls Church yard. Please know that we on McKay Street do not have a NIMBY-esque (Not in My Back Yard) attitude. We live with the noise and activity of the current maintenance yard - mostly with no problems. But to double the amount of cars which brings amplified noise (squealing, ding-dongs, and employees talking to one another over mic systems) and possibly water run-off from washing cars is a bit much for us. Why not just build the Dulles Maintenance Yard now? (0385, 0385-L –1)

> ***Response:*** *The Wiehle Avenue Extension improvements at the West Falls Church S&I Yard include the addition of storage tracks and modifications to the existing Service and Inspection Building. As part of the mitigation for these improvements, a covered box on the yard's existing loop track and the new yard lead track would be built to help minimize sound from rail cars proceeding through the yard. These track and service building improvements are necessary for operation of the Wiehle Avenue Extension, but would be occurring at some time in the future to support WMATA operations regardless of this Project's implementation. The area within West Falls Church Yard loop that was always planned for future storage will be built-out to accommodate the storage of up to 42 additional Metrorail cars. The total number of stored cars will increase from 148 to 190.*
>
> *Efforts are underway to minimize the use of amplified communications within the yard. Run-off from the car wash is recycled and solvents used to clean the cars are captured via a containment system.*
>
> *It would be impossible to open a yard at the Yard Site 15 on Airport property until the remainder of the Full LPA is constructed and operating.*

Support for Alternatives - General

Public Comment: Support rail to Reston or Tysons. Support BRT to Loudoun County. (0092, 0092-CC-1)

Public Comment: I see what has been called as the Dulles transit corridor rail as really what should be two distinct projects. The first, which I call Tysons rail, lies between West Falls Church and Tysons West. The second, which I call Western rail, lies from Tysons West out to Dulles airport or Loudoun County. This evening I will be advocating for Tysons rail and against Western rail. (0134, 0134-T –1)

Public Comment: In general, I am a strong advocate of Metrorail where it is appropriate to support walkability, but criticize wasting money on it in areas where it is inappropriate. Generally speaking, rail is appropriate in walkable urban-style development and inappropriate in car-oriented sprawl developments. Metrorail can be appropriate in Tysons provided Tysons is converted to be truly walkable. That would involve infilling new retail office and residential to directly front wide sidewalks with shady street trees and providing safe street crossings for pedestrians by, for example, dividing Tysons' wide arterials into multiple roadways In the manner of K street downtown. Metrorail is inappropriate where its only purpose is to create large parking garages. When a Metrorail station is called the Reston parkway and lies in the median of the Dulles access road, what kind of a place is that? It's the crossroads of asphalt and raceway wasteland. A rider getting off the Metrorail is nowhere near anything. (0134, 0134-T –2)

Public Comment: One approach that I think does merit careful consideration-- and I haven't reviewed the documents closely enough to have an opinion, is the phased approach where the Metrorail goes to Tysons, and then you do BRT from Tysons westward. As usual, in many complex problems, some hybrid solution is preferred, and I think the debate becomes polarized between the bus system and the rail system. And while, from what I've seen, I tend to favor the bus system, I do believe that the hybrid approach merits careful consideration as well. (0286, 0286-T –4)

Public Comment: Boston Properties is the owner and developer of the 162-acre Broad Run Technology Park located between the AOL Time Warner and MCI WorldCom campuses. We have completed one of the nine master planned buildings and the Park has an office development capacity of over one million square feet. In addition, Boston Properties has completed over three million square feet of development in the Northern Virginia Technology Corridor and has over 15 million square feet either completed or planned in the Washington Metropolitan area. Given this magnitude of office development in the Northern Virginia area, we are highly supportive of the efforts to bring rapid transit to the Dulles corridor. (0003, 0003-L –1)

Public Comment: The National Capital Area League of Women Voters was founded to provide a forum for study and action on transportation policy in the Washington Metropolitan Area. We were among the earliest and most enthusiastic supporters for building a mass transit system. We have many positions that favor expansion of this system, addressing issues of access, safety, social equity, environmental quality, sound land use planning, regional governance, and public participation in decision-making. (0206, 0206-M –1)

> ***Response****: Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to the Project Team and were considered by decision-makers in the selection of the Locally Preferred Alternative (LPA). The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The LPA will be constructed in two phases, the first being from the Orange Line to Wiehle Avenue Station.*

Public Comment: In 'Don't Miss the Bus,' it is reported that RapidBus offers a quality of service comparable to rail transit without the need for tracks. It is designed to provide very frequent service using special buses, operating exclusive rights-of-way to the extent possible, and to provide up-to-the-minute transit service information at attractive stations. (June 2002, Metro Regional Bus Study Update) The data analysis completed resulting in the above conclusions should be included in the DEIS for public review. The findings from this study do not reflect the biases for rail as shown in the DEIS. (0147, 0459-L –5)

> ***Response:*** *The assumptions regarding BRT that were used in the Draft EIS were outlined in detail in the Chapter 2, Alternatives Considered, of the Draft EIS as well as in the Transit Operations and Maintenance Plan (June 2002) and the Travel Demand Forecasting Methodology and Results Technical Report (June 2002). Data from these documents show that the BRT system would have operated quite frequently on multiple route patterns and would have utilized rail-like stations and unique and attractive vehicles. Furthermore, one of the key inputs into the*

ridership forecasting model was a modal constant that reflected riders perceptions of different transit modes. The BRT modal constant in the Dulles model was higher than regular and express bus, meaning that BRT would have been perceived as more attractive by regular and express bus riders, which was reflected in the demand forecasting process.

Opposition to BRT/Metrorail Alternative

Public Comment: MetroRail to Tysons Corner only with Bus Rapid Transit beyond to Loudoun County is not a viable option as it has all of the problems of Bus Rapid Transit noted above. The greatest MetroRail investment is for subway and elevated construction in Tysons Corner which is part and parcel of this alternative. There would be no shop or yard for such a truncated extension. West Falls Church Storage and Inspection Yard is full. Its expansion would pose severe economic, environmental and geometric problems to no advantage. (0013, 0013-L –21)

Public Comment: The purpose of this project is to reduce highway congestion, air pollution and accidents. This alternative [BRT/Metrorail Alternative] will not do well. (0013, 0013-L –22)

Public Comment: A combined BRT/Metrorail system would discriminate against the western end of the corridor and force passengers to transfer from bus to rail at Tyson's Corner. (0175, 0202-L-2)

Public Comment: The Airports Authority and many of the commercial landowners would not support the "BRT/Rail Alternative" as noted above since their economic interests would simply not be met by this alternative. Likewise, because two-thirds of the trips to the key Tysons Corner employment center come from the west, the BRT system as the long-term solution west of Tysons does not serve the Dulles Corridor significantly more effectively than does the existing express bus system. (0088, 0211-M –4)

Public Comment: The BRT/Rail Alternative would not meet the needs of Dulles Airport as noted previously, and would not effectively meet the long term needs of the extensive business and residential areas in the Dulles Corridor west of Tysons Corner. Since nearly a very high percentage of the transit trips to Tysons Corner come from the west, this alternative would not adequately serve this ridership demand. There is reason for fear that if this option is put in place, rail to Dulles Airport could be delayed indefinitely, and possibly would never be built. The Airports Authority has made it quite clear that an option without rail to Dulles is unacceptable. (0204, 0204-M –4)

Public Comment: A combined BRT-metrorail system would discriminate against the western end of the corridor and force passengers to transfer from bus to rail at Tysons Corner. (0175, 0175-T –4)

Public Comment: In addition, BRT cannot serve Tysons Corner in any efficient way. A hybrid plan to extend rail to Tysons Corner and run BRT to Dulles is further flawed, since it incorporates no new Metro vehicle service facility. The facility at West Falls Church is already near capacity and it seems unlikely there would be room to store or service additional cars to run a Tysons loop and at the same time expand service on the Orange Line. (0186, 0186-T –4)

***Response**: Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to the Project Team and were considered by decision-makers in the selection of the Locally Preferred Alternative (LPA). The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The LPA will be constructed in two phases, the first being from the Orange Line to Wiehle Avenue Station. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Support for Phased Implementation

Public Comment: I want to go on record as supporting Metrorail from West Falls Church, THROUGH Tysons Corner, then on to Dulles Airport and Loudoun County. However, I must admit that I'm concerned

that the funding won't be available to allow for its construction all at once. Therefore, I would suggest a modified phased implementation plan that would be tailored to correspond to the available funding levels. To begin attracting riders as soon as possible and get them accustomed to using transit in the corridor, the initial phase would be the expansion of express bus service in the corridor both to the Tysons Corner area and to West Falls Church Station. In conjunction with this phase would be the construction of surface facilities at the future Metrorail Station sites where parking and bus bays to serve the express buses would be provided as soon as possible. Unlike the BRT proposal, no special stations would proceed in stages as funding permits. The first phase would extend from West Falls Church to Tysons West as proposed in the phased alternative. However, rather than waiting until 2010 to open the remainder of the Rail system to Loudoun County (assuming availability of funding), I suggest opening segments beyond Tysons West in two or more phases to get the Metrorail service extended along the corridor as early as possible. The number of these operable segments and the actual implementation schedule would, of course, be dependent on the level of funding actually available. (0387, 0387-L –1)

Public Comment: We support the extension of public transportation through Tysons Corner, Reston and beyond. This is the Phased Implementation Alternative. (0010, 0010-E –1)

Public Comment: That said, our organization believes that practical matters, most notably financing, will dictate that more flexibility is needed in the locally preferred alternative to provide phased relief to the Dulles corridor's transportation needs in a rational and realistic timeframe. While the ultimate goal for the Fairfax County Chamber has been and remains Metrorail extension through Tysons Corner to Dulles International Airport and into Loudoun County, this goal cannot be accomplished in one fell swoop. Construction schedules for the massive project will require phased implementation due to logistical and funding issues. The Fairfax County Chamber suggests that the locally preferred alternative possess the necessary flexibility to allow for the provision of rail in the corridor as soon as practicable and greater enhanced transit opportunities above baseline improvement until rail can be provided. (0233, 0426-M –38)

Public Comment: I support the extension of rail in the Dulles Toll Road/Greenway Corridor. I also support an interim means of transit prior to the full build out of the rail system. This interim transit should be in some form of bus system whether it be an express bus system or a BRT type system. Maryland has been served well by the extension of rail service along many corridors outside of the Beltway and Virginia would likewise benefit. (0096, 0096-CC-1)

Public Comment: While we strongly support this project, the phased implementation option that will bring rail service from Falls Church to Dulles, we have some concerns. (0137, 0137-T –1)

Public Comment: Phased implementation of MetroRail underground (or cut & cover) such as T6. This would satisfy mitigation of much of noise concern by minimizing aerial. (0047, 0047-CC-1)

Public Comment: We strongly support this project - the Phased Implementation option that will bring rail service from Falls Church to Dulles. We would have preferred the so-called T-8 alternative that proposed main line, at-grade trackage with a circulation feeder system to serve Tysons, but that was dropped during the Alternatives Analysis - prematurely, in my view. (0137, 0224-M –1)

Public Comment: Immediately start BRT and/or more aggressively expand express and more flexible transit service in the Dulles corridor. Consider other short-term intermediate strategies to improve road and transit capacity, including private sector transit. View rail to Tysons Corner as a potential goal for 2010, thus creating an opportunity for funding from two Federal reauthorization cycles. Rail to Tysons West can be built for half the cost of rail to eastern Loudoun. Maintain BRT or express bus service between West Falls Church, Reston, and Dulles airport even after Tysons rail is in place to provide better transit travel time connections to Dulles and other jurisdictions. And five, extend rail beyond Tysons to Dulles and Eastern Loudoun after 2020, if transit support of land use patterns, proven rail demand and funding exists. (0446, 0146-T –14)

Public Comment: Immediately start BRT and/or more aggressively expand express and more flexible transit service in the Dulles corridor. Consider other short-term/ intermediate strategies to improve road and transit capacity including private sector transit. View rail to Tysons as a potential (but by no means certain) option by 2010, creating an opportunity for funding from two federal re-authorization cycles. Rail to Tysons West can be built for half the cost of rail to Eastern Loudoun. Maintain BRT or direct express bus service between West Falls Church, Reston and Dulles Airport even after Tysons rail is in place to provide better transit travel time connections to Dulles and outer jurisdictions. Extend rail beyond Tysons to Dulles and eastern Loudoun after 2020 if transit supportive land use patterns, proven rail demand and funding exist. (0446, 0218-M –15)

Public Comment: Historically, the Northern Virginia Transportation Alliance has been a strong supporter of upgraded transit in the Dulles Corridor. Its position has been to initially institute Bus Rapid Transit/expanded flexible transit in the corridor followed by some rail as densities, ridership and revenues increase. (0446, 0446-E –1)

Public Comment: We strongly support this project - the Phased Implementation option that will bring rail service from Falls Church to Dulles. (0137, 0176-L –1)

> ***Response:*** *Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to the Project Team and were considered by decision-makers in the selection of the Locally Preferred Alternative (LPA). The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The LPA will be constructed in two phases, the first being from the Orange Line to Wiehle Avenue Station. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Need for More Enhanced Service

Public Comment: Greater, more enhanced transit service is needed in addition to baseline improvements to measurably address the short-term needs for the corridor. This is of particular importance in areas which will not be served by Metrorail in the immediate future. The locally preferred alternative should incorporate the expeditious provision of some form of enhanced transit service to mid and end of corridor areas to satisfy the community's interim transit needs and continue increasing the ridership base for the anticipated extension of Metrorail to the full length of the corridor. (0233, 0426-M –39)

> ***Response****: The Project Team recommends that the existing transit service provided by Fairfax and Loudoun Counties be further enhanced beyond the bus rapid transit elements that have already been added. Prior to the opening of the Wiehle Avenue Extension additional bus rapid transit elements—including the expansion of the Herndon-Monroe park-and-ride lot (site of the future Herndon-Monroe Metrorail Station), ITS enhancements, and facility improvements—should be advanced.*

Opposition to Phased Implementation

Public Comment: We do not support an interim BRT system as we are concerned over the additional cost to the ultimate project, considering that it would be in use for such a short term. We are also concerned about the effectiveness of the BRT proposal and the disruption during the change over to rail. (0027, 0027-L –2)

Public Comment: Do NOT understand the bus alternative? It won't work. It's the wrong path. Let's not detract from the real solution- which is rail. Money "wasted" on the bus alternative- is not then available for rail. The failure of BRT might prevent the success of metro rail. (0046, 0046-CC-4)

Public Comment: In the final analysis, I believe that it would be ultimately cheaper to build a rail line completely than start with a bus line and then later convert it to rail. (0004, 0004-L –2)

Public Comment: Phased implementation would waste resources and forfeit ridership while BRT operations are suspended during bus-to-rail station conversion. The rate of federal participation with BRT is only marginally higher than with rail. This increment does not justify settling for a transit system which does not meet our needs. (0175, 0202-L –3)

Public Comment: A plan to build BRT facilities and then convert them to metrorail in 10 years makes the capital cost for passengers for these BRT facilities prohibitively expensive. The resources would be far better spent on initial construction of metrorail facilities. (0186, 0186-T –3)

Public Comment: While I support the Dulles Corridor Rail Transit Project wholeheartedly, I can not at all support the Bus Rapid Transit interlude. It will be counterproductive adding to cost, disappointment and delay. (0013, 0013-L –1)

Public Comment: Why put money into buses for BRT if rail is the ultimate goal? (0078, 0078-CC-3)

Public Comment: With the "Phased Implementation Alternative", once again the BRT system would not serve the Dulles Corridor west of Tysons Corner significantly more effectively than the existing express bus system. The cost savings originally assumed to exist by building interim BRT stations and approaches that could then be readily converted to rail transit usage now appears to not exist. In fact, there would appear to be considerable disruption to the BRT system and a great deal of cost associated with converting the BRT phase to rail. Furthermore, there is substantial concern among the various affected community interests west of Tysons Corner that the eventual completion of the rail system to their stations could be delayed or postponed indefinitely. They want a guarantee that the full rail system will be built. (0088, 0211-M –5)

Public Comment: The Phased Implementation Alternative could eventually meet the airport and Dulles Corridor community needs. However, it too would very likely be unacceptable to the Airports Authority and the majority of the commercial real estate owners. Much of the BRT capital investment and operation is not readily convertible to a rail transit system without considerable expense and short term loss of operational effectiveness. Again, there is reason to fear that if this option is accepted, transit services from the west would really be little better than it is today and a full rail system to Dulles Airport might never be built. (0204, 0204-M –5)

Public Comment: If the phased implementation is used, what happens to the ridership during the lengthy process of making the changeover to rail? And just like the BRT-rail alternative, there's no assurance that the rail will ever be built. We are relying on future possibilities. Like in past years, rail may never be built. We would leave an inheritance to our children of what-ifs and should-have-beens, the same legacy of inaction that the people in the '60s left to us. (0204, 0247-T –3)

Public Comment: Phased implementation would waste resources and forfeit ridership while BRT operations are suspended during bus-to-rail station stop conversion. (0175, 0175-T –5)

Public Comment: BRT is widely seen as a threat to timely delivery of rail service in the corridor. We agree with what we frequently hear -- people do not believe that the "Phased Implementation Alternative" could actually result in the delivery of full rail service by the same date as the "Metrorail Alternative," as is assumed in the DEIS. The fact that it would cost five to ten percent more than the Metrorail Alternative almost inevitably means that the construction schedule would have to be drawn out if BRT was included in the Locally Preferred Alternative. We also know that there would be no real guarantee that, if the Phased Implementation Alternative is chosen, the completion of the rail system would not be delayed, for any number of now unforeseeable events. (0478, 0484-E –5)

Public Comment: Does not believe the phased implementation program recommended in the MIS Supplement is a good solution. That study was flawed and did not include proper public participation.

BRT will not work well enough to justify any expense. The present enhanced express bus service is working very well and is better for almost everyone concerned than BRT. (0013, 2-09)

> ***Response:*** *Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to the Project Team and were considered by decision-makers in the selection of the Locally Preferred Alternative (LPA). The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The LPA will be constructed in two phases, the first being from the Orange Line to Wiehle Avenue Station. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*
>
> *The BRT Alternative, as analyzed in the Draft EIS, would have remained in service as a permanent transit improvement, until replaced by Metrorail. Depending on the BRT alignment that would have been selected as the first stage of Phased Implementation, up to half of the capital cost for that stage would have been used to build facilities that would later have been converted to use for Metrorail. In addition, the BRT vehicles would have had significant remaining service life and could have been used for other projects in the region, or sold to another operator elsewhere in the country. Although BRT might have operated with a higher throughput capacity than typical 'express bus' services, it could not have matched Metrorail capacity.*

Opposition to the Metrorail Alternative or Proposed Alignments

Public Comment: While heavy rail is the optimal approach for the Dulles-to-Washington transit corridor, I do not believe that it represents the optimal solution to the transportation problem within Tysons Corner. Three of the proposed alignments, T-1, T-6, and T-9, offer only three or four stations to serve all of Tysons Corner. With these three alignments, it would be approximately a one-mile walk from the new Gannett USA Today building to the nearest heavy rail station. The loop alignment, T-4, would require that one-third of the riders with Tysons Corner destinations go all the way through Tysons, change trains and backtrack to their destinations. None of these is a good solution. (0178, 0178-T –2)

Public Comment: Imagine how terrific it would be to have efficient rail through Tysons Corner which dropped you off no more than a few blocks from your destination. None of the four proposed alignments would do that. (0178, 0178-T –4)

Public Comment: We must ask ourselves, what benefits will we get from rail? An easy trip to the museums in Washington or an easy commute to Washington to work for those few who still work in Washington, but is the price of three to four billion dollars worth it? Will we receive any tax benefits? No, and in fact the county will in all likelihood increase our property tax, and gain from the business taxes. Whereas the state of course, will obtain increased sales taxes, which very little if any will trickle down to Reston. Sadly, all we will really get is to have the privilege of paying for the toll road for another thirty years and a new tax district. Some benefits. (0189, 0201-L –4)

Public Comment: The alliance recommends the following approach: One, establish realistic expectations in terms of implementing and phasing a Locally Preferred Alternative. Do not adopt a rail-only strategy for which adequate funding is far from certain and might stand in the way of more immediate flexible and affordable solutions. Remember, no member of our congressional delegation has expressed optimism that the proposed total for Federal matching dollars is available in the next decade. (0446, 0146-T –13)

Public Comment: Spending 3 billion dollars to do something you could do for 3 million is ridiculous and irresponsible. (0294, 0294-E –4)

Public Comment: Construction of rail in the Dulles corridor will be Northern Virginia's most expensive transportation investment of the 21st century, greater than the Woodrow Wilson Bridge and mixing bowl combined. For the same cost, the region could implement BRT in the Dulles corridor, upgrade the Fairfax

County parkway, build the techway tri-county parkway, and regional bypasses to the east and west and improve Route 28. (0446, 0146-T –1)

Public Comment: For the same cost the region could implement Bus Rapid Transit (BRT) in the Dulles Corridor, upgrade the Fairfax County Parkway, build a Techway, Tri-County Parkway, and regional bypasses to the east and west and improve Route 28. (0446, 0218-M –1)

Public Comment: I believe that the decision about what to do for mass transit in the Northern Virginia area would require a careful weighing of the cost and benefits. And from what I have learned from reviewing the executive summary of the draft EIS, it appears to me that the rail system does not pass the test of the benefits justifying the cost. (0286, 0286-T –1)

Public Comment: In summary, a true Dulles Corridor Rapid Transit System needs to be more user friendly to residents and commuters who are not within close proximity to a station. Selecting an option with benefits only far in the future, highly prone to construction delays, with an extraordinary high cost which would necessarily crowd out the other transportation projects doesn't seem to be the best solution. (0233, 0426-M –30)

Public Comment: And the capital costs of the rail system are almost an order of magnitude larger than the BRT system, and therefore it's hard to get, in oral comments, into details. But, in summary, it doesn't seem to be worth it. (0286, 0286-T –2)

Public Comment: Second, they are convinced that someone other than themselves will pay for the bloated costs (thus qualifying as special interest advocates as we know from public choice theory), or three, they are going to share in the pork built into the $3.3 billion price tag. These are the same people who support Amtrak subsidies that have built up to $25 billion cumulative with no end in sight. In fact, the rail component west of Tysons is most accurately described as Amtrak to Dulles. (0162, 0162-T –3)

Public Comment: This is a terrible waste of money! I won't use it but will have to pay for it. Go with the cheaper bus proposal. (0457, 0457-L –1)

Public Comment: The metrorail options presented in the EIS, in our opinion, rely too heavily on inequitable and questionable funding sources, namely a tax district and increased tolls. In addition, the rail options create unsatisfactory aesthetic and access issues by being aboveground in Tysons Corner. Therefore, we support the lower cost transit alternative of BRT. (0139, 0139-T –9)

> ***Response:*** *Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to the Project Team and were considered by decision-makers in the selection of the Locally Preferred Alternative (LPA). The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT, BRT/Metrorail and Phased Implementation Alternatives and Metrorail Alignments T1, T4 and T9 were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Inability of BRT to Match Metrorail Service

Public Comment: In any event, such a busway will not be cost effective. With only six years of use for an investment of $350 million, the annual cost with six percent for opportunity cost, will be $73 million per year, $7.40 per passenger on top of operating costs. As noted on page 2 of this statement, the best suburban bus service cannot come to the productivity of similar suburban rail service. (0013, 0013-L –20)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The LPA will be constructed in two phases, the first being from the Orange Line to Wiehle Avenue Station. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further*

consideration after the public and interagency review and comment on the Draft EIS.

The BRT Alternative, as analyzed in the Draft EIS, could have remained in service as a permanent transit improvement. The Phased Implementation Alternative might have replaced BRT with Metrorail. Depending on the BRT alignment that might have been selected as the first stage of Phased Implementation, up to half of the capital cost for that stage would have been used to build facilities that would have later been converted to use for Metrorail. In addition, the BRT vehicles would have had significant remaining service life and could have been used for other projects in the region, or sold to another operator elsewhere in the country. Although BRT could have operated with a higher throughput capacity than typical 'express bus' services, it could not have matched Metrorail capacity in this corridor.

Support for Implementing Bus Improvements

Public Comment: Before embarking on any rail system, an express bus system should be tried at much less cost. Only if it is successful in meeting ridership to the point where users, not taxpayers, pay for its operation, should rail be examined (with the same test). (0299, 0299-E –2)

Public Comment: Many ideas that have been discussed and/or incorporated in the BRT alternative should be incorporated in an improved express bus system during the period of rail system development. These include pre-payment of fares to facilitate rapid boarding of buses at park-and-ride facilities and at West Falls Church and provision of real-time bus arrival and departure information at all major stops. These proposals can be incorporated into the existing express system without adopting any of the entire BRT options as defined in the DEIS. (0478, 0484-E –18)

Public Comment: This Express Bus service, that would be located on local roadways outside the Greenway Corridor, could be implemented in short order solving the incremental and interim need for transit prior to the arrival of Metro to the areas while minimizing the need for the demolition of the BRT facilities upon the extension of Metro service to the area. (0014, 0014-L –6)

Public Comment: Since Loudoun County has developed a realistic TOD land use program within its recently adopted Revised General Plan, the optimum transit alternative for the Dulles Greenway Corridor is the Metrorail Alternative in combination with the implementation of local Express Bus. (0014, 0014-L –5)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The LPA will be constructed in two phases, the first being from the Orange Line to Wiehle Avenue Station. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

BRT 3 was developed specifically to address the issue of convertibility of BRT to Metrorail service. BRT 3 would have had operating characteristics similar to the existing Express Bus, with the vehicles using the Dulles Connector Road, the Dulles International Airport Access Highway, the Dulles Toll Road, and the Dulles Greenway. Stops would have been located outside the Access Road/ Toll Road and Greenway rights-of-way. Local roadways would have been used to access these BRT stops. It would also have had features like payment before boarding.

This option could have been implemented in relatively short order and was designed to minimize the need to demolish or convert facilities.

However, BRT 3 did have some drawbacks. Because the buses would have had to leave the Dulles International Airport Access Highway to reach the stations, there was a need to provide multiple bus routes which would have been more expensive to operate, would have been more confusing for non-regular riders, and did not provide full corridor service. Also, buses on the Dulles Toll Road would not have achieved the same speed and frequency as buses using the

Dulles International Airport Access Highway alone. Finally, while little conversion was required, little of the infrastructure that would have been built for BRT 3 would have been usable for ultimate conversion to Metrorail.

Impacts of Tysons West Station

Public Comment: The necessary bus terminal at Tyson's West would be a great problem with little long term value and great short term disadvantage. (0013, 0013-L –23)

Public Comment: In addition, maybe the garage [at Tysons West] could be moved back from Rt. 7 so some offices/residences/restaurants could actually hide the garage from Rt. 7 and provide a better and more pedestrian-friendly environment around that station. (0071, 0071-CC-2)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The LPA will be constructed in two phases, the first being from the Orange Line to Wiehle Avenue Station. The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

For Tysons West Station entrance and facilities, the Project Team recommended, and the decision-makers selected Option E site plan to replace the plan presented in the Supplemental Draft EIS and revised General Plans. Option E has its station entrance at the inbound, east end of the station near Spring Hill Road. The bus bays and Kiss & Ride of Option E are located between Tyco Road and Spring Hill Road, set back from Route 7.

The park-and-ride facility at Tysons West has been reduced from 2,000 to 500 spaces specifically in response to concerns regarding traffic impacts. The 500-space park-and-ride would be part of a joint development project, so the private sector would be involved in the design and development. However, the specific location and design is not yet known. The park-and-ride would be accessed from local roads, and its cost is part of Wiehle Avenue Extension.

Phasing of Reston Stations

Public Comment: Phase in intermediate rail stations in Reston after rail is available to Dulles Airport and Tysons Corner. (0047, 0047-CC-3)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative (LPA). The LPA will be constructed in two phases, the first being from the Orange Line to Wiehle Avenue Station.*

Patronage estimates (the number of people expected to ride the system), are based on the station locations as shown in the drawings supporting the Final EIS, and these estimates are used to help determine if the project will qualify for Federal funding. Current estimates show a large number of people would ride from Reston to Tysons Corner, Arlington and the region's core. If intermediate stations were phased in, the patronage would need to be estimated again and it is likely that ridership for the project would decrease significantly. Lower ridership projections would result in lower measures of performance for the project that may make it less competitive for Federal funding.

The second issue with phasing the construction of the Reston stations is how the stations would be built after the system is operating. It is very costly to construct an 'in-fill' station once a Metrorail line is in operation. One could expect a doubling of the capital cost for an in-fill station.

Ability to Convert from Bus to Rail

Public Comment: Why is it so expensive and does it take so long to convert bus stations to rail stations? I know the stations are different, but a clever engineer ought to be able to design one which can be cheaply and rapidly converted, without $ excessive initial expense. (0041, 0041-CC-2)

> ***Response:*** *The BRT-to-Metrorail conversion process was described in Chapter 2 of the Draft EIS. The Project Team attempted several scenarios for the conversion; none allowed for safe and efficient construction and operation testing of Metrorail while the BRT stations remained in revenue service.*

Effects of Park-and-Ride Facilities on Traffic Flow at Tysons West Station

Public Comment: Concerned about placing a 2,000-car parking structure at the Tysons West Transit Station area. Particularly, the construction of the Locally Preferred Alternative in stages that would, for some period of time, have the Tysons West Station serve as a terminus point for the extended rail line from West Falls Church. This would cause the Tyco Road/Route 7 intersection to be overwhelmed by vehicular traffic that accesses Tysons Corner businesses and Tysons West Station. The combined impacts of the two distinct passenger groups would overwhelm this critical intersection even more than it is today. Believes that a commitment to timely reconstruct the intersection in a way that offers adequate access to all surrounding properties, including the TMS property and ensure that the intersection operates at a level-of-service E or better during the peak period hours of operation. (0135, 2-05)

Public Comment: Traffic at Tysons West will be a problem whether or not a Metro garage is built. The design team, county, and VDOT need to address the issue of access and traffic improvements at this location. (0387, 2-04)

> ***Response:*** *In response to public and interagency review and comment on the Draft EIS, the capacity of the park-and-ride structure at the Tysons West Station was reduced from 2,000 to 500 spaces. Further, the peak activity at the station will be early on weekday mornings and the park-and-ride structure will likely be full before the local peak hour of Tysons Corner. For instance, the final park-and-ride customers of Metrorail would arrive before 7:30 a.m., while the local peak hour would be between 7:30 a.m. and 8:30 a.m.*

Route 772 Station Access and Facilities

Public Comment: It is apparent that the Route 606 station is planned to serve as the terminus station or major people-collector for the system on the western side. Based on the goals contained in the draft environmental impact statement and supporting information, good planning principles would dictate that the Route 772 station should serve that function as the true terminus station. As currently planned, the 606 station has the bus based kiss-and-rides and garage for 4000 spaces. The garage would be in addition to the 700 existing spaces at the Dulles north transit station. (0003, 0246-T –2)

Public Comment: I believe the following will clearly illustrate why the Route 772 station should be the true terminus station by including the massive parking currently planned for the Route 606 station. In addition to the Moorefield Station development, the Draft Environmental Impact Statement ("Draft EIS") indicates that Ashburn Village and Ashburn Farm will have more than 9,000 homes. Added to the Ashburn Farms and Ashburn Village projects are 11,000 homes planned for the Belmont, Broadlands, and Brambleton communities that expand the residential base and exponentially multiply the traffic. All of this planned development is located to the west of the Route 606 station. (0003, 0003-L –2)

Public Comment: By contrast, the 772 station will only have 176 kiss-and-ride spaces. Surrounding the Route 772 station is the planned mixed use development called Moorefield Station, which is currently being reviewed by Loudoun County. This project will have planned 4700 residential units and approximately 16.6 million square feet of nonresidential construction. Added to that, there is the 11,000

homes of Belmont, Broadlands and Brambleton, and 23,000 residents in Ashburn and Ashburn Farm. All of this is west of the Route 606 station. (0003, 0246-T –3)

Public Comment: The draft environmental impact statement had listed specific goals for all of the alternatives. By moving the planned parking garage to the 772 station and by doing so create a true terminus station, the following goals could be achieved:

Goal one. Improved transportation service. Travel time within the corridor and the region would be improved. The level of services in the DEIS have proved that.

Goal two. Increased transit ridership. The Route 772 station would capture the traffic from the populations of all the subdivisions and the Moorefield Station.

Goal three. Support future development. Accepted planning guidelines define that the transit station should be integrated into mixed use development such as the Moorefield station planned. There are no residential opportunities adjacent to the planned 606 station.

Goal four. Support environmental quality. Should the Route 606 station be developed with a 4000-car parking garage, the overall majority of cars destined for the garage will pass the Route 772 station, causing increased commuting times, increased commuting costs, and increased pollution. (0003, 0246-T –5)

Public Comment: Boston Properties believes that both Loudoun County and the various agencies associated with the Dulles Corridor Rapid Transit Project have the tools and the time to avoid the above-listed problems by making a logical and well planned decision to select the Route 772 station as the true terminus station. (0003, 0246-T –6)

Public Comment: We also would note that the DEIS does not include an option for facilities or pedestrian connections to the station in the Greenway median on both sides of the Route 772 station. A southside station or stop is recommended, in part, due to potential wetland and stream impacts. It is of the highest importance for the success of the Dulles Rail project that the Route 772 station is served by facilities on both the north and south sides of the Greenway. Functional pedestrian connections to the Route 772 station must be provided from both sides of the Greenway. As stated earlier, the Loudoun County Revised General Plan recommends a Transit Related Center (TRC) surround the Route 772 station. The area of the TRC extends to one-half mile from the station platform in all directions. It is appropriate to incorporate transit facilities and pedestrian connections into developments for both the north and south sides of the Greenway. (0014, 0014-L –8)

Public Comment: Major employment centers such as Beaumeade, America Online, WorldCom, and the residential communities of Ashburn and the Regency are located in the station vicinity. Feeder bus routes from these areas would be shorter, and would not traverse the Greenway interchanges, if transfer facilities were located on the north side of the station as planned at the Loudoun Station. Similarly, facilities on the south side of the Greenway could serve Moorefield Station and the mixed-use Brambleton development with shorter, more convenient feeder bus routes. (0014, 0014-L –12)

Public Comment: The planned rail station would be most viable when served by high-quality feeder bus, and "Kiss & Ride" on both the north and south sides of the Greenway at Route 772. (0014, 0014-L –13)

Public Comment: Please consider inclusion of an alternative for transit facilities and pedestrian connections for both the north and south sides of the Route 772 stop/station in the selection of the Locally Preferred Alternative and the Final Environmental Impact Statement and at a minimum please include a pedestrian access to the station from both sides of the Route 772 Station. (0014, 0014-L –14)

Public Comment: With specific regard to the Loudoun County stops/stations I believe it is critical that pedestrian and vehicular access be provided on both the North and South side of the Dulles Toll Road / Greenway. (0095, 0095-CC-2)

Public Comment: States that commuter parking should be provided at the Route 772 Station because it will be the terminal station. Assumption that all commuters from outlying areas will drive past Route 772 to Route 606 is not realistic. Believes that commuters will find a way to park at Route 772 Station whether parking facilities are provided or not, which will create a shortage of parking for employees, patrons, and residents of Loudoun Station. (0096, 2-02)

Public Comment: Comstock is working with developers and Loudoun County to help provide space for a commuter parking structure on the north side of the Dulles Greenway near the Route 772 Station. (0096, 2-03)

Public Comment: We urge Fairfax and Loudoun County to work together with VDOT and WMATA to plan effectively for adequate parking facilities. While we understand the desire to provide significant parking at the 606 station, we don't believe that this is adequate. The most logical point for people from Loudoun County is to stay away from the congestion which leaves the 772 station as the most desirable location. (0204, 0247-T –9)

Public Comment: Current WMATA plans provide for regional park-and-ride facilities in excess of 5000 spaces, including 750 existing spaces at the Route 606 station, which is not a terminal station. These are the only park-and-ride facilities in the current WMATA plans to be situated in all of Loudoun County. (0248, 0248-T –2)

Public Comment: Currently the WMATA design is constrained in making an objective study by Loudoun County's self-imposed prohibition contained in the countywide transportation plan which provides that "regional park-and-ride lots will not be located in the transit-oriented development." It appears at page 2-9, item 5. The DEIS shows clearly the consequence of failing to provide park-and-ride facilities at Route 772. Despite that, the Route 772 station is a terminal station, and so should have the greatest demand fro ridership. It will have less than one-third the ridership of the Route 606 station. Moreover, it shows that except if a full station is added in Tysons, what we will have is a terminal station with the lowest ridership of any station in the entire Dulles transit project. This proves what is intuitively obvious. If you do not build it, they will not come. (0248, 0248-T –3)

Public Comment: So compelling is the need for these structured park-and-ride facilities at the Route 772 terminal rail station that if the county were not to cause them to be built as part of the Dulles Corridor rail project, the County would need to build them itself at later date at a cost to the county of tens of millions of dollars. This is so because commuters living in Broadlands, Brambleton, West Winds, Ashburn Village, Ashburn Farms, Landsdowne, Belmont and many more communities even well beyond Leesburg will demand it, because it will become evident that the reliance on a single massive structured park-and-ride facility at the Route 606 rail station to serve most all Loudoun County and parts of West Virginia will not work. (0248, 0248-T –5)

Public Comment: As the report further shows, the park-and-ride facilities at Route 606 need to be drastically reduced to a surface parking lot. (0248, 0447-L –2)

Public Comment: Concerned about the amount of parking provided at Route 606 and the lack of parking provided at Route 772. Request that the parking at Route 606 and Route 772 be reanalyzed in the Final EIS. Request a copy of the unconstrained parking analysis done for Loudoun County by the Project Team. (0248, 2-02)

Public Comment: We actually have had a chance to study the EIS and we note that in the EIS statement there is actually not provision at the moment at the 772 station for access to the platform from both the north and the south sides of the Greenway. We believe that pedestrian access is really of utmost importance for efficient metro transportation. We understand during the EIS preparation time period that there was no development for the design staff to look at. We've had discussions with them and I think they see no problem with providing pedestrian access from both the north and the south side. (0256, 0256-T –3)

Public Comment: And so we would just simply like to say tonight simply that we would ask that in the final EIS statement that access be provided to the platform from both the north and the south sides. (0256, 0256-T –4)

Public Comment: A pedestrian bridge (urban deck) is critical at the 772 metro stop, especially if parking facilities are constructed on either or both sides of the Greenway. (0273, 0273-L –4)

Public Comment: Transit Connection: The construction of the overpass bridge over the Greenway and over the proposed rail platform is noted for construction by others. We suggest that the construction of the roadway to promote bus accessibility in the County's CTP is greatly enhanced with the bridge construction as part of the transit built solution (with rail) to establish linkage to the both sides of the Greenway. We envision the design similar to the local vehicle circulation at the Orange line Vienna Metro Station, as the Countywide Transportation envisions a four lane undivided collector road. The CMCF has proposed through the land use process to reserve land for the future road and construct the off-site connections from the Future Moorefield Boulevard to both Route 772 and Route 607/ Route 411 with provision of mass transit service. (0451, 0451-L –4)

Public Comment: A parking facility must be constructed at the 772 station in Loudoun County. This is the end station in Loudoun County. This is the end station and the station closest to the residential density in the county. It is unreasonable to expect commuters to drive to the Old Ox Metro station when the 772 metro stop is more conveniently located. (0273, 0273-L –3)

Public Comment: Strongly recommend a large parking garage be built at the final stop, 772. The garage should be large enough to provide parking for the 50K current Loudoun County residents already living in the area. No parking is a non-starter. (0090, 0090-CC-1)

Public Comment: Adequate structured parking must be planned at each station from the very beginning of the rail transit extension. All affected jurisdictions must work closely with VDRPT, VDOT and WMATA to plan effectively for adequate structured parking opportunities at all transit stations. Parking needs will vary from station to station. The Reston Town Center station and the Route 772 station in Loudoun County may serve primarily as destination stations with limited opportunity for long-term commuter parking. Nevertheless, the parking needs of these station areas must be given special attention. The language in the Loudoun County Comprehensive Plan that specifically prohibits transit related parking at the Route 772 station even though this station is the system's terminal station in Loudoun County particularly concerns me. While it is understandable that commercial, residential and public uses should be emphasized at this station, the total prohibition of transit-related structured parking at this location will prove detrimental to reasonable access to the transit system, and result in serious "bootleg" parking violations in the neighborhoods surrounding the station. (0088, 0211-M –14)

Public Comment: Parking At Route 772 and Reston Parkway Stations - Although I assume that it was an oversight, the Draft EIS showed no significant amount of parking at either the Route 772 or the Reston Parkway stations [for T6]. It is inconceivable to me that these two major stations in the Dulles Corridor would not require at least 2,000 parking spaces each, particularly given the rate at which Metro is adding new parking garages to its current stations. And whether it is due to an oversight or not, this omission should be corrected prior to the next step in this process. (0071, 0214-M –4)

Public Comment: We urge both affected jurisdictions to work closely with VDRPT and WMATA to plan effectively for adequate structured parking opportunities at all transit stations. Parking needs will vary from station to station. The Reston Town Center station and the Route 772 station in Loudoun County may serve primarily as destination stations with limited opportunity for long-term commuter parking. Nevertheless, the parking needs of these station areas must be given special attention. We are particularly concerned by the language in the Loudoun County Comprehensive Plan that specifically prohibits transit-related parking at the Route 772 station even though this station is the terminal station in Loudoun County. While we agree that commercial, residential and public uses should be emphasized at this station, we believe that the total prohibition of transit-related structured parking will prove detrimental

to reasonable access to the transit system, and result in serious "bootleg" parking violations in the neighborhoods surrounding the station. (0204, 0204-M –11)

Public Comment: Why is there no park and ride lot at the Route 772 station, which is at the end of the line? I decided to look up the Claude Moore Foundation Moorefield Station web site and discovered that they are only planning 205 parking spaces? Isn't it a little unprecedented for the end-of-the-line to not have a big park and ride lot? (0112, 0382-L –8)

Public Comment: We note that the transit station at Route 772 in Loudoun County has no parking associated with it and yet it is the last station on the line and significant new mixed-use development is being proposed around it. Further, ridership is projected to be only 1,400. We think that the parking issue should be revisited by Loudoun County. There might even be opportunities to provide satellite-parking facilities with the feeder bus service to this terminal station. (0141, 0443-E –12)

Public Comment: Enclosed is a copy of the Review of Dulles Corridor Rapid Transit Draft EIS by Gorove/Slade Associates, Inc. dated August 28, 2002. As the report shows, substantial structured park-and-ride facilities are essential at the Route 772 station on both sides of the Greenway. (0248, 0447-L –1)

Public Comment: Parking: The Claude Moore Charitable Foundation encourages flexibility of WMATA for the future station to consider additional parking consistent with the County's Zoning Ordinance or Comprehensive Plan at the Route 772 station, within the proposed land dedication. This would also increase boardings at this station. (0451, 0451-L –8)

Public Comment: The County has described the Route 772 area as a greenfield. The land immediately adjacent to the station is available. In fact 12 acres for transit use has been proferred by a zone applicant. This area, and possibly others, can provide the opportunity to locate a structured, regional park-and-ride facility at Route 772. (0248, 0248-T –4)

Public Comment: Concerned that the transit-oriented development at Route 772 would require significant amounts of parking at this station, especially since it is the end of the line. (0141, 2-02)

Public Comment: Access: We suggest that the Route 772 station include access to both the north and south sides of the Dulles Greenway via vehicular and pedestrian access to improve ridership projections. (0451, 0451-L –10)

Public Comment: Also out at Route 772, really there is no parking to speak of, and we really think, since that's the end of the line station, that the County ought to take another look and see if, at the very least, there couldn't be some satellite parking that could have feeder bus service that brings in people to the 772 station. Because now the EIS shows about 4500 people get on at 606 and only 1400 people out at 772, where you're going to have a major development facility. (0141, 0243-T –7)

Public Comment: And we have also made provision, should it become necessary, to accommodate a number of parking spaces. We recognize the discussion that was presented to you earlier about the 606. There is the possibility on the north side of the 772 station to accommodate some metro parking. (0256, 0256-T –2)

> ***Response:*** *As evaluated in the Supplemental Draft EIS as a revision to the selected LPA and further documented in the Final EIS and final General Plans, the Project Team in cooperation with Loudoun County reconfigured the park-and-ride program in Loudoun County. Route 772 Station increased from no park-and-ride facility to two structures of 3,300 spaces combined. Route 606 Station decreased from 4,750 spaces to 2,750 spaces. Loudoun County arranged with two owner/developers for the location of the two park-and-ride structures at Route 772 Station.*
>
> *The current station facility plans for the Route 772 Station are designed to integrate the station access points with proposed transit-oriented developments. They also include Kiss & Ride*

facilities and feeder bus facilities, and would capture a portion of travelers from the station service area and from the transit-oriented developments. Loudoun County recognizes that the Route 772 Station will function as a major intermodal facility among transit bus, shuttle bus and Metrorail. In fact, WMATA terms the bus-to-rail interface as the heart of the Metrorail system.

As indicated in the General Plans (Final EIS Volume V), construction of the proposed Dulles Greenway overpass is assumed to be by others. Although the Route 772 Station of the revised LPA includes station facilities on both sides of the Dulles Greenway, the Project has determined that transit-related use of this overpass would be limited. Other roadways shown are included in the phased implementation of adjacent developments as approved by Loudoun County. Station access will be the subject of continuing coordination with Loudoun County, property owners, and developers in station area.

The Project Team notes that the morning peak hour for access to the Route 606 Station with its 2,750 park-and-ride spaces will precede and peak traffic for access to adjoining and nearby developments. Based on the evidence of Metrorail system, the park-and-ride facility of Route 606 Station will be full by 7:30 a.m. and more likely earlier. Moreover, the two-hour peak periods of station ingress and egress will have an even distribution of vehicles without a defined surge, at times called the peak of the peak. Therefore, there should be no concerns of traffic congestion due to the Route 606 Station.

Route 606 Station

Public Comment: The Goals and Objectives of the Project are set out in the DEIS, at page 1-27. Goal 3, Support Future Development. By relocating the rail station away from where it was placed in the MIS, Goal 3 is greatly defeated. Millions of square feet of development stand to be made much less pedestrian friendly by moving the station more deeply into Dulles Airport. Also, at the MIS location, an entrance into the possible P&R lot adjoining Area #3 of Dulles Gateway can be readily provided. The DEIS location makes that impractical, if not impossible. This is vitally important, because the opportunity for over 1,000 surface spaces stands to be lost. (0284, 0447-L-4)

Public Comment: The Route 606 station location seems to have been moved away from the future TREC site apparently to save money on construction costs. This location would make it difficult to capture the kind of transit ridership that results from building directly adjacent or close to the rail transit station. There have been a many studies that demonstrate the importance of locating transit-oriented development adjacent to the stations. With increased ridership comes increased transit revenues and also increased land values and property taxes. We urge that the station be the moved closer to developable land. (0141, 0443-E –10)

Public Comment: We are also concerned about the location of the [Route 606] station. We feel it should be moved further to the west in order to enhance the transit-related development that was intended. Where it is now, it's closer to the parking garage. It should be moved closer to where you can have buildings that can provide direct access to the station. (0141, 0243-T –3)

Public Comment: Location of Route 606 Rail Station: We ask that the Route 606 station be relocated. Enclosed is a copy of the Dulles Gateway preliminary plan on which is drawn the Route 606 rail station in the location shown in the Draft EIS (dashed) and in its location identified in the Major Investment Study (solid), and the surrounding area. Highlighted in orange is the connection to the west side of the "MIS station." In yellow is the connection to the "DEIS station." The difference in walking distance from the west side of the adjoining property, Dulles Gateway, is approximately 1,100 feet greater for the DEIS location. Dulles Gateway is planned as one of two Transit Nodes in the Revised General Plan (the comprehensive plan for Loudoun County). The Draft Zoning Ordinance Amendment provides for a corresponding zoning district, PD-TREC (Transit Related Employment Center) permitting non-residential development at densities of up to a 2.0 floor area ratio. (0248, 0447-L –3)

Public Comment: There is no good reason not to restore it [Route 606 Station] to its previous location. Enclosed are two sheets of the profiles of the relevant section of line at and near the Route 606 station. We have had drawn on those profiles, the profiles for a station where it was located in the MIS. This drawing shows that restoring the station to its MIS location is not a major change. The grade difference is modest. For these reasons we believe it is very important that the location of the Route 606 station be restored to its location (MIS) as shown on the enclosed preliminary plan for the Dulles Gateway property from where it is shown in the DEIS. (0248, 0447-L –5)

Public Comment: Our second concern is that the Route 606 rail station has been moved from where it was located in the Major Investment Study. Where it is currently planned for the south and east into Dulles Airport, it is more distant for and less accessible to ridership demand. Were the station placed back to where it was in the MIS, ridership would be as much as 1,100 feet closer to the rail station. An examination of the cost difference shows it to be miniscule. (0248, 0248-T –6)

Public Comment: Requested that the Route 606 Station be relocated to the MIS location. Commenter is looking into the Project Team's response and will have an engineer validate the reasons why the Project Team says it should not be done. As currently located the station is more difficult to access and would be located farther away from the Transit-Related Employment Center (TREC). The station has been relocated to serve a preconceived parking location. (0248, 2-03)

Public Comment: States that the Project Team has misunderstood the request to move the Route 606 Station to mean that a second entrance would need to be constructed as part of the project costs. The commenter suggests that if the circumstances warranted, a second entrance could be constructed in the future, if the station was relocated, thereby providing access to the west. The current station design precludes access to the west. (0248, 2-04)

Public Comment: Request that the location of the Route 606 station be reanalyzed in the Final EIS. The commenter provided a sketch of Area 3, which is located approximately one-quarter mile of the Route 606 Station. An adjacent piece of property could be used as a park-and-ride to act very similar to the Herndon-Monroe Station. The Project Team dismissed this recommendation in the *Public Hearings Report*. (0248, 2-05)

Public Comment: Concerned that the Project Team does not understand that the area identified as Area 2 on a plan submitted to the public is part of the transit node, and that the Loudoun County Board of Supervisors added special language to the TREC policies to include this parcel. (0248, 2-06)

Public Comment: Area 2 would be within a half mile from the station if it were moved back to the MIS location. The commenter states that by suggesting shuttle buses, the Project Team has seriously underestimated the willingness of commuters to walk to rail rather than resort to a second mode of transportation. (0248, 2-07)

> ***Response:*** *Dulles Gateway Associates, L.L.C. and TAB I Associates, L.L.C., the owner and developer of undeveloped property to the north of the Route 606 Station and the Dulles Greenway, has commented on the Route 606 Station location, access and facilities during the two public comment periods for the Draft EIS and Supplemental Draft EIS and during several coordination meetings with the Project Team. In this Chapter 2 of Appendix J, his comments appear under the commenter identification number 0248 for the Draft EIS and its proposed General Plans (June 2002) and under number 0111 for the Supplemental Draft EIS and revised General Plans. For the comment period of the Draft EIS, the owner-developer submitted a February 3, 1994 plan titled "Transit Station Site 5-A, Dulles Toll Road Corridor". For the comment period of the Supplemental Draft EIS, the owner-developer submitted a technical report by his consultant, titled 'Route 606 Station and Parking Analysis' (December 2003), on alternatives for the Station's park-and-ride structure and other facilities.*
>
> *With his comments on the proposed General Plans (June 2002) the owner-developer submitted an undated development site plan titled "Dulles Gateway North, Sterling Virginia - Antigone*

Properties" prepared by Leo A Daly. The site plan shows two major developments that are separated by the stream valley and flood plain of Broad Run. Loudoun County in its revisions to its General Plan (County's name for its comprehensive land use plan) designates the area north of the Greenway, east of Broad Run and one-half mile north of the Route 606 station as appropriate for consideration of a transit node, Transit-Related Employment Center (TREC). Specific location of the TREC will be determined when a development proposal is made that complies with the policies and criteria specified in the plan. The owner-developer has not yet submitted his proposal to Loudoun County for review and approval. The owner-developer has identified the development east of Broad Run as Area 1 and west of Broad Run as Area 2. In addition, the owner-development has a land-locked parcel south of the Dulles Greenway and Broad Run and north of Route 606, which he has designated as Area 3. The route from Route 606 to the station facilities is via the existing Route 789.

Station Location

The location of the Route 606 Station in the final General Plans is west of the Route 606 overpass of the Dulles Greenway. The Greenway was planned, designed and constructed with a section of wide median to accommodate the future station. The Project Team's design in the final General Plans reveals that the width of median is not sufficient and, therefore, a westbound section of the Greenway must be moderately shifted outward from the median.

The Route 606 Station has its facilities of bus bays, Kiss & Ride and park-and-ride structure north of the Dulles Greenway on Airport property. North of the station facilities is the Area 1 TREC development.

The station location in the proposed General Plans (June 2002), revised General Plans (October 2003) and the final General Plans differs from the station location that DRPT had identified in its Dulles Corridor Transportation Study (June 1997). The study has been also known by its Federal definition, Major Investment Study or MIS. During the preparation of the proposed General Plans (June 2002), the Team shifted the station approximately 400 feet eastward or inbound from its MIS location for three reasons:

1) *to minimize the height and extent of Station's retaining walls and fill,*
2) *to avoid potential impacts to the existing Dulles Greenway bridges over Broad Run, and*
3) *to avoid impacts to the horizontal clearances between the eastbound lanes of the Dulles Greenway and the southern abutment of the Route 606.*

The owner-developer has consistently commented in the two public comment periods and requested in several coordination meetings with the Project Team that the Route 606 Station be restored to a location that he believes is the one identified in the MIS.

For the coordination meetings and for the Public Hearings Report (February 2004), the Project Team prepared Figure J.2-1 in order to depict the General Plans location versus the MIS location of the Route 606 Station. But, the MIS location differed from the location that the owner-developer believes is the one identified in the MIS. His location is approximately 700 feet further west or outbound from the General Plans location.

In the comparison of the General Plans and MIS locations of the Route 606 Station, the pedestrian bridge between the station and the station facilities (park-and-ride structure, bus bays, and Kiss & Ride) remains in the same location. The travel path from the platform to pedestrian bridge to the station facilities is aligned for extension to a proposed transit node and TREC. The Project Team will be coordinating with the owner-developer so that this pedestrian link will be efficient and attractive.

In his comments, the owner-developer has requested a shift of the station and a second pedestrian bridge and station entrance to serve the development west of Broad Run. WMATA and industry standards assume that one-quarter mile is a reasonable walking distance, and one-

half mile represents the outer limit of distance that most persons will choose to walk. Most of the Area 1 development is within one-half mile of the center of either the MIS or final General Plans station location, and could be accessed through the station facilities to the north (as noted above). Conversely, none of Area 2 development is within one-quarter mile of either platform location, and only a small portion is within one-half mile. The Project Team utilizes the WMATA study Development Related Ridership Survey II (December 1989) *as a reference for the determination of ridership by development type and distance. It revealed that the walk mode share decreases by 0.76 percent for each 100-foot increase in distance from the station. The additional rail transit trips by walk mode to and from the Area 2 development would, therefore, be negligible due to the prohibitively long walk distance.*

The sketch plan and profile submitted with the comments would move a large portion of the platform below grade, increasing construction costs, and increasing the distance from the platform to the mezzanine and pedestrian bridge level, which still must clear the Dulles Greenway below. Since the capital and operating costs of a second station entrance are significant and the additional ridership and revenues negligible, the Project Team declined this suggestion, as it previously did in a coordination meeting with the owner-developer. The economical solution for access from the Area 2 development west of Broad Run should be private shuttle buses, for which the Project Team would provide spaces at the station facilities.

Park-and-Ride Alternatives

The owner-developer in his comments on the Draft EIS and proposed General Plans encouraged the reduction of the 4,750 park-and-ride spaces at Route 606 Station. In the Supplemental Draft EIS, the Project Team proposed, later recommended, and the decision-makers selected a reduction to 2,750 spaces.

In his February 1994 plan and his December 2003 technical report, the owner-developer suggests that the Project Team consider the reduction of capital costs by the use of a surface park-and-ride facility in lieu of a structured one for the Route 606 Station. He also suggests the relocation and reconfiguration of the park-and-ride facilities by using Airport property north and south of the Dulles Greenway and using Area 3 of his ownership.

The Project Team discourages the separation of station facilities, particularly those of moderate size. If there were two park-and-ride facilities, totaling 2,000 spaces, a park-and-ride customer of Metrorail would not readily and conveniently reach one facility if the other became full first. The Project Team also discourages the separation of the station bus and Kiss & Ride facilities from the Area 1 TREC development, since there can be intermodal transfer and direct connections between the station facilities and the TREC development.

Interchange Modifications

The owner-developer has consistently commented in the two public comment periods and requested in several coordination meetings with the Project Team that the eastbound exit ramp of the interchange between the Dulles Greenway and Route 606 be modified in order to serve the alternative park-and-ride facilities south of the Greenway.

Through its travel demand forecasting and traffic analysis, the Project Team has shown that Project does not necessitate improvements to the interchange between the Dulles Greenway and Route 606. The traffic analysis in support of the Final EIS reveals that the intersection of Route 606 and Route 789 will degrade from Level of Service B in the current year to Level of Service F in the Project's forecast year of 2025, in the No-Build Alternative, that is, without the Project, due to the forecast land use. Level of service at an intersection is measured by the delay in seconds for drivers traversing the intersection. In the opening year of 2015 and in forecast year of 2025, the Full LPA increases the delay. The Project's mitigation for the opening year of 2015 is the addition of a right turn lane from southbound Route 789 to westbound Route 606. As shared with other stakeholders in the Dulles Corridor, the Project Team notes that the traffic conditions of station access should not be a major concern to the County nor to the owner-developer. The

peak activity at the station will be early on weekday mornings and the park-and-ride structure will likely be full before the local peak hour of local development. For instance, the final park-and-ride customers of Metrorail would arrive before 7:30 a.m., while the local peak hour would be between 7:30 a.m. and 8:30 a.m.

The suggested modifications of the interchange are not in conformance with A Policy on Geometric Design of Highways and Streets (Green Book) of the American Association of State Highway and Transportation Officials (AASHTO). In particular, the modifications create an interchange between the Dulles Greenway and two crossroads and place a driveway on the eastbound exit ramp. An interchange with two crossroads (in this case, Route 606 and the development roadway) creates complex signing for the exit; moreover, the driver will have unconventional decision-points in a short length of travel. The presence of the ramp toll plaza worsens the signing, the line of sight to the decision-points and the inherent weave between the plaza and ramp terminal.

The driveway on the exit ramp violates the denial of access line established for this freeway by the owner of the Dulles Greenway. That denial of access is an integral element for safe and efficient operations of freeways.

While there are other reasons for eliminating this suggestion for modifications, one to add is that the driver, having exited the Dulles Greenway via the eastbound exit ramp and then the development roadway, will not have a clear understanding of the return to the Dulles Greenway. His orientation will be confused, unlike the exactness of the conventional exit maneuver to the primary crossroad, Route 606.

In the formulation of its Team recommendations (February and March 2004), the Project Team concluded, as it did in October and November 2002 Team recommendations, that it could not accommodate the suggested alternatives of the owner-developer.

Following the revising of the LPA and approval of the revised General Plans, the Project Team participated in a May 2004 meeting with the owner-developer, his consultants, a member of the Commonwealth Transportation Board, MWAA, TRIP II, and Loudoun County. The purpose of the meeting was to review the above issues with all interest parties. The meeting did not result in a change in the selected LPA and approved General Plans.

As stated in the final Team recommendations, the Team will continue to coordinate the pedestrian connections between the station facilities and the proposed development north of Route 606 Station.

Access Congestion at Route 606 Station Park-and-Ride Facility

Public Comment: Another concern is the recommendation to construct a 4,000-space parking garage immediately adjacent to the rail transit station. The size of this facility would severely congest the adjacent roadways. The amount of parking provided there should be significantly scaled back and provided in such a way that revenue producing mixed-uses are integrated into the parking and convenient shops and services provided for transit riders. (0141, 0443-E –11)

Public Comment: We are concerned about the 4000-space parking garage [at Route 606]. That's a huge thing. In this day and age, we think it should be scaled back, and certainly what parking remains should be integrated into the surrounding land use development. (0141, 0243-T –4)

Public Comment: While we understand the desire to provide significant parking for transit riders at the Route 606 station, we are greatly concerned that this single location cannot fully accommodate the very heavy parking demand that will result from focusing all Loudoun County commuter parking at this station. This situation will exist even with very significant improvements to the access at this interchange and to

Route 606. As strong advocates of Dulles Airport, we are troubled by the potential for very severe congestion impeding airport-oriented traffic and adjacent land use at this location. (0204, 0204-M –12)

Public Comment: A policy choice was made to provide significant parking for transit riders at the Route 606 station. I am greatly concerned, however, that this single location cannot fully accommodate the very heavy parking demand that will result from focusing all Loudoun County commuter parking at this station. A serious congestion problem will exist even with very significant improvements to the access at this interchange and to Route 606. I am troubled by the potential for very severe congestion impeding airport-oriented traffic and adjacent land uses at this location. (0088, 0211-M –15)

> ***Response****: As evaluated in the Supplemental Draft EIS as a revision to the selected LPA and further documented in the Final EIS and final General Plans, the Project Team in cooperation with Loudoun County reconfigured the park-and-ride program in Loudoun County. Route 772 Station increased from no park-and-ride facility to two structures of 3,300 spaces combined. Route 606 Station decreased from 4,750 spaces to 2,750 spaces. Loudoun County arranged with two owner/developers for the location of the two park-and-ride structures at Route 772 Station.*
>
> *Intersection LOS in the vicinity of the Route 606 station in 2025 will be F in both the No-Build Alternative and the Full LPA. The Project provides roadway improvements as mitigation measures. The location of the park-and-ride facility north of the station will not significantly change traffic congestion in the peak period. The park-and-ride facility at the Route 606 Station reflects transit demand as well as the Loudoun County Revised General Plan. Incorporating the facility into mixed-use developments would be based on county and developer initiatives.*

Request to Build Station at Hunter Mill

Public Comment: We realize that all of these ugly facilities have to go somewhere. So in the interests of fair play and equality of property rights between the government and private citizens, we would like to offer to build and operate a facility with up to 10,000 parking spaces for Metro or BRT, and to participate in paying for all or part of an additional Metro or BRT station at or near the Hunter Mill interchange. This could save tens of millions of tax dollars as compared to other proposed station locations, and provide much needed additional parking. As the owners of approximately 100 acres of largely undeveloped land at this interchange, we want to call your attention once again to the smart growth rail oriented development opportunity that exists here at this interchange. When combined with the adjacent 116 acre undeveloped tract and other undeveloped adjoining properties, approximately 250 acres could be planned and developed in a coordinated smart growth rail oriented urban village providing much needed affordable housing. Too often rail stations are located for political reasons where the existing adjacent development precludes a meaningful relationship between extending Metro and coordinating additional rail focused development. For example, a Hunter Mill Station provides a much better opportunity for smart growth than the Herndon/Monroe site that is adjacent to a wetlands and across the street from a significant amount of low density single family housing. The Hunter Mill interchange area provides an exciting opportunity to properly plan and focus Metro rail oriented smart growth, to obtain land for additional parking, and to close what would otherwise be a long gap in service between Tysons Corner and Reston. We would appreciate getting a number for the actual hard construction costs for either an additional Metro Station or an additional BRT Station. (0464, 0464-L –5)

Public Comment: Commenter states that the Dulles Corridor Land Use Task Force expressed preference for a station at Wiehle Avenue over Hunter Mill Road in an either/or situation, that does not preclude an additional station near Hunter Mill Road. Believes that the Land Use Task Force did not propose any land use changes because they were specifically instructed not to look at land uses east of the W&OD Trail. Suggests that a station at Hunter Mill Road would provide more parking, appropriate land, and better smart growth opportunities than the proposed station at Wiehle Avenue. (0464, 2-01)

> ***Response:*** *The process used for evaluating the initial list of alternatives for the Dulles Corridor Rapid Transit Project was a two-phase process: initial screening and intermediate screening. The process applied increasingly detailed and comprehensive measures of effectiveness to a*

decreasing number of alternatives. For the initial phase, most measures were qualitative. The alternatives advanced or carried forward for further evaluation at the end of each phase were those alternatives that best met the transportation needs of the corridor, relative to the other alternatives under consideration.

Control of the overall level of development in the Hunter Mill Road vicinity is under the jurisdiction of Fairfax County. Moreover, the locations of the proposed stations in the Mid-corridor section of the Dulles Corridor Rapid Transit Project are governed by and consistent with the Fairfax County Comprehensive Plan.

As explained in Chapter 2 and Appendix H of the Final EIS, during the early stages of the EIS process, a number of station alternatives were considered for the Dulles Corridor Rapid Transit Project, including a station at Hunter Mill Road. This station was eliminated from more detailed consideration in the Draft EIS because it would not be consistent with current or planned land use in the vicinity of the station. These reasons are explained fully in the Final Alternatives Analysis Report (May 2001). Some findings are summarized below.

Low-density land uses surrounding the proposed site would not generate enough ridership to support a station at this location. In addition, the citizens in the area expressed strong opposition to a station at Hunter Mill Road.

The Dulles Corridor Land Use Task Force, appointed by the Fairfax County Board of Supervisors, stated strong opposition to a station at Hunter Mill Road in lieu of the proposed station at Wiehle Avenue. The Task Force voted at its session on February 26, 2001 to endorse the elimination of the Hunter Mill Station and continued planning for the Wiehle Avenue Station. The Comprehensive Plan changes adopted by the Fairfax County Board of Supervisors on May 21, 2001 support this position; no transit-oriented land use plans have been adopted or considered for a proposed station in the vicinity of Hunter Mill Road.

Need to Reduce Number of Stations

Public Comment: In conclusion, I believe that the bus rapid transit proposals are vastly superior, but if the politicians really want to see fixed rail service in this corridor, I would urge WMATA to seriously consider killing some of the stations such as in Tysons, at Herndon-Monroe, Route 28 and the ones beyond Dulles Airport. (0112, 0269-M –9)

Response: *Many of the stations identified by the commenter for elimination are important sources of ridership in the corridor, and therefore are not appropriate candidates for elimination.*

Concern About Convenient Pedestrian Access

Public Comment: While the metro extension through Tysons benefits the region, the specific benefit to the new Gannett/USA TODAY headquarters, employing approximately 1,700 people is not certain. The proposed new Tysons stops actually may be farther from our new headquarters than the existing West Falls Church station. They are not within a reasonable walking distance. (0274, 0274-L –1)

Response: *The Project Team acknowledges that relatively few transit patrons would choose to walk between the Gannett/USA TODAY site and Tysons Corner Metrorail stations. For such large trip generators as Gannet/USA TODAY, there should be private shuttle buses that ferry transit patrons to and from the stations.*

Request for Passenger Amenities

Public Comment: Build restroom facilities into the new stations along the Dulles line. Passengers originating in Ashburn, for example, may be on board for well over an hour, including transfers, before reaching their destination. Arriving passengers will likewise have been inside the facility-less Metro

system for a long time. The added convenience for passengers will be well worth the small additional investment in custodial staff. (0290, 0290-L –6)

Public Comment: Public toilets at stations should be supervised and much more easily accessible. As population ages, this becomes even more critical. All public facilities have an obligation to protect the health, in addition to, the security of the public. (0441, 0441-E –10)

Response: *In November 2003, the WMATA Board of Directors today modified former the Metrorail restroom procedures for the public and implemented a variety of enhancements designed to protect customers and employees.*

- *In-station restrooms will be available to Metrorail paying customers upon request to the station manager if the customer has an emergency; if the request is made on behalf of a child; or if the customer is elderly or has a mobility requirement.*
- *Station managers have the right to refuse restroom use, at their discretion, if they feel their personal safety is at risk; or if there is an ongoing emergency on a train, in the station, or on the right-of-way requiring the station manager's immediate attention. Emergencies may include sick customers, station crowding, fare equipment collection issues, or a person on the tracks.*
- *If a station manager refuses restroom use on the basis they feel their personal safety is at risk, or if there is an ongoing station or train emergency, a report must be filed.*
- *Customers will be escorted to the locked ancillary door leading to the entrance to the restrooms. The station manager will unlock the door and direct the customer to the appropriate restroom.*
- *The station manager will return to his/her duties and allow the patron to exit himself/herself. Metrorail Station Facility Preparation*
- *Currently, all 83 Metrorail stations are equipped with a women's and men's restroom located behind ancillary doors in the stations. These individual rooms will be converted to restrooms for customers or for employees only. Additionally, all backroom locks, doors and cabinets will be modified as needed.*
- *Signs will be displayed at kiosks notifying customers of public restroom availability. The following four stations will not have restrooms available for customers for security reasons: Rhode Island Avenue, Addison Road-Seat Pleasant, Vienna/Fairfax-GMU and Pentagon.*
- *The revised operating procedures will be posted on the doors leading to the restrooms.*
- *There may be temporary closing of Metrorail station restrooms for a period of up to 30 days under certain specific security-related situations - when the national alert level is elevated or Orange or above; when a specific threat to rail systems is shared with Metro by the FBI, Federal Transit Administration, the Department of Homeland Security or other federal agency; or when domestic or worldwide terrorism or other related events warrant increased security vigilance.*

Need for Additional Vertical Circulation

Public Comment: More Escalators - The design drawings for most of the Metrorail stations in the Dulles corridor show two escalators and two stairways connecting each station's mezzanine to its platform [for T6]. As recent events within the current Metrorail system have indicated, having more than one escalator operating in each direction has a better chance of avoiding situations where passengers need to walk up or down due to escalator maintenance, planned or otherwise. Accordingly, I would suggest that the stairs planned for these stations be replaced with additional escalators. (0071, 0214-M –6)

Response*: Life safety codes require that, for emergency egress purposes, stairs be provided in addition to escalators. Stairs also provide increased flexibility for station circulation when used in conjunction with escalators.*

Need for Adequate and Reliable Vertical Circulation

Public Comment: We particularly appreciate plans for two elevators at each metro station in case one should become inoperable. We have experienced, and I have personally because I have a daughter who

uses a wheelchair, the difficulty when there is only one elevator that's out of commission at a metro station. Therefore, we feel that two elevators is an absolute necessity. (0259, 0259-T –2)

> ***Response**: Elevators are shown in the General Plans (Final EIS Volume V). Under the selected Metrorail Extension, all new stations would have two elevators serving each level: platform-mezzanine and mezzanine-street.*

Need for Station and Urban Design

Public Comment: The Reston Charrette demonstrated a high level of interest in making the stations more community-friendly through such means as holding an international design competition for the stations, attracting conveniently located services and facilities in and around the stations, and specialized training of staff for the stations with the objective of making the stations become community centers to the maximum feasible extent. Achievement of this objectives ties in well with all of the above recommendations, and can be achieved by adding this objective specifically to the scope of recommendations #3 [air-rights development plans] and #6 [strategies for reducing operating subsidies] and those below. (0478, 0484-E –21)

Public Comment: During the FEIS and rail PE process we need hard work on …Plans for making the stations more community-friendly through design competition, local control of operating policies, and training of staff. (0173, 0213-M –9)

Public Comment: I would also like to make the following suggestions: Every effort should be made to provide high quality stations with ample parking to help ensure that the stations are not only convenient, but attractive additions to the surrounding neighborhoods. (0393, 0393-L –3)

Public Comment: While offering my full support to the rail alternative, I do suggest the following considerations: Every effort should be made to provide the community with high quality stations that will offer not only convenient access to Metro but also an attractive addition to the surrounding neighborhoods. (0418, 0418-L –2)

Public Comment: The pedestrian bridges and stations, as shown for Reston in the Draft REI, are particularly ugly and will certainly be blight on the environment and lower property values below what they could be. As shown, they are particularly insensitive to the present environment and will instill no pride of ownership by the public. There is, consequently, a great probability that they would not withstand the test of time. I agree with others that the stations should be designed as the result of a proper design competition. (0441, 0441-E –12)

Public Comment: Local officials must play a far more effective pro-active role in anticipating the challenges and opportunities associated with the transit system. This is particularly true of the urban design planning needed for stations and the land areas directly adjacent to stations. Local officials must take a more proactive approach to urban design considerations and the planning of internal circulation systems associated with the transit-oriented development anticipated within transit station impact areas. It is appropriate to consider the general massing of structures and the layout of public spaces in the urban centers that will be created through the utilization of the transit system. Simply reacting to private sector proposals is not sufficient. Urban centers such as Tysons Corner, Reston, Herndon-Route 28, and the Route 772 center, will be very unique with the advent of rail service. They must be given local government attention that reflects their exceptional character. The traditional suburban two-dimensional, colors-on-a-map planning approach that has been used here to fore is not adequate to address the unique challenges of these urban activity centers. I challenge local officials to rise to this new opportunity to effectively guide development. It is already apparent that at several of the transit stations, especially the Reston Town Center and Route 772 stations, exclusive busways, light rail systems, or other internal circulation system must supplement a greatly improved pedestrian / bicycle network in order for these important activity centers to function effectively. This won't happen without a serious commitment of attention and financial resources by public officials. (0088, 0211-M –18)

Public Comment: Fostering structural and natural beauty are among Reston's founding principles. The transit-oriented development, necessary and desirable for rapid transit, will also create design challenges in maintaining Reston's beauty and creating a sense of one community north and south of the corridor. The Dulles Corridor Rapid Transit Project will involve massive construction operations in the near term and will foster development with a very high potential for significant increases in storm water runoff and other impacts. We emphasize these principles to County, developers, and other decision-makers now as the rail project is becoming a reality. RCA recommends that Low Impact Development and Green Building Design be incorporated into all plans for station area development. (0478, 0484-E –22)

Public Comment: I think in going forward toward the final EIS, we ought to have -- and this would require more of a delay, but we need significant community charettes, traffic demand and modeling out of this to maximize the number of pedestrian trips accessing transit from the new development that we get. There is still too much of a disconnect between land use and transportation here. I think it's going to take the design first, the appropriate traffic modeling of these pedestrian-oriented centers to make the additional density without increasing traffic congestion unduly. (0149, 0180-T –13)

Public Comment: Pedestrian bridges should also be designed to accommodate "Ponte Vecchio"-type commerce. (0441, 0441-E –7)

Public Comment: All stations & stops should have secure & rain protected bicycle parking located as close to station entrances as possible (closer than all car parking but possibly included in structured parking or within stations themselves). Station areas should be designed for safe on-road bike access [e.g., Bike lanes & ample sidewalks). (0066, 0066-CC-3)

Public Comment: Convenient, weather-protected, secure and ample bicycle parking should be provided at all stops and stations as close as possible to the stations. This could be ideally in covered parking, deck parking at the closest point in those structures near the stations, or within the station areas themselves. That really is an important feature of station design. If you want to get people to abandon their cars to get to the stations, and if they do that, they're more like to take transit rather than drive, you really have to make bicycle parking as convenient and time-saving as possible. (0066, 0254-T –8)

Public Comment: In Tysons Corner, the station design and function of the transit structure and facilities should be integrated into the transit-oriented development and should enhance and complement street frontages. (0387, 2-02)

Public Comment: Canopies for buses, taxis, bicycles, vehicle drop-off/ pick-up, and pedestrians, etc., should be integral with the entrance pavilions, which should be gracious entry/gateway places with various information and convenience commercial facilities. (0441, 0441-E –11)

> ***Response:*** *The land use plans adopted by local government within the Dulles Corridor all contain guidelines to support transit, higher densities, mixed-use development, and walkable, bike-friendly development patterns in close proximity to the transit stations. DRPT will work with the local government to support transit-oriented development initiatives, although implementation of this form of development is under the jurisdiction of the local government in the area.*
>
> *In the final General Plans, the station architecture of the Dulles Corridor Metrorail Project incorporates WMATA's "New Look" design that is now being completed for New York Avenue Station, and the two stations of the Largo Extension. This concept retains key principles of Harry Weese's original design, with more inviting and better-defined entrances, an emphasis on customer information, and an open, graceful, and light feel through the use materials such as steel and glass for enclosures. These are systemwide "signature" elements that support a unified system identity as well as economical design and construction. The project is expected to maintain a high level of design quality through the use of a special architectural consultant during preliminary engineering and final design.*

Station configurations do not preclude community facilities and functions separate from station facilities. WMATA is willing to consider clean retail businesses as part of the station facilities. The concept of a pedestrian bridge with retail business would have to be implemented as part of a joint development project; at this time, no specific provisions are planned to accommodate such development. The timeframe for addressing the technical issues is during preliminary engineering, which has recently commenced.

As indicated in the final General Plans, most of the canopies cited in the above comment are connected to or in close proximity to the entrance pavilions. Entrance pavilions would provide passenger information and space for newspaper vending equipment. All stations have bicycle racks and/or lockers adjacent to station entrances. However, none of these facilities are rain-protected. During final design, roadway widths, lane markings and sidewalk widths will be designed to address bicycle access.

Joint development projects at the stations are also subject to review by the local government through zoning and comprehensive planning procedures.

Public Comment: In conjunction with changes in land use, Dulles rail can reduce regional traffic. Most urgent, of course, is connecting the Orange Line to Tysons Corner and making Tysons work. This means creating the right mix of uses, including affordable housing and good pedestrian-oriented design. We can't simply drop the stations in the middle of Route 7. But it's going to be, if we do all these things, the best way to fix Tysons Corner congestion. (0149, 0180-T –7)

Response: *The Project Team agrees that the Dulles Corridor Rapid Transit Project would not solve traffic gridlock; however, it would provide an alternative to driving the automobile. While it is expected that increased density will result in localized traffic congestion in some of the station areas, the new transit-oriented urban form will help to increase the overall mobility in the corridor, counties, and the region, which would provide better walk and bicycle access within Tysons Corner.*

Need for More Ridership Forecast Detail

Public Comment: Provide more details on the results and methodology of the ridership forecasts that indicate that Metrorail patrons would not park at the West Falls Church Station to access the system. (0430, 2-01); (0520, 2-01); (0521, 2-01)

Response: *Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church Station will return to its former level. Nevertheless, the Project Team does not anticipate any increases in project-related cut-through traffic in the Westhampton neighborhood.*

Public Comment: Concerned that the May 2001 *Final Alternatives Analysis Report* is no longer valid because it ignores that transit ridership and benefits depend on high quality pedestrian access. (0494 2-05)

Travel demand forecasting models are typically not detailed enough to account for the quality of pedestrian linkages to a particular station. For the Draft EIS, the travel demand forecasting model reflects the presence or absence of pedestrian linkages at a particular station, but does not account for the quality of these linkages. Given that the model used for the detailed analysis presented in the Draft EIS does not reflect the effect of high-quality pedestrian access on transit ridership, earlier phases of the project would not be considered invalid because they do not account for these effects.

Public Comment: The EIS at a broad scale attempts to measure pedestrian trips tied to some of the density numbers, but I think it's at too high a level of modeling. (0149, 0180-T –11)

> ***Response:*** *The demand forecasting model used in the Final EIS utilizes an approach called a nested logit model. This model approach is a detailed method for first taking all person trips and distributing them between different modes (e.g. automobile, transit, other mode). The total person trips are modeled based on the number and density of residences in a geographic area called a Transportation Analysis Zone (TAZ). For transit trips the model then distributes trips between different modes of arrival (e.g. walk, auto, feeder bus). In assigning trips to a specific mode of arrival, the model considers total trip time, including time required to access the station by each mode, whether a walk access path exists, available parking, and available feeder bus service. This model is quite detailed and can be further fine-tuned by splitting the geographic analysis zones that are the foundation of the modeling process to more accurately reflect where people live and work within a densely developed area such as Tysons Corner.*

Uses of Future Wolf Trap Station

Public Comment: Believes that any other use for the proposed future station at Wolf Trap, other than a single-purpose station for events, is against project standards especially considering the area zoning, lack of road structure, and absence of commercial or high-density facilities. (0060, 2-01)

Public Comment: Would like to know the purpose of the possible future station at Wolf Trap. Would like to know if the current plans for grading for the future, estimated at $4.4 million, serve a full-service station as well as a single-purpose one? (0060, 2-02)

Public Comment: Believes that in the response to his comment in the *Public Hearings Report*, “park and ride layout and size” and “access roads” signifies an intent to establish a full-time use of the existing Dulles Access Road exit and entrance to Wolf Trap despite road signs to the contrary. (0060, 2-03)

> ***Response:*** *It is currently planned that, if constructed, the Wolf Trap Station would be a single-purpose station, used only for events at the Wolf Trap Farm Park for the Performing Arts.*

Need for Adequate Compensation

Public Comment: Commenter recently learned that his property would be taken as part of the north entrance pavilion for the Tysons Central C Station for the Locally Preferred Alternative. Believes that the company would receive little, if any, compensation and that he would not be able to find affordable property, or property that is zoned for a tire and auto store.(0493, 2-01)

> ***Response:*** *As discussed in Chapter 3 of the Final EIS, DRPT and FTA are required to meet certain standards for the fair and equitable treatment of persons and businesses displaced by federally supported actions. Relocation assistance will follow the guidelines set forth in Title 49, part 24 of the Code of Federal Regulations (49 CFR Part 24).)*

Relocation of Tysons Central C Station Entrance

Public Comment: Requesting that the location of the north entrance pavilion for the Tysons Central C station be moved from the Merchant’s property.(0493 01)

> ***Response:*** *The proposed location of the north entrance pavilion for the Tysons Central 123 Station was developed to be consistent with the transit-oriented development goals of Fairfax County and trackwork alignment geometry for the Metrorail Alternative.*

Request to Revise Responses

Public Comment: Would like the response to his original comment on pages 475 through 477 of the *Public Hearings Report* rewritten. (0494 2-06)

> ***Response:*** *The response presented in the Public Hearings Report is appropriate. However, the Project Team will continue to coordinate with the Reston Citizens Association regarding this issue.*

Public Comment: Requests that the responses to their recommendations on pages 49, 127, 157, 327, 329, 334, 358, 359, 421, and 474 of the *Public Hearings Report* be reviewed as a single set of recommendations for a more constructive response that would be helpful for project implementation. (0494 2-07)

> ***Response:*** *The Project Team did review these comments as a single set of recommendations. However, they were included in the Public Hearings Report under different subject headings.*

Public Comment: The Commenter would like to meet with the Project Team to discuss the above recommendations. (0494 2-08)

> ***Response:*** *The Project Team will continue to coordinate with the Reston Citizens Association on these issues.*

Need to Coordinate with Future Air Rights Development

Public Comment: Requests that the wording of the response to the "Air Rights Development Plans" on page 151 of the *Public Hearings Report* recognizes the need to perform early conceptual engineering work to assure that the recommended improvements in pedestrian access to stations is coordinated with prospective air rights development. (0494 2-09)

> ***Response:*** *With respect to air rights development above Metrorail stations, the Project Team acknowledges that the two Counties govern land use and that FAA, MWAA, VDOT and TRIP II, as the owners and operators of the DIAAH, Dulles Toll Road and Dulles Greenway, must be involved. Therefore, the Project Team will await any initiative of the two Counties with the involvement of the highway owners and operators.*
>
> *Pedestrian walkways are provided from stations in the median of the highways to both roadsides.*

Need to Relocate Dulles Stop

Public Comment: The Dulles Airport stop was never sufficiently detailed. The stop is far away from the terminals, resulting in travel times greater than the existing Washington Flyer service. (0162, 2-08)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*
>
> *The Dulles Airport Metrorail Station is shown in the final General Plans (Final EIS Volume V). This station will have a direct underground connection to the main terminal, and will have a special wide platform to provide plenty of space for passengers with luggage. Space has been allocated in this station for airport information, additional accessible fare gates, and luggage cart rental and return immediately adjacent to the station entrance.*

Need to Evaluate North-South Flow

Public Comment: No analysis done was done for traffic generated at the stations for north-south flow. (0162, 2-09)

> ***Response:*** *The impacts of congestion due to density bonuses are included in Chapter 9 of the Draft EIS and in the Travel Demand Forecasting Methodology and Results Technical Report (June 2002. The overall level of development expected to occur as a result of the density bonuses in the transit station areas is discussed in Chapter 5 of the Draft EIS. The projected level of growth and related traffic and other effects were assessed. All neighborhoods within a half-mile of the transit stations were analyzed to see if they would experience an increase in cut-through traffic or other traffic impacts due not only to the construction of the transit alternatives, but also due, in part, to the increase in traffic associated with the development.*

Access to Stations

Public Comment: You may try to concentrate growth in the Dulles Corridor if you want, but how are people going to get to and from the stations? We do not have sidewalks, so people cannot walk, bike, roller blade, or jog. As long as people still take their cars between stations, home, and office, and as long as people still need cars to get to the grocery store, pharmacy, and baseball field, you have not really reduced congestion. (0007, 0007-E –2)

Public Comment: I strongly support greater emphasis on pedestrian and bicycle access to the stations. I think this is part of an overall urban plan that is needed and I'll go into that in a little bit more detail. (088, 0172-T –5)

Public Comment: In order for this project to be successful, there is a need for the improvement of intermodal connections and this calls for better pedestrian and bicycle access to the stations. A person living near a station could make auto-free trips if well designed trails, crosswalks and bike storage facilities are provided. (0158, 0475-L –6)

Public Comment: Planning for station access, especially for pedestrians and bikes is needed, as well as for a system of feeder buses to expand the transit-shed. (0158, 0475-L –7)

Public Comment: And we have a need to improve station access, especially for walking and biking. (0181, 0181-T –6)

Public Comment: Pedestrian and bicycle access is not yet adequately addressed. (0170, 0170-T –6)

Public Comment: During the final EIS and rail PE process, we need a lot of hard work, and I've got a list of nine things. One of the most important is improved grade upgrading, pedestrian access to stations from all four quadrants of all three of the Reston area stations, and that's been repeated over and over again by every major Reston organization. We need to allow safe access from all directions to the stations. A dense network of attractive and safe pedestrian and bike trails in the whole corridor area. 0173, 0173-T –6)

Public Comment: We believe that effective pedestrian and bicycle access to the transit stations is important in optimizing use of the rail system. (0204, 0247-T –6)

Public Comment: In addition to the two major transit-oriented developments planned adjacent to the platform, other nearby parcels are within the core or transition areas of the planned TRC District and need pedestrian friendly connections to the proposed Route 772 Metro stop. (0014, 0014-L –11)

Public Comment: All nearby pedestrian & bicycle facilities in the Fairfax Countywide Trails Plan (adopted 6-17-02)- including a "major regional trail" along all of the Dulles Airport Access & Toll Rd. and "major paved trails" along Sunset Hills Rd. & Sunrise Valley Dr and all other planned trails, sidewalks &

bikeways within 1/2 mile of all stations & stops should be constructed as an integral part of this project. (0066, 0066-CC-2)

Public Comment: As a board officer of Hunters Green Cluster, located equidistant from the planned Reston Pkwy. And Wiehle Ave. stations, we would be interested in knowing what our pedestrian access routes would be to those stations. (0078, 0078-CC-1)

Public Comment: While the changes occur, planning should include walkways and trails leading to all of the stations to make it easier for walking and biking commuters to use this transportation. (0098, 0098-E –4)

Public Comment: High quality pedestrian and bicycle access to all stations and stops is essential for maximum ridership. Detailed plans for all stations areas should include a comprehensive pedestrian network within one mile radii of the stations and a bikeway network consisting of on route bikeways and high quality shed use paths, within a five-mile radii. The W&OD Trail would provide excellent nonmotorized access in the Reston area, but a trail should also be built along the Dulles Access and Toll Road. (0066, 0254-T –5)

Public Comment: A major regional trail along the entire length of the Dulles Access and Toll Road is part of the Fairfax County comprehensive -- Fairfax County Trails Plan that was adopted by the Fairfax County Board of Supervisors on June 17th of this year. I would seriously consider building at least those portions of the trail that are adjacent to the -- in the vicinity of the transit stations as part of this project. (0066, 0254-T –6)

Public Comment: Also, bicycle access through parking lot locations needs to be carefully thought out and needs to be -- bicycle movement should be safe. Bike range is probably the way to do that, but most of the existing metro stations haven't really given much thought to that. (0066, 0254-T –7)

Public Comment: There are many pedestrian safety and bicycle safety effects that should be addressed. There are also some very positive effects that could be addressed, such as increased use of transit stations by bicycle and pedestrians; by enhancing the network that feeds into these stations. (0284, 0284-T –2)

Public Comment: I would really like bicycle access to be included in any solution. Bicycles greatly extend the reach for a person in a suburban environment, where density is comparatively low. (0076, 0076-CC-4)

Public Comment: During the FEIS and rail PE process we need hard work on…A dense network of attractive and safe pedestrian and bike trails in the corridor. (0173, 0213-M –4)

Public Comment: I strongly support strong emphasis upon effective pedestrian and bicycle access to rail stations.

Both Loudoun and Fairfax County planning officials and elected representatives must take responsibility in assuring that there is close coordination with the Virginia Department of Rail and Public Transportation (VDRPT), the Washington Metropolitan Area Transit Authority (WMATA) and the Virginia Department of Transportation (VDOT) to ensure that pedestrian and bicycle access to stations is not an afterthought in the development of land uses in the primary transit impact areas. A well thought out comprehensive access plan for each transit station is essential, particularly within the urban development centers adjacent to transit stations. (0088, 0211-M –10)

Public Comment: As someone living near Wiehle Avenue metro station, I would like to see trail signs installed throughout Reston trail system and bicycle storage facilities included at the metro stations to encourage pedestrian and bicycle usage. We would like a trail system similar to Reston's system and bicycle storage used throughout the Dulles Corridor Rapid Transit area. (0188, 0217-M –4) (0188, 0188-T –4)

Public Comment: Include pathways along the Toll Road between the stations. We can begin now to make the area more bicycle and pedestrian friendly. (0210,0210-M –7)

Public Comment: The attached station access recommendations referenced above, together with the Reston on Foot plan, provide a good starting point for the development of a plan for a transit station areas pedestrian and bike network. Fairfax County should work cooperatively with community organizations and property owners to develop such a plan. (0478, 0484-E –15)

Public Comment: Pedestrian and bicycle access is not yet adequately addressed. (0233, 0426-M –9)

Public Comment: Make adequate provision for pedestrian access to Tysons rail stations. (0392, 0392-L –6)

Public Comment: Pedestrian and bicycle access to stations: The description in the draft EIS of the plans to implement pedestrian and bicycle access to the stations is adequate. The EIS should be revised to describe the plans for pedestrian and bicycle access to each proposed station. The area considered should be at least a 3/4- to 1-mile radius from each station. The EIS should state more specifically how bicycles would be accommodated at the stations. If these needs and plans are incomplete at this time, the EIS should describe the process that will be used to identify the needs and develop these plans, including public participation. The EIS should state that pedestrian and bicycle access facilities would be paid for as part of each build alternative. (0392, 0392-L –8)

Public Comment: Compliance with Fairfax County Trails Plan: The EIS should describe how the Build Alternatives would affect and comply with the Fairfax County Trails Plan and what elements of the Plan must be implemented as part of the Build Alternatives. For example, the EIS should state whether the Scotts Run Stream Valley Trail would be completed in the vicinity of the Tysons East station as part of the rail alternatives. (0392, 0392-L –9)

Public Comment: While I realize the State DOT is in financial peril, the funds for this should come out of the project budget. These sidewalks will allow the pedestrians a much higher degree of safety. Our area [Westhampton] will have a large increase in vehicles attempting to get to the WFC Metro station-and sidewalks will be a big help in cutting down serious injuries. Too, speed humps, stop signs, sound barriers are all going to be necessary to appease the neighborhood. (0423, 0423-E –1)

Public Comment: Finally, if the [T4] Loop Option is adopted, our preference is that station access be provided on the East Side of International Drive, again because we feel it provides shorter and safer access to the residents who live here. (0395, 0395-L –3)

Public Comment: Access to stations: There must be auto and/or bus access to stations, depending on the station location. There was little discussion of this in the Draft EIS other than the proposal to construct a multi-level parking garage at the western end of Tysons Corner on Route 7. There must also be pedestrian and bicycle access to the stations to encourage people to walk or bike to the stations if possible. Rationale: It is a disincentive to ride transit if there is no feeder bus service to the stations, no parking at the stations or at park-and-ride lots, or no pedestrian/bike access. While these "amenities" are not the direct responsibility of VDRPT or WMATA to design and construct, they are essential elements of an efficient transit system. (0402, 0402-L –11)

Public Comment: Additional study is warranted at station locations to ensure the most appropriate design. (0413, 0413-L –3)

Public Comment: The Project team should show complete system planning approach for walkways and pedestrian access in addition to that provided to get riders from a drop off point to station. (0392, 2-01)

Public Comment: With all but the T4 alignment, the stations located along Routes 7 and 123 seem to be somewhat remote from the office and residential development north of Route 7 and west of 123. Thus,

the alternatives as proposed may not be reaching the full ridership potential. Furthermore, the rolling topography in this area does not appear to be all that conducive to walking. (0387, 0387-L –3)

Public Comment: Pedestrian Issues in Tysons Corner: Currently in Tysons Corner, it is very difficult, intimidating, and generally pedestrian-unfriendly for pedestrians and bicycles to cross Route 7 and Dolley Madison Boulevard/Chain Bridge Road. Construction of an elevated rail structure along these roads could increase this pedestrian problem. The EIS should be revised to describe how this issue would be addressed at the proposed rail stations and along the route of the elevated structure. The EIS should state where pedestrian bridges would be constructed between stations along Route 7 as part of the raised rail support structure or should at least describe how the design of the raised structure would accommodate pedestrian bridges in the future. (0392, 0392-L –15)

Public Comment: Access to the stations should be more comprehensive. There are not enough separate pedestrian, bicycle and "jitney" routes allowed for. In order to allow for this and future effective jitney service, the pedestrian bridges must be much wider and more space should be allowed for parking bicycles, scooters, etc. (0441, 0441-E –6)

Public Comment: Inasmuch as I and other residents nearest the proposed Wiehle Avenue station live south of the proposed station location, I was pleased to see the inclusion of means of direct pedestrian access to the Wiehle station from both the north side, where the Park and Ride facilities are located, and from the south side. I hope that this dual access means will be kept in the final plans. (0194, 0216-M –3) (0194, 0194-T –3)

Public Comment: Welcomes the project team's desire to ensure user-friendly access to Metro stations. States that recent surveys underline the fact that achieved ridership will be a function of access ease as well as journey time. (0133, 2-05)

> ***Response****: Station locations were identified and located based on proximity to residential, employment, and recreational locations, engineering constraints, and access. Ridership estimates were then developed based on these station locations. The demand forecasting model used to estimate ridership takes into account a number of factors when producing ridership estimates. These factors include overall trip time (including access to the station), station proximity to key employment concentrations, station proximity to residential concentrations, and ease of station access for pedestrians, autos, buses, and other modes.*
>
> *As described in Chapter 3 of the Final EIS, the land use plans adopted by local government within the Dulles Corridor all contain guidelines to support higher densities, mixed-use development, and walkable, bike-friendly development patterns in close proximity to the Metrorail stations. These plans are under the jurisdiction of local government, including the initiation of transit-oriented development around stations. DRPT will work with local government and developers that might be interested in developing transit-oriented development around stations.*
>
> *DRPT is the Project's sponsor and initial owner. However, the responsibility for modifications of sidewalks and trails as part of station access is with Fairfax County, Loudoun County, Town of Herndon, City of Falls Church and VDOT. DRPT will, though, coordinate with these jurisdictions and agencies during preliminary engineering and final design to determine the improvements for station access beyond the station site plans, as well as their ownership and maintenance. Close communication would also occur with the Fairfax County Non-Motorized Transportation Committee, private landowners and developers and other stakeholders. The Fairfax Countywide Trails Plan and the Loudoun County Trails plan have been and will be consulted. Comprehensive pedestrian circulation beyond the station site plans may be implemented in conjunction with other planned developments, County, and/or State projects and/or as elements of the Fairfax Countywide Trails Plan and the Loudoun County Trails plan.*
>
> *All stations will have bicycle racks and/or lockers adjacent to station entrances. Specific quantities will be determined as part of final design.*

Table 6.3-3 of the Final EIS describes the Project's park-and-ride program. The selected LPA is a Metrorail Extension that has the following park-and-ride capacities:

STATION	*SPACES*	*YEAR*
Tysons West	*500*	*2011*
Wiehle Avenue	*2,300*	*2011*
Herndon Monroe	*3,500*	*2015*
Route 28	*2,000*	*2015*
Route 606	*2,750*	*2015*
Route 772	*3,300*	*2015*
Total	***14,350***	***2015***

These park-and-ride facilities are in structures, as shown in the General Plans.

Each of the eleven Metrorail station has a pedestrian bridge or underground passageway that connects the station's mezzanine to the other side of the roadway or highway. The pedestrian bridges and stations are designed so that pedestrians may cross from one side of the roadway or highway to the other without entering the station proper and without paying a fare. However, it is anticipated that during the few hours that the station is not open, the entrances to the pedestrian bridges and vertical circulation devices would be secured due to security and vandalism concerns. Should the local government desire these bridges to remain open 24/7, WMATA, as the operator, may request that the local government be responsible for maintenance and operation of the entrance and pedestrian bridge facilities.

Construction of additional pedestrian bridges between stations is not within the scope of the Project. The Metrorail aerial guideway in Tysons Corner does not preclude construction of additional bridges by others; however, no specific provisions have been made to accommodate them. Nor are there plans to accommodate jitneys or other motor vehicles on the pedestrian bridges of the stations.

Need Mitigation to Address Congestion

Public Comment: The final EIS should more fully address mitigation tools to minimize the traffic congestion forecasts around stations. (0396, 0396-L –6)

Response: *Chapter 6 of the Final EIS discusses the traffic mitigation measures for the two Build Alternatives and station areas. Based on the traffic analysis, most of these mitigation measures would reduce the level of service and delay at some intersections to the levels forecast for the No-Build condition.*

Service to Tysons Corner

Public Comment: Adequately Serving Tysons Corner: The draft EIS does not describe how well the proposed rail alternatives serve the Tysons Corner area. The EIS should be revised to discuss this issue directly and completely. For example, the EIS should be revised to state the percentage of Tysons Corner workers that would be served by each rail alternative. The EIS should state why a one-half mile radius around the rail stations was used as walking distance instead of the more-standard 1600 feet. (0392, 0392-L –11)

Response: *Chapters 3, 5, 9, and 10 of the Final EIS present information on land use effects and the planned development at Metrorail stations throughout the Dulles Corridor. The population and employment levels within Tysons Corner station areas are presented in each of these chapters. As described in Chapter 5, the development effects in Tysons Corner are assessed for an area within 1,600 feet of the proposed stations.*

Parking Facility at Spring Hill Road Needed

Public Comment: For the station at Spring Hill Road I'm suggesting that to include a park & ride facility as part of station design. Since it is centrally located location. (0067, 0067-CC-1)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*
>
> *A parking facility at Spring Hill Road had not been not included as part of the Draft EIS analysis because it had been anticipated that Spring Hill Road/Tysons West*Park would be an interim facility as part of Phased Implementation from BRT to BRT/Metrorail to Metrorail.*

24 Hour Parking Needed

Public Comment: Suggest design parking areas for vehicles legally able to park >24 hours, which is often required when traveling by air. Currently taking metro to National Airport is difficult since most people must drive to metro and cars are towed after 24 hours. (0079, 0079-CC-1)

> ***Response:*** *WMATA currently has some 24-hour parking for use by airport patrons at select Metrorail stations. Greenbelt, Huntington, and Franconia-Springfield each have between 15 and 17 spaces allocated for multi-day use and are available on a first-come, first-served basis. The potential for 24 hour parking at Dulles Corridor Metrorail stations may be considered. Possible disadvantages include the potential for airport patrons to use less expensive parking at rail stations instead of more expensive airport parking, thus denying parking capacity to daily transit riders.*

Parking Pricing to Limit Demand

Public Comment: A plan for parking and travel demand management that includes emphasis on rational parking pricing, to limit auto congestion and assure availability of parking spaces, integration of parking with mixed use transit-oriented development, and strategies for market rate private parking facilities. (0173, 0173-T –8)

> ***Response:*** *Transportation demand management (TDM) is a useful tool for dealing with issues related to transportation, land use, economic development, and environmental quality in an urban context. TDM can be used to manage the transportation system better, which would increase mobility, and reduce pollution. TDM can also be used to mitigate negative consequences of development, particularly increased traffic congestion and air pollution, while perhaps encouraging additional development to occur through the avoidance of traffic gridlock, if, when, and where TDM is implemented properly. The compact, mixed-use development planned for the station areas would enhance accessibility by transit, walking, and biking. Some employer-based TDM strategies, such as carpool/vanpool incentives, parking management, financial/time incentives, and information and marketing could also greatly reduce single occupant vehicle (SOV) traffic volumes.*

Public Comment: During the FEIS and rail PE process we need hard work on…A plan for parking and travel demand management that includes emphasis on rational parking pricing to limit auto congestion and assure availability of parking spaces, integration of parking with mixed-use transit-oriented development, and strategies for market-rate private parking facilities. (0173, 0213-M –6)

> ***Response:*** *Integration of parking with adjacent development will be the topic of continuing coordination with Fairfax and Loudoun counties, property owners, and developers. Both Fairfax and Loudoun counties have ongoing travel demand management programs that include car and vanpool assistance and employer assistance such as the Metrocheck program. Creating a*

parking policy that would use parking pricing to ration and minimize parking demand would require agreement among private parking operators, local and state governments, and regional entities such as the Metropolitan Council of Governments. Implementing such policy is beyond the scope of Dulles Corridor Rapid Transit Project, and as it was not in place at the time of the development of the Final EIS, it was not included in the ridership demand forecasting analysis.

Parking Access in Tysons Corner Area

Public Comment: There appears to be no easy access from Eastbound Route 7 to the Tyson's West Parking Garage. Is it just wistful to believe that most of the significant Eastbound traffic will instead elect to utilize rail- or is this "oversight" designed to discourage automobile traffic and push it to the Metro? (0041, 0041-CC-1)

Public Comment: The proposed Tysons west parking structure will just make the current Rt 7/ DTR intersection backups even worse. For a 2000+ space garage to work the Rt 7 bridge will need to be 4 lanes inbound and the DTR exits will need to be widened. The plan for the garage must include these road improvements- explore using Wolftrap instead. (0043, 0043-CC-3)

Public Comment: From the information presented in the Traffic Analysis and Stations Access Study, it's clear that the level of service at the Tyco Road/Route 7 intersection will be unacceptable at LOS F under all scenarios. The access to the station facilities will be severely compromised as a result. The location and/or design of these facilities should therefore be considered unacceptable as presented. It is incumbent upon the planning/design team to come up with a plan that addresses this access deficiency either by adding additional features, proposing additional road improvements or even possibly moving the surface facilities even if it means relocating the station platform if that's what it takes to address this problem. Addressing this issue becomes even more critical when a larger facility program, which actually meets the projected demand, is considered. (0387, 0387-L –43)

Public Comment: Moreover, providing parking for 2,000 cars next to the station will encourage additional traffic at the already congested intersection of Tyco Road and Route 7. This station, currently operating at a LOS F during the AM and PM peak periods, cannot accommodate the additional traffic associated with a large commuter parking garage. This fact is acknowledged in Section 14.3.1 of the "Traffic Analysis and Station Access Study-Technical Report" (the "Traffic Technical Report"), which indicates Tyco Road and Route 7/Leesburg Pike will operate at LOS F in 2025 under all of the alternatives considered. Importantly, the intersection functions work after the construction of the parking garage than it otherwise would under the Baseline (No-Build) alternative. We suggest that, before the Commonwealth selects a locally-preferred alternative that includes this massive garage, the Project Team should clarify the benefits to be achieved by constructing a parking garage that increases traffic congestion in an already-congested area. (0135, 0391-L –15)

Public Comment: The proposed Tyson's West parking structure will just make the current Route 7-Dulles Toll Road intersection backups even worse. For a 2,000-plus space garage to work, the Route 7 bridge will need to be four lanes inbound, and the Dulles Toll Road exits will need to be widened. The plan for the garage must include these road improvements. I would suggest exploring using the Wolf Trap parking instead. (0043, 0276-T –3)

Public Comment: I am also against putting huge parking structures up at Tysons West - unaesthetic, congestive, likely to crowd & creates more traffic. Horrible idea, unless it's underground. (0030, 0030-CC-4)

***Response*:** *The park-and-ride at Tysons West Station has been reduced from 2,000 to 500 spaces specifically in response to concerns regarding traffic impacts. The 500-space park-and-ride would be part of a joint development project, so the private sector would be involved in the design and development. However, the specific location and design is not yet known. The park-and-ride would be accessed from local roads, and its cost is part of Wiehle Avenue Extension.*

Restricted Access to Herndon-Monroe Parking

Public Comment: Is there a plan to restrict the parking (new) at Herndon Monroe to Toll Access only or is the plan to allow entry from the toll with exit to Sunrise Valley. During the discussion on the original garage we were told that only 700 or so spaces would be accessed from Sunrise with the rest accessed by the Toll Rd. Those vehicle that entered from the Toll Rd. were to be required to exit back on to the Toll Rd. (Westbound) that lasted less than one year. (0081, 0081-CC-1)

> ***Response*****:** *As configured in the General Plans, all sections of the park-and-ride can be accessed by all vehicles. Policy regarding limited access to Sunrise Valley Drive would be under the authority of Fairfax County. However, limits on ingress and egress could have negative effects on patronage for the project.*

Public Comment: Create access to parking garage from the West bound toll road - eliminate traffic on Sunrise Valley Drive. (0075, 0075-CC-5)

Public Comment: Take a serious look at the development plan for the Herndon-Monroe Park & Ride. Access from the north side of the Toll/Access Road is a necessity. Eventually a parking garage should be built on the northside. (0075, 0075-CC-3)

Public Comment: Build access to east and west bound toll road for passengers leaving the HM parking garage. (0075, 0075-CC-6)

> ***Response:*** *Access to the Herndon-Monroe facility from north of the Dulles Toll Road is already adequate, with a number of alternative means of crossing the Dulles Toll Road in the vicinity of the Park-and-Ride, including Fairfax County Parkway, Monroe Street and Centreville Road. The limited number of vehicles that would use an additional direct connection from the westbound Dulles Toll Road to the Herndon-Monroe Park-and-Ride facility would not significantly reduce the current traffic volumes using the access on Sunrise Valley Drive.*
>
> *Parking at each Metrorail station was designed and sized based on projected demand for spaces, site constraints, and cost. Consultation with local government was also an integral part of the sizing of parking facilities.*

Tysons Central 123 Station

Public Comment: Each of the rail options shows a five-way bus transfer center at the parking terrace D located along the internal ring road adjacent to Route 123, between Lord & Taylor and Hecht's. As noted above, we are currently providing bus stops in the mall and we are open to discussing an enhanced role for such facilities as part of the center's continued development. (0143, 0143-T –2)

Public Comment: However, we have certain issues and items that we would like to bring to your attention tonight and to discuss with WMATA in greater detail before the Commonwealth selects an ultimate alternative. Number one is parking. I noted that the proposed bus transfer station is located abutting a parking structure that serves the Tysons Corner Center mall currently along the ring road. It is not a WMATA garage, it is not another public entity's garage, it is in fact a private facility constructed to serve and does serve the property owners' business interests and those of its tenants. Moreover, we depend on the availability of those spaces to serve our customers and employees. We are concerned, however, that making the Tysons Corner Center a de facto park-and-ride facility by locating a bus transfer station abutting this parking structure represents a potential unintended consequence for the rail system. We encourage WMATA to respond to this issue as part of its ongoing study, and we offer our time and assistance in your doing so. (0143, 0143-T –3)

Public Comment: Related to the potential impacts of this parking situation, the location of the bridge platform next to the parking structure, we also think it has the potential to impact development and redevelopment of the areas immediately adjacent to the rail station and the bus transfer facility. We

encourage the Commonwealth and WMATA to select designs that permit and encourage redevelopment and development of pedestrian-friendly, transit-oriented development within walking distance of this bus and rail station. (0143, 0143-T –4)

Public Comment: I note that the parking structure where the bus transfer facility is proposed to be located represents the closest underdeveloped area adjacent to the station. We need to make sure that we have the flexibility both working with you and in the ongoing future to design redevelopment in the bus transfer station in ways that facilitate and complement each other, not preclude one another. (0143, 0143-T –5)

Public Comment: Finally, I would note that circulation concerns remain an issue that we would like to work through with WMATA. We have concerns in particular about the circulation patterns for the buses accessing this proposed bus transfer facility. The design overlay included as part of the DEIS highlights the potential conflicts of buses making left turn lanes as they seek to re-enter the internal ring road within the Tysons Corner Center. We hope and intend to work with WMATA's staff and the Commonwealth to learn more about the potential circulation issues as it relates to this facility and to minimize the effect both on the mall property as well as service within the Tysons Corner area. (0143, 0143-T –7)

Public Comment: Each of the rail options for the Tysons Central station includes a 5-bay bus transfer station abutting Parking Terrace D of the Center located along the private, internal ring road adjacent to Route 123 and between the Lord & Taylor and Hecht's department stores. It appears from the DEIS exhibits and from our meetings with the Project Team that this bus transfer station would be constructed in an area that already is improved with a parking structure, surface parking spaces and the private internal ring road servicing the Center. We also understand that the bus transfer station would be linked to the rail platform via a pedestrian bridge across Route 123. We are concerned about the location of this bus transfer station along he narrow, private ring road of the Center and abutting the parking structure. That area of the Center is a major entry and exit point for customers and employees accessing the Center from Tysons Boulevard and Chain Bridge Road/Route 123. This is especially true during the holiday shopping months of November and December, when the local police officers are used to direct and manage the flow of traffic through the area. The narrow passageways and tight turns of the private ring road and parking structures also represent substantial circulation and access challenges for buses and passenger vehicles traveling in opposite directions. The introduction of additional bus activity in an already congested area of a private street that the Owners constructed and continue to maintain at their expense, will have a substantial effect on the Center's operation and imposes undue public burdens on a developed commercial property that is arguably the centerpiece of Tysons Corner. We support the need for and construction of appropriate pedestrian access to and from the Center and the Tysons Central transit station; such a connection is vital to ensuring the proposed transit system functions as intended and desired. We do not support, however, constructing a major, new bus transfer station in an already-developed area that has established and unique circulation patterns. (0406, 0406-L –3)

Public Comment: We suggest that the Project Team consider locating the bus transfer station across Route 123 on the undeveloped parcels located between Galleria Drive and Route 123 west of Tysons Boulevard and east of International Drive. That location is conveniently adjacent to the proposed Tysons Central rail platform and provides improved ingress/egress opportunities to the service areas of the buses that will utilize the proposed bus transfer station. Indeed based on our review of the "Transit Operations and Maintenance Plan-Technical Report", we understand that the bus transfer station would serve as a transfer point for rail passengers transferring to several proposed Circulator Bus routes (Tysons Circulator Routes A, B, C and D). Three (3) of the four (4) Circulator routes would serve areas of Tysons Corner that are north of the Center, including Jones Branch Drive, Westpark Drive and Tysons Boulevard, while the fourth route would service areas to the south of the Center, including Old Courthouse Road. Thus, the majority of Circulator or feeder buses (and passengers) entering and exiting the proposed transfer station could be expected to come from or be destined for areas on the same side of Route 123 as the proposed rail platform, rather than on the south side of Route 123, where the Center is located. Moreover, we also understand that the proposed bus transfer station at Tysons Central would serve passengers of Fairfax Connector and WMATA buses whose origin or destination may be Crystal City, Old Town Alexandria, Reston/Herndon and other areas of Northern Virginia. Access to these routes would,

for the most park, be via arterials such as Route 123. Again, location of the proposed bus transfer station on the north side of Route 123 would be more convenient for passengers accessing the rail platform. It also would offer less congested and more direct access to and from Route 123 for the Circulator, Connector and WMATA buses utilizing the bus transfer station. Otherwise, these buses would need to circulate through the private internal ring road of the Center, creating conflicting movements with passenger vehicles in fairly tight turning areas. By no means would these conditions be ideal. (0406, 0406-L –4)

Public Comment: To help illustrate the benefits of relocating the bus transfer facility, attached as 'Exhibit A1' is a route map showing the circulation patterns for the four (4) Tysons Circulator bus routes (Routes A, B, C and D) that are proposed to serve the Tysons Central station. 'Exhibit A2' shows the ingress/egress and circulation routes for the Fairfax Connector and WMATA buses that also will use the Tysons Central station. As is evident from the drawings, most of the routes originate and serve areas north of the Center between the Dulles Airport Access and Toll Road (the "DAAR") and Route 123. Placing the bus transfer station on the north side of Route 123 along Galleria Drive offers more direct access to the bus routes (many of the routes utilize that portion of Galleria Drive) and avoids the narrow pathways and circulation challenges of placing the transfer station on the Center's property. (0406, 0406-L –5)

Public Comment: 'Exhibit B', also attached, is an example of how the bus transfer station could be constructed along Galleria Drive on one of the currently undeveloped parcels adjacent to the rail platform (the "Alternate Location"). The proposed Alternate Location is served by a four lane divided and undivided public roadway (as opposed to a private, two-lane road at the Center) and includes median breaks for improved access and circulation into and out of the bus transfer station. It also is centrally-located to the Circulator bus routes and Route 123; in fact, many of the bus routes pass directly in front of the Alternate Location. Best of all, though, the Alternate location is undeveloped. The bus transit station could be integrated as part of a joint development with the rail station to provide convenient access for passengers while avoiding the need to "force" a transfer station into an already developed and established property. Indeed, we understand that Fairfax County already is reviewing a zoning application to integrate the rail platform and associated facilities into the design and development of the Alternate Location. Adding the bus transfer station to that design should be included in the County's review. (0406, 0406-L –6)

Public Comment: Tysons Central D Station --

A. Why are there no surface facilities planned for the north side of 123 where they would be immediately adjacent to the station entrance facilities rather than several hundred feet away on the south side of 123.
B. Does the plan for the bus terminal assume that this terminal will replace the current terminal near Nordstroms? If so, has the bus bay program adequate to accommodate both the needs of the station and the existing shopping center terminal. It would seem counterproductive to have two separate widely spaced bus terminals at one shopping center. (0387, 0387-L –45)

Public Comment: We recently met with the representatives of the Project Team to review these issues and to suggest alternative designs of the pedestrian connection. We are still working on those designs and appreciate your flexibility and willingness to consider alternative terminus designs as the project moves into more detailed engineering and design stages. We are supportive of having a pedestrian connection from the rail platform in the general location shown in the DEIS, but we ask for greater flexibility to integrate the connection terminus into the Center and its environs. At this stage, however, we understand that such a detailed design proposal is not necessary or required for purposes of determining the locally-preferred alternative. (0406, 0406-L –10)

Public Comment: Beyond the location and design of the bus transfer station, we also have concerns regarding the terminus point for the pedestrian bridge linking the rail platform on the north side of Route 123 to the Center. The pedestrian bridge appears to terminate at a point abutting Parking Terrace D. We certainly appreciate the opportunity to have direct pedestrian access to the Center and believe this

connection will help enhance transit ridership. We believe, however, that the terminus of the pedestrian bridge should be designed to better link the rail platform to the Center. (0406, 0406-L –7)

Public Comment: Indeed, providing a coordinated and convenient pedestrian connection to the Center, while retaining flexibility to modify the connection in the future, is critical to ensuring the viability of the Tysons Central station. The current design, which leads to the exterior of a structured parking facility, does not maximize the opportunity to creatively accommodate the flow of rail passengers between the rail station and the Center in a manner that would benefit both the Center and the Commonwealth. (0406, 0406-L –8)

Public Comment: As we mentioned in our presentation at the public hearings, we are concerned that the proposed terminus of the pedestrian connection at the parking structure is an invitation for transit riders to park their vehicles in our private, customer and employee parking garage and ride the rail transit line. Creating a de facto park-and-ride facility at our parking facility is not in our interest or in the Commonwealth's interest, and we ask that you work with us to prevent such a result. (0406, 0406-L –9)

Public Comment: We look forward to working with the Project Team and your office to work out these details in the coming months. In the meantime, please note that we suggest a different configuration of this pedestrian connection is appropriate, and ask that our notation be included and acknowledged in the responses prepared by WMATA. (0406, 0406-L –11)

Public Comment: Tysons Central D and Tysons West need special attention, as the station facilities are located within areas that are functionally difficult most of the year. The surface facilities should be located on the north side of Route 123 so that buses would not have to cross Route 123 and would be between the two shopping centers. Facilities should be built on vacant land, thereby guaranteeing proper integration into future development. (0387, 2-03)

> ***Response:*** *The proposed entrance pavilions and other station facilities at the Tysons Central 123 Station are important to the success of the project. In response to public and interagency review and comment on the Draft EIS, the intermodal facilities of the Tysons Central 123 Station have been reconfigured. As indicated in the General Plans (Final EIS Volume V), the south side bus bays have been relocated and reduced in quantity, and bus bays are now also provided at the north side. During preliminary engineering, DRPT and WMATA will continue to work with Fairfax County, VDOT, affected property owners and developers to coordinate integration of the station facilities with existing and proposed development. Any integration of the intermodal facilities with a proposed development will be subject to review by Fairfax County through its zoning and comprehensive planning procedures.*

Tysons Central 7 and 123 Stations

Public Comment: Tysons Central Stations. For these stations to realize their full ridership potential, kiss & ride and taxi spaces as well as bays for internal shuttles as well as scheduled bus service should be provided at each station. Again, without these facilities, which would be relatively inexpensive, the effectiveness of a transit system costing as much as $3.3 billion would be compromised. (0387, 0387-L –46)

> ***Response:*** *The Project Team will continue to coordinate with Fairfax County and VDOT on issues of station access. Due to limitations of available right-of-way, and likely limitations on additional curb cuts at Route 7, the parallel service roads, the Project Team is not proposing any off-street facilities for taxicabs at the Tysons Central 7 and Tysons Central 123 Stations.*

Vertical Circulation, Platform Clear Space, and Fare Gates

Public Comment: Stations -- While I haven't checked the designs of the stations in detail, it should be confirmed that the design of the stations including vertical circulation, platform clear space especially at the constrained portions of the platform near the stairs and escalators, numbers of fare gates and

vendors, conform to WMATA's design criteria. Since there is no indication of future fare collection equipment in any of the station designs, it should also be confirmed that the program of fare collection equipment and other facilities in the station also allows for future ridership growth (usually 30% above the design year forecast). (0387, 0387-L –28)

> ***Response:*** *Vertical circulation, platform clear space and fare gate and vendor quantities, conform to WMATA-established design criteria. Fare gate quantities shown on the drawings are for design year 2011 or 2015 patronage, and all stations have sufficient space to accommodate 2025 patronage projections. Future fare collection equipment is clearly indicated for Metrorail stations where patronage growth between 2010 and 2025 would trigger the need for additional fare gates.*

Station Site Plans

Public Comment: The site plan configurations at many of the proposed stations are poorly conceived. As the station surface facilities are the points where the traveling public interfaces with the transit system, the design of these facilities is critical if a smooth interface is to occur. A poorly functioning facility will discourage ridership. Most of the deficiencies noted below can be corrected for relatively little additional cost or impact. It's critical that the deficiencies be addressed now in the planning process with the redesigns reflected in the approved general plans for the stations. Experience has shown that the site plan configurations approved during the planning process are what you will see on the ground almost without exception. (0387, 0387-L –29)

> ***Response:*** *Station site plans represent a balance between availability of real estate, environmental constraints, and transportation programming requirements. Station site plans presented in the final General Plans demonstrate overall feasibility of the stations in each location, and the designs will continue to be refined during preliminary engineering, in coordination with VDOT, Loudoun and Fairfax counties, and adjacent property owners and developers. Experience shows that, using the WMATA Largo Extension as an example, significant refinement occurs between the early NEPA phase general plans and the final design documents.*

Configuration of Kiss-&-Ride Facilities

Public Comment: The circulation in many of the kiss & ride facilities calls for traffic to proceed the wrong way along aisles that are clearly intended to be one way aisles in the opposite direction due to the orientation of the parking spaces. (Traffic proceeding in the "wrong" direction could not access the angled parking spaces which are oriented in the opposite direction.) Also many of these same facilities also do not allow kiss & ride traffic to recirculate within the lot to be able to return to vacant spaces that may have been by passed on entry into the lot. This is a particularly important feature to provide when the lots are crowded during the PM peak period. Another problem with some of the kiss & ride facilities is that they place the passenger loading area at the end of the facility which would cause waiting vehicles to queue at the turnaround area where the pavement is the narrowest thereby jamming up the entire facility. These end loading facilities lead to operationally disastrous situation. The conditions noted above are found in the proposed site plans at the following proposed station sites. Route 772: BRT Option 1 has wrong way traffic, lack of or poor recirculation, and end loading; BRT Option 2 has lack of or poor recirculation and end loading; "Metro North" Option 1 has lack of or poor recirculation and end loading; "Metro South" Option 2 has lack of or poor recirculation and end loading. Route 606: BRT 1 has lack of or poor recirculation and end loading; and "Metro L1" has wrong way traffic. Route 28: "D1 South" has lack of or poor recirculation. "Reston Parkway North": BRT 1, BRT 2, and "D1" have wrong way traffic, lack of or poor recirculation, and end loading. "Reston Parkway South" has lack of or poor recirculation and end loading. Tysons East Station has end loading. (0387, 0387-L –30)

> ***Response:*** *Kiss & Ride spaces cited in this comment are correctly configured in accordance with current WMATA practice, allowing vehicles to move forward while entering and exiting the space. Route 772 plans cited in this comment provide for recirculation; comments regarding end*

loading will be addressed as station plans are refined, and will be balanced against programming needs and real estate availability. Recirculation on the cited plan at Route 28 South has been addressed in the final General Plans.

Public Comment: Route 606 BRT 1- K & R driving aisles too narrow. (0387, 0387-L –31)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Configuration of Parking and Bus Platforms at Route 606 Station

Public Comment: Route 606 Metro L1- Locating the garage so that all of the people parking in the garage have to cross the bus lanes to reach the pavilion will severely disrupt bus operations. Garage vehicular access is poorly configured with limited queuing area beyond the gates and dead end areas within the garage. (0387, 0387-L –32)

Response: *Bus facilities are sited to optimize access to the station entrance pavilion, which includes vertical circulation accessed directly from upper levels of the parking structure. This will provide access for almost all park-and-ride patrons, without having to cross the bus lanes. Ramps are configured to support phased construction of the garage. Exterior queuing is based on the split road system and the fact that the cars will have free flow into the garage at all times on a pay-on exit system. Access configuration promotes a straight in and out flow to the main ramp systems within the garage. The internal exit queuing on the ramp system works well for exit queuing. A small amount of dead-end parking is present only on the first level on the first phase, and was included to maximize the investment in parking.*

Public Comment: Route 606 BRT 1,2,3. Garage vehicular access is poorly configured with limited queuing area beyond the gates, dead end areas within the garage, ramp designs that won't result in the optimal circulation within the garage. (0387, 0387-L –33)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Route 28 Station Kiss-&-Ride

Public Comment: Route 28 D1 South. Kiss & ride facility is poorly designed and very likely undersized. The L-Shaped garage inefficient from a circulation standpoint. (0387, 0387-L –34)

Response: *The park-and-ride structure cited in this comment has been configured to avoid impacts to adjacent wetlands. The southside Kiss & Ride at Route 28 has been refined in the final General Plans.*

Public Comment: Route 28 D1 North- Kiss & ride facility very likely undersized. (0387, 0387-L –35)

Response: *Facilities shown in the final General Plans meet patronage demand for Kiss & Ride/short-term parking. This facility has been configured to minimize real estate requirements.*

Herndon-Monroe Station Kiss-&-Ride Spaces

Public Comment: Herndon-Monroe BRT 3. What are unlabeled pull in/backout spaces on the north side of the facility for? Whatever they're for, the need to back out of the spaces will compromise traffic

flow. General vehicular traffic should not be allowed to be in the bus bays on the north side as it will compromise bus operations. (0387, 0387-L –36)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS. The cited facilities are no longer an element of the site plan.*

Tysons West*Park Kiss-&-Ride Spaces

Public Comment: Tysons WestPark BRT 1&2. The pull in/back out spaces will impede traffic flow within the kiss & ride facility rendering it effectively useless during the PM peak period. The resulting spill over will impede bus operations which will make the entire local side of the facility essentially useless. (0387, 0387-L –37)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Tysons West Kiss-&-Ride Facility

Public Comment: Tysons West Metrorail. The kiss & ride facility appears to be much too small to be effective. The pull in/back out spaces will impede traffic flow within the kiss & ride facility rendering it effectively useless during the PM peak period. Where are facilities for taxis and employee shuttles? (0387, 0387-L –38)

Response: *For Tysons West Station entrance and facilities, the Project Team recommended, and the decision-makers selected Option E site plan to replace the plan presented in the Supplemental Draft EIS and revised General Plans. Option E has its station entrance at the inbound, east end of the station near Spring Hill Road. The bus bays and Kiss & Ride of Option E are located between Tyco Road and Spring Hill Road, set back from Route 7.*

Tysons East Kiss-&-Ride Spaces

Public Comment: Tysons East Station. The use of pull in/back out spaces along what would be the primary drive aisle would seriously disrupt traffic flow and would effectively cause the facility to fail during the PM Peak hour. (0387, 0387-L –39)

Response: *During preliminary engineering, this aspect will be considered.*

Confirm Bus Bays are Adequate at Stations

Public Comment: Bus Terminals. Confirm that the facility programs for the bus terminals at the various stations include adequate bays for layovers and storage as well as designated spaces for the supervisors and service vehicles. (0387, 0387-L –40)

Response: *Bus terminal plans incorporate passenger boarding capacity for revenue and non-revenue operations. Spaces for supervisors and service vehicles would be established within public parking areas.*

Bus Terminal Configurations

Public Comment: Also, the configuration of the bus terminals as proposed at some stations are such that a bus will not be able to properly berth itself at some of the bus bays. The ability of buses to be able to recirculate facilitates operational planning and particularly layovers where it may be desirable for the

layover to occur in a remote part of the terminal. Thus the site plans should be configured to allow recirculation of buses within the terminal to allow them to reach any bay from any other bay. Route 772, Metro South Option 2 has inaccessible bay(s) in the southwest. Route 606 BRT 1 has lack of or poor recirculation. Reston Parkway South has inaccessible bay(s) in the north and west and has lack of or poor recirculation. West Falls Church BRT 2 Left Door [is inaccessible] in northeast BRT bay on EB side and in north bay on WB side. (0387, 0387-L –41)

Response: *Autoturn Version 4 was used to model vehicle turning radii and tracking in station areas to ensure sufficient station access and mobility. Articulated and standard bus access was modeled for BRT and standard bus access sites. The individual berths cited in this comment were reviewed and found to provide adequate access and egress. Bus recirculation will be addressed as plans are refined during preliminary engineering.*

Design Comments on Tysons West Station

Public Comment: Assuming that the [Tysons West station] access issue noted above can be addressed, the following comments on specific design issues are offered:

A. While the text seems to indicate that the ramps from the DAAR/Toll Road are for buses only, the configuration of the driveway configuration adjacent to the garage suggest s otherwise. If general auto access is not provided directly from the DAAR/Toll Road, what is the purpose of the two-way ramp into the garage along the southwest side of the structure parallel to Route 7? If all or nearly all of the vehicles entering the garage are expected to do so from Tyco Road, the access system shown is totally inadequate for the 2000 spaces provided in the current garage design, let alone for the capacity which should really be provided to address the full projected parking demand.
B. The traffic flow at the gate array at the Tyco Road entrance as currently designed has too many movement conflicts at the garage side of the array to function at all well.
C. To effectively distribute vehicles within the garage, the ramp system should be located closer to the center of the garage. At least one aisle should be provided between the sloping floor ramp and the perimeter of the garage.
D. Details of the ramp between the garage and the Dulles Toll Road and Airport Access Road should be provided. The plans don't show the ramp system to the garage from the toll road and Airport Access Road. It seems as though it could be very complicated with the need to provide toll collection capability from the Toll Road and separate access to the airport access road for buses and airport bound traffic. (0387, 0387-L –44)

Response: *The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

For Tysons West Station entrance and facilities, the Project Team recommended, and the decision-makers selected Option E site plan to replace the plan presented in the Supplemental Draft EIS and revised General Plans. Option E has its station entrance at the inbound, east end of the station near Spring Hill Road. The bus bays and Kiss & Ride of Option E are located between Tyco Road and Spring Hill Road, set back from Route 7.

Rail Will Not Reduce Congestion

Public Comment: The third urban legend is that rail is going to reduce congestion in the corridor, and that is flat out incorrect. In fact, I give credit to the EIS, they don't claim that rail is going to reduce congestion. We know it will not. It has not reduced congestion on I-66, and the people who did the beltway study didn't even consider rail for the beltway because their conclusion was it wasn't even worth studying. (0184, 0184-T –4)

Public Comment: The VDOT study of the Beltway situation accurately concluded that Beltway, carrying more than twice that in the Dulles Corridor, would not benefit from rail. So why are we thinking of heavy rail in the much less congested area outside the Beltway? (0162, 0162-T –6)

Response: *The information contained in Chapter 6 of the Final EIS confirms that two Build Alternatives are expected to result in reductions in congestion on most regional roadways. In addition, traffic conditions in the vicinity of proposed stations are generally expected to worsen during the peak periods as transit patrons drive to and from these stations. However, the two Build Alternatives, in combination with the planned transit-oriented urban form, will help to increase overall mobility in the corridor, the counties, and the region.*

The Capital Beltway MIS advanced several recommendations, including additional study of rail transit along the Beltway corridor. Based on analysis conducted during the MIS, the study sponsors concluded that the regional transit share would increase if the radial lines of the Metrorail system were connected with a Beltway alignment; however, there was not a corresponding decrease in the traffic congestion along the Beltway corridor. Nonetheless, because rail improvements were seen to have benefits for the region, rail transit improvements in the Beltway corridor were further studied by DRPT in the Capital Beltway Rail Feasibility Study. The Capital Beltway EIS performed by VDOT only considered the recommended highway improvements.

The Capital Beltway Rail Feasibility Study (March 2001) included recommendations further evaluation for several transit modes and alignments in the Beltway corridor, including Metrorail, light rail, and monorail.

New Rail Line Will Not Bring Economic Benefits

Public Comment: At the session out in Ashburn a metrorail person testified about how prosperity follows rail (as if it wouldn't with BRT). Wherever rail went, so went business. I am suggesting that wherever rail goes into this corridor, prosperity vanishes (except in East Loudoun which I will address in a moment). According to a very informal questioning of the businesses at our Parkridge Center office park (with some 3500 to 4000 potential employees), few if any riders will use rail to again access to our location along the toll road in Reston. Do you know why??? How do you walk from the Wiehle rail stop to the intersection of Sunrise Valley Drive and Hunter Mill? (over a mile). (0233, 0426-M –16)

Response: *Increased transportation access is expected to have a corresponding positive effect on property values within the immediate vicinity (one-half mile) of the Metrorail stations.*

The proposed rapid transit alternatives of the Draft EIS would not be able to serve the travel needs of all trip makers in the Dulles Corridor. They would, however—in combination with the planned transit-oriented urban form—help to increase overall mobility in the corridor. Highway and transit improvements that address other travel needs are recommended in the Northern Virginia 2020 Plan, the Statewide Transportation Plan, and local comprehensive plans. Overall, this program of improvements is intended to increase mobility and address the existing and potential future deficiencies in Northern Virginia.

For trip generators near Sunrise Valley Drive and Hunter Mill and those beyond walking distance from the Metrorail stations, a mode of access may be Fairfax Connector feeder bus service or private shuttle bus service.

As explained in Chapter 2 of the Draft EIS and in Appendix H of the Final EIS, during the early stages of the EIS process, a number of station alternatives were considered for the Dulles Corridor Rapid Transit Project, including a station at Hunter Mill Road. This station was eliminated from more detailed consideration in the Draft EIS because it would not be consistent with current or planned land use in the vicinity of the station. These reasons are explained fully in the Final Alternatives Analysis Report (May 2001). Some findings are summarized below.

Low-density land uses surrounding the proposed site would not generate enough ridership to support a station at this location. In addition, the citizens in the area expressed strong opposition to a station at Hunter Mill Road.

The Dulles Corridor Land Use Task Force, appointed by the Fairfax County Board of Supervisors, stated strong opposition to a station at Hunter Mill Road in lieu of the proposed station at Wiehle Avenue. The Task Force voted at its session on February 26, 2001 to endorse the elimination of the Hunter Mill Station and continued planning for the Wiehle Avenue Station. The Comprehensive Plan changes adopted by the Fairfax County Board of Supervisors on May 21, 2001 support this position; no transit-oriented land use plans have been adopted or considered for a proposed station in the vicinity of Hunter Mill Road.

Proposed Stations In Tysons Corner Would Lack Accessibility

Public Comment: I live on Old Dominion Drive just west of Spring Hill Road and I believe that all of the proposed rail solutions do not serve the needs of my neighborhood. Only one of the proposed Tysons rail stations would have parking. The Tysons West station is proposed to have a 2000 car parking garage. To access this station to commute to work in Reston, go Dulles Airport or to downtown DC, would require driving into Tysons through intense congestion during working hours. Besides adding to already severe auto congestion, making a trip using rapid transit would take more time than simply driving to my final destination. If the commute were towards DC, it would cause at least one train change at Falls Church. At least the proposed Bus Rapid Transit (BRT) station at Spring Hill would require driving through less congestion as it is on the periphery of Tysons Corner as opposed to within it. (0233, 0426-M –24)

Response: *As part of the selection of the Locally Preferred Alternative, accessibility to stations, ridership, and effects such as congestion were considered by the decision-makers.*

Document Is Biased In Favor Of Metrorail

Public Comment: Draft EIS shows a bias in favor of "seamless Metrorail" that it projects onto riders regardless of associated costs and secondary effects. It states that transferring from bus to Metrorail at Tysons West would make the transit trip less attractive than a seamless Metrorail trip. This bias should be removed. (0510, 2-01)

Response: *As described in Chapter 6 of the Draft EIS, the number of transfers required to make a trip from an origin to a destination is one of the most important determinants of passenger convenience and comfort. Research shows that there are several reasons that transfers decrease the attractiveness of a transit service. The added time associated with transfers increases a passenger's overall trip time. Also, there is a discomfort associated with uncertainty about the arrival of the vehicle being transferred to, specifically whether the vehicle will be early (and therefore missed by on-time arriving passengers), late, or will arrive at all.*

Intra-system transfers (like transferring from one Metrorail line to another) make much of the burden typically associated with a transfer between two modes less onerous, but still require moving between platforms and does not provide the convenience of a one-seat ride. Therefore, this type of transfer would still affect ridership levels.

As described in Chapter 8 of the Draft EIS, it is assumed that the Dulles Corridor transit line would use the same fare structure, regardless of the technology selection (BRT or Metrorail) as the existing Metrorail system and that this fare would be adjusted for inflation over time. Currently the maximum fare on the Metrorail system is $3.90. For trips between most parts of the corridor and Arlington and the core, the maximum fare would apply. In addition, parking fees would apply at the stations.

Data In Document Needs To Be Converted

Public Comment: Projections are based on insufficient, erroneous, and/or misleading data (MWCOG Round 6.2 data). Without use of corrected data, the Draft EIS will remain speculative. (0510, 2-02)

***Response**:* For the travel demand forecasting in support of the Final EIS, Round 6.3 of the MWCOG Cooperative Land Use Forecast was used.

Data on Rail Speed Is Not Realistic

Public Comment: If average Metrorail speed is 36 mph, then some of the travel times between stations are not realistic. Travel times to Metro Center on page 107 of Technical Report and page 6-40 of DEIS are overly optimistic and contain disparities. (0112, 2-01)

***Response:** The average speed along the entire corridor is 36 mph. Speeds between stations will vary depending on the distance between stations and the number of curves and other track geometry issues. The travel times for Metrorail in the corridor were developed using a detailed simulation package that takes into account station dwell times, number and radius of curves, allowable train speeds, vehicle acceleration rates, number of stations, and distance between stations. Travel times for Metrorail outside the corridor are based on the Metrorail operating schedule.*

Ridership Estimates Are Overly Optimistic

Public Comment: States that the run times are not "real world", and that the station dwelling times are not realistic if the Project Team is anticipating high Metrorail ridership. Hence, the ridership estimates are overly optimistic. (0112, 2-02)

***Response:** As noted previously, the run times in the corridor are based on a detailed simulation package that considers a number of factors. This simulation takes into account the specific characteristics of Metrorail vehicles as well as measured performance on Metrorail and other rail systems (e.g., the performance of vehicles as they move through a curve). The dwell times are based on WMATA experience on the existing Metrorail system. Therefore, the run times do reflect 'real world' experience.*

Clarification Needed on Response to Previous Question

Public Comment: States that the Project Team failed to answer his question of whether the 11,000 fewer boardings on the three western most Orange Line stations counted in the Total Boardings for Dulles rail in 2025. (0112, 2-03)

***Response:** The total boardings in the Dulles Corridor do reflect the passengers moving from Orange Line stations to the Dulles Corridor.*

Aerial Alignment Is Not Desirable

Public Comment: Again, as others have mentioned, the aerial lines to and through Tysons Corner would be far too noisy, in my opinion. I think there could be better land use where the aerial lines are planned to run. You can have plazas, sidewalk cafes, artwork, fountains, more trees, a little bit of greenery would help. I think it is important to put Tysons Corner on the same level playing field as other high density urban areas in the Washington area where the metro system has underground service, like in downtown and Bethesda and Rosslyn, among other places. (0071, 0215-T –6)

Public Comment: We expect our elected officials and our civic leaders to protect our quality of life, our property values and our welfare as residents/taxpayers/voters in Fairfax County, where possible. We want to sleep in relative peace and quiet at night, and continue to be proud of living in Tysons Corner - in the 21st century. Bottom Line: Please - no elevated trains or stations in residential areas. (0411, 0411-L –3)

Public Comment: Plus I think we need to look to the future. We are building a system here for 100 or 200 or maybe a lot more years than that. Who knows what Tysons Corner is going to look like in 50

years or 100 years? Do we really think that the south side of Route 7 is going to be lined with auto dealers in the year 2102? I don't. I think an aerial line through Tysons Corner will make the future development of the area much more difficult and we should not burden our descendants with a noisy and intrusive aerial alignment there. (0071, 0215-T –7)

Public Comment: If the rail option is selected as the Locally Preferred Alternative, we are extremely concerned that it is proposed to be aboveground in Tysons Corner. An elevated structure will create major aesthetic and access issues. These issues effect our properties as well as many of the properties in the district, and time does not permit me to go into those issues. (0139, 0139-T –8)

Public Comment: Every aerial system that I have seen, and I've seen several of them, I've seen them in New York, I've seen them in Sydney, Australia, they have absolutely been destroyed the area and eventually had to be taken down and brought underground. I don't believe an aerial system is a viable system. It certainly is not going to be viable for the residents of Rotunda, for the owners of the Rotunda. It's going to reduce the property values and make our life miserable, especially those people who will look out here and witness all the noise and visual pollution that such a system would bring. (0160, 0160-T –3)

Public Comment: In general I am against any kind of elevated Metrorail. Underground is okay. Elevated on the other hand looks like Brighton Beach! And I don't need to explain how awful that is. (0064, 0064-CC-2)

Public Comment: I think it would be a mistake to have an aerial alignment through Tysons Corner. (0074, 0074-CC-2)

Public Comment: As much as I am eager to see a rail transit system serving Tysons Corner and the Dulles Corridor built right a way, when at the Draft EIS public hearings I see the WMATA model representing an elevated rail platform passing through Tysons Corner, I cannot help but think of the horrendous 1880's vintage "El" transit system that continues to be the curse of downtown and outlying neighborhoods in Chicago. The "El" is hardly the noble hallmark for the mobility system of a great American City in the 21st Century. I shudder to think of Tysons Corner in the year 2102. (0088, 0088-L –1)

Public Comment: Opposed to elevated transit in Tysons Corner. An elevated alignment will bring dirt, pollution (air and noise), and cause structural problems at the surrounding buildings. (0512, 2-01)

> ***Response:*** *The above comments pertain to Alignment T4 of the Draft EIS. Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to the Project Team and were considered by decision-makers in the selection of the Locally Preferred Alternative. The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT, BRT/Metrorail and Phased Implementation Alternatives and Metrorail Alignments T1, T4 and T9 were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Seeks Clarification on How Dulles Line Leaves Orange Line

Public Comment: As the train branches off from I-66 will it do so by going underground to cross the west bound lane of I-66 or will it do so by using an aerial bridge? (0117, 0117-E -6)

> ***Response:*** *The Dulles Corridor line will branch from the existing Orange line via two separate aerial bridge structures, one for each direction of track. These structures will cross the lanes of I-66 (and associated ramps) into tracks for the Dulles Corridor line that will run in the median of the Dulles Connector Road.*

Stops in Tysons Corner Will Decrease Train Speeds

Public Comment: My specific comments tonight are directed toward the need to make the system fit its name, rapid. Rapid rail or rapid bus. In fact, rapid rail or bus to Dulles, with the current design of multiple stops in Tysons, might put us in the position of taking the name "rapid" out of the name. (0148, 0250-T – 2)

> ***Response***: *Relative to BRT, the additional Metrorail stations in Tysons Corner does not reduce the "rapidness" of the Metrorail Extension. The Transit Operations and Maintenance Plan (June 2004*) *shows that the LPA Alignment T6 has a travel time of approximately 41 minutes between the Route 772 and East Falls Church stations. The all-stops operating pattern for BRT 1 has a travel time of approximately 48 minutes between Route 772 and West Falls Church, even though this alignment has fewer stops than Alignment T6.*
>
> *In response to comments following the publication of the Draft EIS, the Project Team evaluated a new alignment option for the Metrorail Alternative that would provide for express service that only includes one stop at Tysons Corner. The alignment would include a leg that extends along the median of the DIAAH on the north side of Tysons Corner, and would include a stop at Spring Hill Road.*
>
> *The analysis for this alignment option shows that a one-stop bypass of Tysons Corner offers very little travel time savings. Moreover, given the length of most trips on the transit line, the time savings would be considered negligible. A one-stop trip between Wiehle Avenue and East Falls Church on an alignment that runs along the median of the DIAAH would save approximately 4.5 minutes over Alignment T6, an alignment that penetrates the core of Tysons Corner and includes four stations. Given that transit travel times on the Dulles Corridor line for trips between Arlington and the central and western portions of the Dulles Corridor would be approximately 30 to 50 minutes, a time savings of 4.5 minutes would be negligible. For whereas the perceived difference between a 5-minute trip and a 10-minute trip could be substantial, the perceived difference between a 25-minute trip and a 30-minute trip is relatively minor.*

Need More Rail Coverage in Tysons Corner

Public Comment: My conclusion is in these tough economic times to invest our limited metrorail dollars where it counts, in Tysons. That means building T-2 [T-4] metrorail and dropping the Western rail segment. And the plans need to be coordinated with potential beltway rail and potential Route 7 rail originating from Bailey's Crossroads. Metrorail should crisscross Fairfax County's downtown in a grid, the way it does in downtown D.C. (0134, 0134-T –10)

Public Comment: If a concerted effort is in fact made to make Tysons a mixed-use, walkable, livable place, then we need to be considering how to crisscross Tysons with multiple grade-separated rail lines, not just one branch from the Orange Line that serves Northern Tysons. Just as a network of rail lines serves downtown D.C., so should the network of rail line serve Tysons, including Purple Line beltway rail stations that would serve Southern Tysons and Route 7 Bailey's Tysons rail stations that would serve Southeastern Tysons. (0134, 0134-T –3)

> ***Response:*** *An alignment that would provide a connection to a future transit line in the Beltway corridor was examined during the early stages of the Dulles Corridor Rapid Transit Project, and was eliminated from further study. The reasons for the elimination of this alternative is fully detailed in the Final Alternatives Analysis Report (May 2001) and are summarized below.*
>
> *The plans for future transit in the Beltway corridor are not advanced enough to make it appropriate or feasible to conduct detailed coordination efforts related to these improvements. The Capital Beltway corridor Rail Feasibility Study includes recommendations further evaluation for several transit modes and alignments in the Beltway corridor. Further study would be necessary to advance Beltway Rail plans to the level that coordination would be possible.*

Redesign T-4 as a Loop

Public Comment: In addition to the proposed Route 123/Route 7 route, the need for the two way system to go directly along the Dulles Corridor would benefit greatly some of the largest Tysons employers and owners of residential property. This would also provide a good two-way loop for the entire Tysons region. I was dismayed to read that the "T-4" design was only a one-way system, which would not provide a complete loop system through Tysons. Please clarify if this is a misunderstanding on my part. This one-way route is reported to cost an additional $400 million, making the total project $3.7 billion. (0274, 0274-L –2)

Public Comment: Support the additional metro loop through Tysons (2) – asap. The underground station(s) (Metrorail) is the better plan- for Tysons 2. Given the density of Tysons Corner, I do not see how you cannot put a loop through Tysons? A loop through Tysons is critical/needed! (0046, 0046-CC-2)

Public Comment: If running this loop or spur is essential, then please put it underground to reduce/eliminate noise. (0020, 0020-L –3)

Public Comment: Please put the T-4 Loop under-ground. (0056, 0056-CC-1)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. Alignments T1, T4 and T9 were eliminated from further consideration after the public and agency review and comment on the Draft EIS.*

The T2, T5, T10, and T11 'loop' alignments had been analyzed by the Project Team and eliminated from further consideration during Intermediate and Final Screening for a variety of reasons. The screening analysis and results have been detailed in the Final Alternatives Analysis Report (May 2001). The results were also described in Chapter 2 of the Draft EIS and are summarized below.

Alignment T2 was the first 'loop' alignment considered for the project. It had been developed by the Project Team subsequent to the Major Investment Study as a way to serve more of Tysons Corner. Alignment T2 included loop connectors that would have allowed trains to turn back at Tysons Corner, or even operated a loop circulator system in Tysons Corner. Operational Analysis of both the turn-back and circulator service showed that there would have been difficulties operating this service. Detailed design studies showed that Alignment T2 would have been difficult to design and construct to WMATA design standards, and would also have resulted in more significant environmental impacts, property acquisition, and greater costs, for relatively few benefits. Alignment T4 had been developed as an alternative to the T2 alignment, without the loop connectors at each end. This alignment could have also operated 'turn-back' or circulator service through the pocket tracks at The Tysons East and Tysons West Stations, with the added advantage that it would have also served those stations, whereas Alignment T2 did not. Studies show that Alignment T4 had significantly less impacts and costs, and provided similar benefits when compared with the other loop alignments.

Alignment T2 was eliminated from further consideration because it did not attract substantially greater patronage than Alignment T4, would have cost significantly more than Alignment T4, had additional noise and visual impacts, and would have resulted in additional property acquisition when compared with Alignment T4. Because the impacts were not balanced by greater benefits, Alignment T2 was eliminated from further consideration and was not fully evaluated in the Draft EIS.

At the project scoping meetings, the Project Team was asked to consider underground alignments for the Tysons 'Loops', which was designated Alignment T5. The request for an

underground alignment was in the context of reducing the visual impacts of the loop alignments in Tysons Corner, particularly to residences along Westpark Drive. The Project Team evaluated the underground loop alignment and determined it did not perform well as measured by the project evaluation criteria. The primary benefit of the T5 alignment was that it avoided the potential visual and noise impacts associated with aerial alignments. However the price of this benefit was found to be significant.

Underground construction presents greater risks to project cost and schedule that cannot be completely identified prior to actual construction. While it is customary to assess higher cost and schedule contingencies to underground construction to cover these exposures, it is not reasonable to assign a sufficient contingency to cover every risk, and maintain a level comparison among alternatives. Most of the significant risks relate to unknown subsurface conditions, including soil conditions, utilities, archaeological finds, changed subsurface water conditions, and unrecorded hazardous materials.

Alignment T10 had been suggested as an alternative to Alignment T2 to provide greater operational flexibility. It included a second track on the south leg of the loop, and included the loop connectors. Alignment T10 was eliminated in Initial Screening because it had all the disadvantages of Alignment T2 discussed above, and the operational flexibility offered by the second track on the south leg could have be achieved by lower cost means such as pocket tracks and crossovers.

Alignment T11 had been developed by the Project Team subsequent to the scoping process in order to provide interconnectivity with a future transit line along the Capital Beltway. Alignment T11 was not compatible with current local plans and would not have served the core of Tysons Corner as well as other potential alternatives. Because of the planned widening of the Beltway, I-66, Route 7, and Route 123, implementation of Alignment T11 would have required significant right-of-way acquisition. In addition, Alignment T11 provided inferior service coverage than other loop alternatives and would have been more costly. As compared with the other Tysons alignments still under consideration, Alignment T4 did provide greater coverage in Tysons Corner, and therefore supported Fairfax County Comprehensive Plans for development in Tysons Corner better than the other loop alternatives. The ridership forecast for Alignment T4 was slightly lower than other Tysons alternatives primarily due to the way the service would have operated. Trains would have operated in one direction on each leg of the loop. Thus, patrons traveling round trip to or from destinations on the loop would have had to backtrack and transferred to reach their final destinations on one part of their trip. This transfer and additional transit time decreased ridership for Alignment T4.

Suggestions for Variations in Vertical Alignments

Public Comment: The one time that we have been told for many, many meetings was that the underground loop, rather than the aerial loop, has never been eliminated. Well, it was eliminated in this report, and I feel betrayed because that has not been what was told to us in every meeting that we have had in the past, that that underground loop, which is good enough for Crystal City, good enough for Arlington, good enough for Ballston, and good enough for Rosslyn, why isn't it good enough for Tyson's Corner? Even Georgetown, which did not have a metro in the original planning, now is talking about having a metro. And where are they going to put it? They're going to put it underground where it belongs. (0160, 0160-T –2)

Response: *The underground alignment was eliminated in Intermediate Screening, performed in April 2001. The findings were published in the Final Alternatives Analysis Report in May 2001. The reasons for eliminating the underground loop in Tysons Corner are summarized above in the response to Comments (0134, 0134-T –5), (0274, 0274-L –2), et al.*

Public Comment: I know that people will argue that modern elevated construction is neater and smaller and allow quieter operation, but a train high up in the air is still objectionable. If the Westpark route is

deemed so desirable, it should be put underground for the 500-1000 yards in the vicinity of the apartment complexes. The terrain is such there that the trackage would be quite level. Such facilities should be expected to last a 100 or more years, and over the years the extra cost will be easily worth it. (0305, 0305-L –2)

> ***Response:*** *The Project Team recommended and the decision-makers selected Alignment T6 as the Locally Preferred Alternative. Alignment T4 was eliminated from further consideration after the public and agency review and comment on the Draft EIS.*
>
> *A conceptual study alignment and profile had been developed for placing the Tysons Central B Station underground along with approximately 2000 feet of the track alignment. A preliminary cost estimate indicated this would cost approximately $66 Million more than Alignment T4 aerial station.*

Public Comment: If the rail (and highway) right-of-ways were below grade at the Town Center and Wiehle Avenue stations, connection between the North and South parts of Reston, adjacent to the Dulles Corridor, will be more easily accommodated and the sound and visual impact of the Rail Corridor will be controlled. Not only air rights over the corridor, but also adjacent property values will be enhanced greatly to allow for civic and housing needs to be accommodated. Coincidentally, it is very economical to simply cut the new railway bed at the Town Center station, since a significant rise occurs between 1338+00 to 1390+00, with the highpoint at 1358+00 (see the profile cuts on drawing sheets 143, 144, & 145). The highpoint (at 428) is about thirty-three (33) feet above the start and end of the rise. This will allow for both the highway and railway to be below grade at the Town Center station. Similar possibilities exist at the Wiehle Avenue station. Note that if the "Dulles Corridor" were below grade, pedestrian (and jitney) access to the Town Center station would be much easier, eliminating the need for elevators/escalators on each side of the "Corridor". (0441, 0441-E –4)

> ***Response:*** *A basic project assumption has always been that Metrorail in the median of the Dulles International Airport Access Highway (DIAAH) would be at-grade. There are also no plans or funding available to place all of lanes of both the DIAAH and Dulles Toll Road (DTR) in a deep retained cut section. Lowering both the highway and rail profiles would be enormously impactive to the area and add significant cost to the Project. A long length and height of retaining walls would be required on both sides of the corridor and significant underpinning of the bridge piers at Wiehle Avenue and Reston Parkway would also be required to depress the profile.*

Public Comment: Additional study of the feasibility of running the rail line underground at this section [WFC Yard near Westhampton] to address noise and visual pollution concerns related to having a freeway, train yard and aerial metro service all near residential areas. (0430, 0430-E –9) (0431, 0431-E –9) (0438, 0438-E –8) (0442, 0442-L –8) (0465, 0465-L –9) (0466, 0466-L –8) (0467, 0467-L –8) (0469, 0469-L –8) (0470, 0470-L –9) (0471, 0471-L –8) (0473, 0473-L –9) (0474, 0474-L –9) (0386, 0386-E –9) (0398, 0398-L-9)(0399, 0399-L –9)(0403, 0403-L –8)(0412, 0412-L –9)(0415, 0415-L –9)(0416, 0416-L –9)

Public Comment: Underground by Tysons. (0061, 0061-CC-1)

Public Comment: Above ground negatively impacts unique aspects of area. Area around Tysons still evokes pleasant urban area as opposed to industrial. (0061, 0061-CC-3)

Public Comment: I do believe that the best and only remedy to our problems and to prepare for the anticipated future growth, is by way of a Metrorail system from West Falls Church station to the airport. But an underground railway all the way is the only way to go. Look back into history and you will find that elevated railways there through are the kiss of death to any city area. It is the greatest producer of slum areas (the third and sixth ells in New York City, the Loop in Chicago); who in the right mind with other options available would choose to reside or work next to and elevated railroad? Build an elevated railroad through Tysons Corner area and you will cause the greatest slum area the State of Virginia has ever known. (0085, 0085-L –2)

Public Comment: Finally, I believe that rail in Tysons Corner area should be underground. I think the aerial stations appear to be too massive and looked at in certain ways even ugly. You can look at the drawings on pages 16 and 17 of the executive summary, and I believe you will see this. (0071, 0215-T – 5)

Public Comment: Prefers underground Metrorail. (0506, 2-02)

Public Comment: Prefers underground Metrorail. (0338, 2-01)

> ***Response:*** *The planning for the connection to the Orange Line of the proposed Metrorail extension has always incorporated the use of at-grade and aerial methods of construction for connecting the flyover from the median of I-66 to the median of the Dulles Connector Road. Provisions for this connection were made with the original construction of the Orange Line in the early 1980s, including the construction of a pier and foundation in between the Orange Line tracks to facilitate such an aerial structure to minimize eventual disruption to the Orange Line during construction.*
>
> *The impacts and costs for underground construction of this connection were not evaluated as part of any current alternative in the Draft EIS. Making this connection would present extremely complex construction challenges to keep the Orange Line fully operational and not impact both directions of I-66, a major interstate highway. Due to its complexity, the cost of this underground construction for this segment would be significantly greater than typical cut and cover construction, and many times greater than the planned at-grade and aerial construction.*

Public Comment: Underground installation [of the WFC yard lead]. Mr. Dittmeier indicates that underground may not be practical because of construction and maintenance costs. Is it possible for the planners to give this option further study? If the track is to be elevated, install a tunnel-type cover over the track. A problem, as Mr. Dittmeier explained, is the explosive expulsion of air from the tunnel as the train exits. A slot along the top of the tunnel would take care of the air-blast problem. (0432, 0432-E –5)

> ***Response:*** *The current alignment for the West Falls Church Yard lead track is partially underground as it goes beneath the eastbound Dulles Connector Road lanes and enters the rail yard. The remaining portion of the yard lead in the median of the Dulles Connector Road will be on aerial structure in order to meet the grade from the both the inbound and outbound project tracks descending from the flyover across I-66. Within the yard proper, the Project will enclose of a portion of the loop track at the yard's eastern end and the new yard lead in box structures. There should not be the air-blast due to the short section of the underground yard lead and to the low speed of trains.*

Public Comment: They tell me that the train will take to the air after Haycock Road in the 66 median and rise to over 40 feet in the air and continue in the air until Idylwood in the median of the access road. All of this while the trains are making 90 degree turns. (0117, 0117-E -2)

> ***Response:*** *The trains will be making an approximately 75 degree turn (somewhat flatter than 90 degrees); however, with the Supplemental Draft EIS and revised General Plans (October 2003) the Project Team lowered the Metrorail profile such that the top-of-rail is, on average, 25 feet above the median of the Dulles Connector Road.*

Concerns About Impacts On the Washington Dulles Marriott Hotel

Public Comment: After reviewing initial plans for the planned rail alignment at the Dulles International Airport, it is our opinion that the Washington Dulles Airport Marriott Hotel will be negatively affected on a permanent basis. Our opinion has been developed on the basis of our understanding and interpretation of plans and documents for our review, including Sheet 9 of the Environmental Constraints and Limit of Disturbance. Our greatest concern is that, as proposed, the rail line will emerge from the underground

Dulles Airport Station along Autopilot Drive in close proximity to the and public meeting space. Among other concerns, we understand that it is standard procedure for trains to provide audible warning signals when emerging from tunnels, and our fear is that this and other regular noise factors will disturb and otherwise adversely impact the experience of guests and patrons of the hotel. The currently proposed placement of this tunnel will also have an adverse impact upon our property and the operation of the hotel in that it is in the vicinity of a significant access point to the hotel from Autopilot Drive. The mouth of the rail tunnel would interfere with the area of ingress and egress along Autopilot Drive, forcing guests and employees onto Aviation Drive, and resulting in inconvenience as well as increased congestion and traffic counts on this two-lane road. (0453, 0453-L –1)

Public Comment: Relocating the entry/exit to the tunnel farther north on Autopilot Drive, preferably at a point beyond the hotel's property line, will likely address our primary concerns relating to the anticipated environmental and economic effects that the proposed rail project would have on our property. (0453, 0453-L –2)

> ***Response:*** *With the Supplemental Draft EIS and revised General Plans (October 2003) the Project Team relocated northward the portal at the western end of the Dulles Airport tunnel so that the Project's effects on the Dulles Airport Marriott have been reduced. This relocation is part of the Full LPA and final General Plans.*

Prefers A Different Point of Connection To The Orange Line

Public Comment: If rail must be added, it would seem that a more direct route would be from the East Falls Church station rather than West. (0267, 0267-L –3)

> ***Response:*** *The selected LPA, a Metrorail Extension, has a "seamless" connection to the Metro Orange Line that would connect to the existing Orange Line at a point between the East Falls Church and West Falls Church stations, allowing passengers to transfer to an Orange Line train in either direction at the East Falls Church Station.*

Suggestions For Variations On the T-8 Alignment Option

Public Comment: We would have preferred the so-called T-8 alternative that proposed main line, at-grade trackage with a circulation feeder system to serve Tysons, but that was dropped during the Alternatives Analysis - prematurely, in my view. (0137, 0176-L –2)

Public Comment: Please put the T-8 option back on the table, that's the single station option. Let's not rush through in 30 days decisions that cannot be undone or corrected in a lifetime. (0148, 0148-T –8)

Public Comment: It is almost too easy to imagine attractive monorail or other circulating transportation system taking people to and from a single rail stop at the periphery of the city of Tysons Corner, while simultaneously serving the thousands of people who populate and need to circulate in and around these cities by day and by night. (0148, 0148-T –6)

Public Comment: I believe that a single heavy-rail station with a connection to a light rail or monorail loop is a more appropriate solution for transportation within Tysons Corner. Monorail or light rail would allow for three or four times the number of stations and offer more frequent trains. Which would you rather do? Be delivered directly to a station up to a mile from your destination, or change trains and end up a few blocks from where you're going? I submit to you that most commuters would prefer the latter. (0178, 0178-T –3)

Public Comment: It is disappointing that WMATA has prematurely chosen to dismiss the very viable T-8 alternative. It is in the region's best interest to first extend rail out to Dulles to provide the majority of commuter with mass transit opportunities and then focus on Tysons Corner. The T-8 feeder system to and at grade, main line metro system, would be a simpler, more timely, less expensive option that would provide through-commuters with more expedient access without delay. (0150, 0150-T –2)

Public Comment: The T-8 alternative should be reincluded for consideration. (0150, 0150-T –9)

Public Comment: A variation on the T-8 option, which was eliminated during the initial draft environmental impact statement screening phase, should be reevaluated. The draft environmental impact statement indicated that T-8 was eliminated because ridership would be lower due to the need to transfer trains. Yet the same document advanced the screwball T-4 alignment, wherein a third of the riders not only have to change trains, but they have to go all the way through Tysons and then backtrack to their destination. (0178, 0178-T –6)

Public Comment: It is disappointing to learn that the T-8 option, Tysons feeder option, has been summarily dismissed because it was determined that the Springhill Road station was inappropriate and should be rejected. By all appearances, the T-8 feeder monorail, light rail or personal rapid transit system compared to an at-grade main line metro system, could be a less expensive, greater ridership option that could provide through commuters less delay to their destination and a broader range of coverage for Tysons Corner residents and employers. A transfer the Dulles Silver Line to the Tysons feeder system is similar to a transfer at Roslyn to continue to National Airport or a transfer to Metro Center to the Red Line. This option needs to be revisited. (0179, 0179-T –5)

Public Comment: Though the option was eliminated from consideration in the recent Draft EIS study, is it too late to take another look at keeping the primary Metrorail system in the Dulles Corridor with a greatly upgraded Tysons station at Spring Hill Road / Dulles Highway? Could we then use the billion plus dollars of the proposed through-Tysons rail loop to fund the construction of a state-of-the-art people mover system serving even more of Tysons Corner? Of course, such a system would, of necessity, be elevated. It would have to be to avoid ground level congestion. However, the people mover guideway could be far less obtrusive than the conventional double track Metrorail platform. A people mover system could run more frequent service throughout Tysons serving a full range of internal trips as well as rail transit trips from outside. How many purely internal Tysons trips could be added to the transit-originated trips? No more getting into your car to do lunch at a Tysons restaurant! With Metrorail bypassing three of the four internal Tysons stations, service to Dulles airport and communities west of Tysons could be speeded up, both in terms of normal travel time and also in terms of the initial construction time. Meanwhile the internal people mover system could serve far more stations throughout Tysons. Yes, this would add an additional mode transfer for transit-originated trips. However, it is entirely likely that the net portal-to-portal trip would actually be faster for many transit users even transferring modes. Surely the technology needed to make such a system effective is already at hand. Would the net cost really exceed what is currently planned for the Metrorail stations? Probably not. Wouldn't spreading the direct economic benefit of transit throughout a broader geographic area within Tysons ultimately generate greater tax revenues to finance such a system? Yes, the option isn't on the table today, but shouldn't it be? (0088, 0088-L –3)

Public Comment: The EIS does not show how the ridership for the proposed Tysons Corner rail alternatives T1, T4, T6 and T9 compares to Alternative T8 that was eliminated from further consideration at the Initial Alternatives Screening phase. It is not clear that the alternatives proposed in the draft EIS provide significantly greater ridership in Tysons Corner for the investment than the T8 alternative. The EIS should be revised to compare the ridership of the proposed Tysons Corner alternatives and the T8 alternative. If ridership is similar, the EIS should be revised to include the T8 alternative. (0392, 0392-L –13)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative.*
>
> *While NEPA requires an evaluation of all reasonable alternatives, it allows alternatives to be eliminated prior to detailed studies as long as the reasons for eliminating them are discussed in the EIS. The process used for evaluating the initial list of alternatives for the Dulles Corridor Rapid Transit Project was a two-phase process: initial screening and intermediate screening. The process applied increasingly detailed and comprehensive measures of effectiveness to a decreasing number of alternatives. For the initial phase most measures were qualitative. The*

alternatives advanced or carried forward for further evaluation at the end of each phase were those alternatives that best met the transportation needs of the corridor, relative to the other alternatives under consideration.

As detailed in Section 2.6 of the Draft EIS, and in Section 2.1 and Appendix H of the Final EIS, numerous alternatives, including alternative modes of transportation, were studied prior to conducting the detailed evaluation of BRT and Metrorail as presented in the Draft EIS. As part of the Major Investment Study (MIS) for the Dulles Corridor Rapid Transit Project, a median station alignment that connected to a fixed-guideway feeder system was considered. This alternative was eliminated from detailed evaluation, because it was determined that this configuration would severely restrict access to Tysons Corner and would have potential adverse impacts on residential neighborhoods near the station site. It was also determined to be inconsistent with Fairfax County's economic development goals. In response to Scoping requests, the Project Team for the Dulles Corridor Rapid Transit Project reconsidered a feeder system connected to a DIAAH median alignment through Tysons Corner (Alignment T8). The findings of the MIS team were reviewed and found to be valid. Therefore, Alignment T8 was eliminated from further consideration and was not fully analyzed in the Draft EIS. The reasons for the elimination of this alternative have been fully detailed in the Final Alternatives Analysis Report (May 2001)..

Evaluate a BRT T-8 Alignment

Public Comment: T-8 is not a current rail alignment, but was studied previously and is in the BRT alternative. Evaluation of this combination should not unduly delay the EIS. (0170, 0170-T –8)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

The BRT 1 alignment was not similar to the previously proposed Metrorail Alignment T8. That alignment had had a separate circulator in Tysons Corner, while BRT 1 did not. The T8 Metrorail alignment alternative was eliminated as documented in the Final Alternatives Analysis Report (May 2001) *and was not evaluated in detail in the Draft EIS.*

Support for the T-4 Alignment Option

Public Comment: We are writing to recommend the selection of a rail transit system through Tysons and selection of alignment T4. Of the four proposed Metro rail alignments, only alignment T4 serves all of Tysons Corner. Only T4 provides pedestrian access to the highest concentration of residents; only T4 serves the two largest employers in Tyson; and only T4 justifies the cost of the rail systems, for both the residents and the commercial property owners who will be asked to pay for the system. (0455, 0455-L –1)

Public Comment: I am a resident of the Rotonda Condominium. Proposal T-4 is clearly the best option for the 1160 residences within the Rotonda Condominium Association. Rail service would be conveniently located adjacent to our property. I am sending this note to let decision-makers know the opinion of the "silent majority" within the Rotonda. Our voice more often than not gets stifled by the retirees and reactionaries opposed to any change -- no matter how good it proves to be to us. Bring T-4 Metrorail service to Tysons and the Rotonda. (0015, 0015-E –1)

Public Comment: Tysons is planned as the downtown of Fairfax County and is envisioned as a mixed-use center with office, residential and retail components. Metrorail is the only alternative in the DEIS which will promote the vision for Tysons Corner. Furthermore, we believe the loop serving the Westpark Drive/Greensboro Drive/International Drive area as set forth in the Alternative T4 is essential to maintain this areas a prestigious office location. Westpark Drive and Greensboro Drive have long been the center of first class development in Tysons Corner. This area deserves a first class rail system to serve its many

office workers and future residents. (0413, 0413-L –2)

Public Comment: Further, our preference is for the Loop Option T4 because we believe it provides shorter and safer access to the residents who live in this area (which includes Lillian Court and Rotonda Condominiums and the Lincoln and Avalon Crescent Apartments). It also puts virtually all who work in Tysons II within reasonable walking distance to Metro. (0395, 0395-L –2)

Public Comment: Although not expressly stated in the draft EIS, only T4 provides transit stations in proximity to some of the largest employers in the area such as Freddie Mac and Gannett. Alignment T4 also provides the greatest service to the present and future residential core of Tysons Corner. By bringing transit to the greatest number of potential riders, this alignment serves the greatest public good and does the most towards relieving congestion and pollution. The station area coverage is also critical to justify the additional tax burden that the commercial owners in the area are expected to bear. (0084, 0458-E –2)

Public Comment: I am the owner of the Lincoln at Tysons Apartments located on the east side of International Drive between Jones Branch Drive and Westpark Drive. The Lincoln at Tysons currently includes 500 rental apartment units. I am familiar with the wants and needs of Tysons, apartment residents and we strongly support the Metrorail alignment T4. Tysons is a city in need of a residential heart. It needs more full time residents. It needs more services for its residents. And it needs convenient ways to move around within Tysons. Only alignment T4 creates an internal transit system within Tysons and it accomplishes this objective at a cost that is comparable to the other rail alignments. (0084, 0458-E –1) (0084, 0084-L –1)

Public Comment: I support Metro Rail to Tysons - Option T4. Tysons Corner will continue to grow and develop. By providing more stations this will increase the potential for users to choose to visit this area thus benefiting the overall economy of Fairfax Co. (0093, 0093-CC-1)

Public Comment: My LPA for Docket R02-1 is the T-4 Alignment. While I am disappointed that a true loop alternative was eliminated by the DEIS, the T-4 alternative comes the closest to providing Tysons Corner with its most viable rail service. If the land use plan for Tysons Corner is to create higher density sections and make them more pedestrian-friendly, there needs to be adequate incentive to get people out of their cars. The 6-station T-4 alternative covers the most area in Tysons with stations within a walkable distance. Of the four build alternatives, the best option is Metrorail only and build now. I fear the momentum would be lost if a phased approach were chosen. (0034, 0109-E –1)

Public Comment: T4 through Tysons provides the widest coverage for pedestrian access. (0043, 0043-CC-1)

Public Comment: Although not expressly stated in the draft EIS, only T4 provides transit stations in proximity to some of the largest employers in the area such as Freddie Mac and Gannett. Alignment T4 also provides the greatest service to the present and future residential core of Tysons Corner. By bringing transit to the greatest number of potential riders, this alignment serves the greatest public good and does the most toward relieving congestion and pollution. The station area coverage is also critical to justify the additional tax burden that the commercial owners in the West*Park area are expected to bear. (0084, 0084-L –2)

Public Comment: The other negative comment on this alignment was the visual and aesthetic impact of aerial tracks along Westpark Drive. It is unfortunate that the underground alternative of this alignment was eliminated from the EID study as this would have been preferable. However, I believe that Lincoln at Tysons residents and other renter along Westpark will be best served by and will strongly support the aerial line, given the huge benefit of transit service next door. (0084, 0084-L –5)

Public Comment: I am a resident owner at the Rotonda Condominiums in Tysons Corner and I support the all rail proposal that includes a rail loop or spur (T-4) that would traverse Westpark Drive behind building 2 of the Rotonda. This plan would be a tremendous benefit to those living in the area and who

commute to downtown DC or to points in the Dulles Corridor. It would also provide a significant increase in the property values of the Rotonda and other condominiums in the area. (0120, 0120-L –1)

Public Comment: At the July 29, 2002 hearing a small group of residents from the Rotonda objected to the T-4 rail loop. They claim the rail loop on Westpark Drive goes behind buildings 1 and 2 and that those buildings would be adversely impacted by the proximity to the elevated line. This simply is not the case because building 1 is not anywhere near Westpark Drive and in fact it backs up to International Drive. Only one half of the back of building 2 faces Westpark Drive (see attached site map and the highlighted area for the portion of building 2 that backs up to Westpark Drive). This part of building 2 contains about 50 units. I urge you to process with the full rail concept including the T-4 loop. (0120, 0120-L –2)

Public Comment: I am a resident owner within the Rotonda Condominium complex. I wish to go on record stating that Option T-4 (tee four) for Metrorail through Tyson's Corner is clearly the best option for residents in the Rotonda and Lincoln communities. (0015, 0231-L –1)

Public Comment: There has been a vocal MINORITY of Rotonda residents who have voiced resistance to all changes and improvements that would make transportation through the area of the Rotonda less congested and more convenient. Their voices are the MINORITY. For the MAJORITY of Rotonda residents, who favor changes which will drastically improve our community's access to rapid transit, please choose T-4 (Westpark Drive) as the route for MetroRail through Tyson's Corner. (0015, 0231-L –2)

Public Comment: The first one is T-4, through Tysons, which is the split single route, provides the widest coverage for pedestrian access, and I think it's the preferable route. (0043, 0276-T –1)

Public Comment: So choose rail, build it now, put in the most stations possible to serve the most people. (0034, 0109-E –3)

Public Comment: Maximum amount of stations in Tysons Corner. (0068, 0068-CC-2)

Public Comment: As for the Orange Line branch to Tysons we are discussing today, no less than the maximum six stations should be considered, which means the T-4 option. (0134, 0134-T –4)

Public Comment: On behalf of the homeowners association at the Fountains of McLean, I am writing to urge you to select Alignment T4 when you choose the locally preferred alternative. Alignment T4 will provide our homeowners with the most convenient access, allowing them access not only throughout Tysons, but also to the entire metrorail system. Without T4, Fountains of McLean residents will be more likely to use cars, which will, in turn increase traffic and air pollution. Only alignment T4 can support the needs of the future homeowners at the Fountains of McLean. Please help connect them with the rest of the Tysons community. Choose Alignment T4. (0481, 0481-E-1)

Public Comment: Agrees with Figure 7-1 on page 587, however, can only support Alignment T4 through Tysons Corner. Commenter states that the underground section of T6 will be costly, slow, and very disruptive. (0123, 2-03)

Public Comment: Opposed to Alignment T4.(0338, 2-02)

> ***Response:*** *Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in the selection of the Locally Preferred Alternative (LPA). The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. Alignments T1, T4 and T9 were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Support for the T-1 or T-6 Alignments

Public Comment: I support Metrorail (T1 or T6 only), because I believe it would improve traffic as well as property values in the area. (0030, 0030-CC-1)

Public Comment: I support alignments T1 and T6 - even though they include a partially elevated station at Tysons Central. That station (at Tysons Boulevard and Rt. 123) is not an area bordered by residences. The area already has significant noise, vibration, and visual impacts from heavy traffic volumes. Since the station would serve both Tysons 1 and 2 Malls, there is some hope that some people now driving to these malls might take public transit. At any rate, the station is clearly needed at that location. In summary, I support alignments T1 and T6. I strongly oppose alignment T4. (0124, 0124-E -3)

> ***Response****: Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to us and was considered by decision-makers in the selection of the Locally Preferred Alternative (LPA). The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. Alignments T1, T4 and T9 were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Support for the T-1 Alignment

Public Comment: Alignment T1 through Tysons Corner seems to be the best option. It would provide the most versatility, and serve the greatest number of people and locations.0116, 0116-E -2

Public Comment: The Metrorail Alternative is my second preference. Unfortunately, the Draft EIS does not adequately address various aspects of the supporting transportation infrastructure that would be needed to ensure the success of the Metrorail Alternative. For starters, there appears to be a conflict in the mission of this alternative. If it is meant to serve both commuting needs and for travel to and from Dulles Airport, it might be better to have the T1 Option at Tysons Corner and provide an internal transportation network for Tysons Corner proper. This would mean fewer stops and enhance the rail line's attractiveness as a way to get to and from the airport. This would also benefit people traveling to the Herndon/Reston and Loudoun County stations. (0401, 0401- L-2)

> ***Response****: Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to us and was considered by decision-makers in the selection of the Locally Preferred Alternative (LPA). The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. Alignments T1, T4 and T9 were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Support for the T-6 Alignment

Public Comment: As for the various alignments within Tysons Corner, the T-6 alternative appears to offer the best service for the least impact. I strongly recommend adoption of the Metrorail Alternative and the T-6 Alignment in Tysons. 0115, 0115-E –2

Public Comment: In the event Alternative T4 is not chosen as the Locally Preferred Alternative, we suggest adoption of the T6 versions with the Tysons Central C station placed underground. T6 would, in the absence of the loop, provide the best access for Greensboro Drive properties. (0413, 0413-L –4)

Public Comment: With regard to the specific Metrorail proposals for the Tysons Corner area, I am in favor of the general "T6" alignment, including the four proposed stations, being adopted as the Locally Preferred Alternative. But this alignment through Tysons Corner MUST be placed underground in its

entirety, i.e., from the point where it leaves the Dulles Airport Access Road to the point where it returns to it. My comments are as follows:
1. High-Density Urban Area- By far, this is the most important disagreement that I have with the Draft EIS. The Metrorail line within the Tysons Corner area will be serving a high-density urban area that is widely considered to be the "downtown" of Northern Virginia. In fact, the Draft EIS executive summary notes that Tysons Corner is "the primary urban center of Fairfax County today." Tysons Corner currently has about 90,000 jobs and is projected to have over 125,000 jobs in 2025. It is also the pre-eminent retail center for the entire Washington region. This is precisely the type of area that should be served by an underground Metrorail line.

2. Consistent With Other High-Density Urban Areas - Metrorail lines have been placed underground in similar high-density urban areas throughout the Washington region, such as downtown D.C., Bethesda, Rosslyn, Ballston and Crystal City. They have even been placed underground in less densely developed areas like Wheaton and White Flint in Montgomery County. I believe it is therefore appropriate that the proposed Metrorail line through the Tysons Corner area be placed entirely underground as well.

3. More Visually Appealing - The artist's renderings of the proposed elevated stations along Routes 7 and 123 in Tysons Corner show facilities of almost monstrous dimensions that will tower over many nearby buildings and act as a "Great Wall of China" visually separating the two sides of each street. The station canopies will rise to as much as 80 feet above the ground along the "T4" alignment, which I do not favor). With all of the necessary ancillary facilities beyond the ends of the platforms, these elevated stations simply have far too much mass and are, in short, ugly. However, if the "T6" alignment is placed totally underground through the Tysons Corner area, the Metrorail stations, tracks and supporting facilities can be as massive as necessary without visually impairing the street-level environment.

4. Less Noise Pollution - The elevated alignments through the Tysons Corner area will also produce a significant amount of noise pollution. This will affect people walking along Route 7, Route 123 and other nearby streets, as well as people in some office buildings and hotels that will be uncomfortably close to the rail line (according to drawings in the Draft EIS). Despite undoubtedly well-meaning efforts to limit the noise from the rail line, the fact remains that the Metrorail system uses steel wheels on steel rails and that produces noise, especially on sections of curved track. Anyone who has heard Metrorail trains going around the curve just to the south of the elevated Metro station at National Airport will understand this phenomenon. But placing the Metrorail tracks underground at Tysons Corner removes this source of noise pollution.

5. Better Land Use - By placing the "T6" Metrorail alignment totally underground in the Tysons Corner area, the land that would otherwise be underneath an elevated structure would instead be available for better and often more pedestrian-friendly uses. These could include plazas outside of office, retail and residential buildings, fountains, artwork and sidewalk cafes, as well as more trees plantings to bring a bit more of nature to this high-density urban area.

6. More Station Entrances - I believe that underground stations would allow for more entrances (or at least the provision for more entrances that could be built in the future as densities increase) to better serve the Tysons Corner passengers without the "visual pollution" caused by additional overhead passageways. This would be especially important for additional station entrances where some of the highest densities will be allowed, such as International Drive for the Tysons Central station and at Westpark Drive for the Tysons Central C station.

7. Looks To The Future - The proposed rapid transit system through the Tysons Corner area that we are discussing will be built to last for not just the next 20, 30 or even 50 years, but for at least 100 years and perhaps even 200 years or more. Who knows what Tysons Corner will look like in 50, 100 or 200 years? When considering these kinds of time scales, we should remember that elevated rail lines in high-density urban areas in this country generally have not withstood the test of time - most of them were demolished within 50 years of being built. We should therefore not burden our descendants with an ugly and noisy elevated alignment through the Tysons Corner area that will be very costly to place underground at some

later date. Building the Metrorail line underground from the beginning will be somewhat more costly now but it is simply the right thing to do. (0071, 0214-M –3)

Public Comment: Prefers Alignment T6. .(0338, 2-03)

> ***Response**: Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to us and was considered by decision-makers in the selection of the Locally Preferred Alternative (LPA). The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. Alignments T1, T4 and T9 were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Support for T-6 or T-9 Alignments In Tysons Corner

Public Comment: Locally preferred Alternative - Tysons Corner Alignment. Based on the information contained in the Draft Environment Impact Statement (EIS), we support building one of the four-station rail alternatives through Tysons Corner (T6/T9). We favor the alternative that would permit the station area around the Tysons Central C station to be developed in a community-friendly fashion. The challenge will be to link the areas north and south or Route 7 and the station together in a way that enhances access to the station and provides vibrant pedestrian and public open space links to the north and south. (0141, 0443-E –4)

Public Comment: Therefore, be it resolved that McLean Citizens Association endorses: The Metrorail alternative that provides rail transit service in the corridor now; Retention of Express Bus service until completion of the rail system; The T-6 or T9 alignment options because they best serve Tysons Corner; Eliminating phasing with Bus Rapid Transit (BRT) as an interim step. (0392, 0392-L –1)

Public Comment: A comparison of the estimated capital cost and ridership projections demonstrates that the T-4 alignments cost more than the other alignments and will attract fewer commuters than the others. This translates into less operating revenue and increases the magnitude of transportation subsidies that the Dulles Rail Project will require. The community effects of the T-4 alignment also compared unfavorably with the other alignment alternatives. Based on the evaluation criteria of the Draft EIS, Northwestern supports T-9 because it appears to have the most favorable economics. Northwestern supports, and prefers, the T-6. While T-6 entails higher capital costs than T-4, T-6 has a much higher projected ridership and will produce less noise and visual blight during construction and actual use because of its design to be underground for a great distance. The anticipated economic development that the T-4 alignment might encourage does not give adequate weight to the negative impact of a one-track configuration and one-track stations. As reflected in the table on page S-14 of the Executive Summary of DEIS, alignments T-6 and T-9 will generate 1,300 more new riders each weekday in the first year of operation than will T-4, and 2,500 more total riders each weekday in the first year of operation than will T-4. Only the T-6 and T-9 alignments have the Tysons Central C Station, which will enhance ridership compared to the T-4 and T-1 alignments. (0461, 0461-E –7)

Public Comment: A comparison of the estimated capital costs and ridership projections demonstrates that the T-4 alignment alternative costs more than the other alignment alternatives and will attract fewer commuters than the others. This translates into less operating revenue and increases the magnitude of transportation subsidies that the Dulles Rail Project will require. Based on the evaluation criteria of the Draft EIS, NADA supports T-9 because it appears to have the most favorable economics and the least impact upon properties surrounding that alignment. Similarly, NADA supports the T-6 alignment for the same reasons. While T-6 entails higher capital costs than T-4, T-6 has much higher projected ridership. The anticipated development that the T-4 alignment might encourage does not give adequate weight to the negative impact of a one-track configuration and one-track stations. (0477, 0477-L –14)

Public Comment: Of the Metrorail solutions presented, I most prefer T9. (0076, 0076-CC-1)

Public Comment: Whereas TYTRAN supports the extension of rail through Tysons Corner to Dulles Airport on an alignment that includes the appropriate number of stations to encourage ridership, provides the greatest access for pedestrians, coordinates with the existing roadway in Tysons Corner, provides additional parking solutions for commuters, and provides employees with the most cost effective and time saving mode of transportation with the fewest number of stops and transfers; therefore, be it resolved that TYTRAN supports the Metrorail Alternative providing rail from West Falls Church to Dulles Airport on alignment T9 through Tysons Corner, with 4 stations above ground including a short tunnel between Tysons Central and Tysons Central C stations; the development of appropriate parking solutions that do not further congest the western terminus of Tysons Corner, and enhanced pedestrian facilities to encourage ridership. (0433, 0433-L –1)

Public Comment: Therefore, be it resolved that TYTRAN supports metrorail alternative of providing rail from West Falls Church to Dulles airport on alignment T-9 through Tysons Corner, with four rail stations aboveground, including a short tunnel between Tysons Central and Tysons Central C stations, the development of appropriate parking solutions that do not further congest the western terminus of Tysons Corner, and enhance pedestrian facilities to encourage ridership. (0152, 0152-T –3)

Public Comment: Favors the other alignments particularly T6 and T9 because they allow for adequate access for users of the Metrorail system without impacting Rotonda, Lincoln, and Avalon residents. (0514, 2-02)

> ***Response:*** *Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in the selection of the Locally Preferred Alternative (LPA). The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. Alignments T1, T4 and T9 were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Project Will Have Negative Impacts In Tysons Corner

Public Comment: It appears to me a multiple stop rapid rail system through the middle of Tysons Corner, with its unattractive infrastructure components, will do very little to mitigate the aboveground transportation problems plaguing both Tysons and Reston. In fact, I submit there could be serious negative effect that would be derived from the noise and visual pollution accompanying such a system. (0148, 0148-T –5)

Public Comment: Furthermore, the negative impacts of an aerial alignment would not be eliminated with any of the other rail alignments, since each of the alternatives includes some aerial segments through Tysons. We would, of course, support reexamination of undergrounding a segment of this alignment if it became necessary to mitigate this impact. (0084, 0084-L –6)

Public Comment: Quality of life issues with an aerial alignment or the construction of a tunnel on Westpark Drive, International Drive, and Spring Hill Road. Any of the other MIS Alignments (T1, T6, T9) would be preferred because they would not be located in dense residential areas. The BRT Alignments (BRT 1, BRT 2, and BRT 3) would provide the quickest solution to mass transit if the following were considered: dedicated bus lanes, the construction of a parking garage at the Tysons-West*Park Transit Center, and additional parking along the bus routes. (0515, 2-04)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. Alignments T1, T4 and T9 were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*
>
> *Four alternative alignments in Tysons Corner were evaluated in the Draft EIS for potential impacts. The evaluation of the selected alignment (T6) was carried forward into the Final EIS.*

The analysis presented in Section 3.4 of the Final EIS shows that Alignment T6 would have minimal visual impact in Tysons Corner.

Because the elevated portions of Alignment T6 primarily extend along relatively wide roadways, the visual impact for these alignments would generally not be as substantial. In addition, Alignment T6 includes a lengthy underground section along Route 123 and Route 7, reducing the visual effects. The most substantial visual effect would occur in the vicinity of the Tysons Central 123 Station, where landscaping would be removed and signage for the Tysons Galleria would be obscured. These effects can be mitigated.
An underground loop alignment had been previously considered in the early stages of the Dulles Corridor Rapid Transit Project. The Project Team evaluated an underground loop alignment and determined it did not perform well as measured by the project evaluation criteria. The reasons for the elimination of this alternative are fully detailed in the Final Alternatives Analysis Report (May 2001). In response to other comments during the public comment period of the Draft EIS, the Project Team evaluated a new alignment option for the Metrorail Alternative consisting of an entirely underground alignment through Tysons Corner. This alignment is identical to Alignment T6 except that it transitions to an underground alignment in the median of the Dulles Connector Road, continuing west through Tysons Corner in a tunnel. The alignment resurfaces in the median of the DIAAH on the west side of Tysons Corner. All four stations for the alignment would be underground.

Overall, though an underground alignment option would mitigate the visual and noise effects associated with the selected Alignment T6, these effects could be mitigated through in other ways at a lower cost. . Moreover, because of the length of the underground portion, the alignment would also have additional cost and schedule risks associated with underground construction.

Opposition To The T-4 Alignment

Public Comment: I am totally against the extension of rail loop around, or near, the Rotonda Condominiums. That would not only ruin any semblance of an attractive area, but would cause noise, vibrations, possibly affect the integrity of the buildings, etc., etc. (0006, 0006-L –1)

Public Comment: Northwestern strongly opposes the T-4 alignment. Additionally, Northwestern supports alternative Alignments T-6 or T-9, with T-6 being its preferred alignment. (0461, 0461-E –1)

Public Comment: Northwestern recognizes that the selection of an alignment alternative involves public interest considerations that transcend the interests of any one property owner. From a broad public interest perspective, however, T-4 an unacceptable alternative. (0461, 0461-E –5)

Public Comment: We have also seen the other options and understand T-4 would involve more expense at time when we as taxpayers have no money to waste. (0028, 0028-L –2)

Public Comment: Throughout the Draft EIS, simplicity and efficiency are identified as a means of encouraging increased ridership, which in turn will lead to improved transportation service levels. When a would-be user of rapid transit facilities encounters difficulty in reaching the user's destination, this operates as a deterrent to ridership. Efficiency and convenience are attributes essential to any alternative form of rapid transit, and with respect to Tysons Corner, the selection of an alternative alignment. T-4 is neither efficient nor simple from the vantage point of a user. The single-track configuration behind T-4 means that users will have to "double-back" to reach the proper station to travel in the direction necessary to reach their destinations. By contrast, the other alignments use double tracks, which provide the simplicity and convenience essential to attracting and retaining ridership. (0461, 0461-E –6)

Public Comment: Re: T4, which goes from 123 on Westpark. I suggest that the cost would seriously outweigh the benefits. I live in the area - obviously I'm opposed for my own personal reasons. But I also suggest that the number of additional people the rail line would attract on this span would not be enough

to warrant the cost. How many people in the area this line would focus on would ride the rail. (0051, 0051-CC-1)

Public Comment: Northwestern recognizes the value of bringing rail through Tysons Core. The BRT option will provide no service to the Core. Metro rail, on the other hand, will produce the highest ridership (twice BRT), the highest number of new riders (three times BRT), the highest percentage of people using transit, the shortest travel time and the greatest increase in capacity to move people through the Corridor. But Northwestern cannot accept the impacts of the T-4 alignment upon its asset. Alignment T-4 will have a devastating impact upon Northwestern. It will deter tenants from renewing their leases and perspective quality tenants from locating at the building. Northwestern will see the value of its limited partnership interest in the Westpark Corporate Center decrease because of the adverse impact of visual blight and noise upon the its ability to attract and retain tenants and to charge market rates on market lease terms. T-4 makes the least sense economically, and its one-way stations will cause confusion and discourage ridership without any substantial countervailing benefits. Indeed, T-4 has the most adverse impact upon communities as compared to all the other alignments. (0461, 0461-E –9)

Public Comment: For the reasons set forth below, the Association opposes the T-4 alignment. Additionally, the Association supports alternative Alignments T-6 or T-9. (0477, 0477-L –1)

Public Comment: The Association recognizes that the selection of an alignment alternative involves public interest considerations that transcend the interests of any one property owner. However, viewing the selection process from a broad public interest perspective inescapably leads to the conclusion that the T-4 alignment is an unacceptable alternative. (0477, 0477-L –12)

Public Comment: The Draft EIS stresses simplicity and efficiency as a means of encouraging increased ridership. Increased ridership, in turn, will lead to improved transportation service levels by taking would-be drivers off the road. When a would-be user of rapid transit facilities encounters difficulty in reaching a destination, ridership suffers, and the Rapid Transit Option has lost impact upon levels of service. The Draft EIS favors the Build Alternative because it will provide "as 'seamless' a service as possible between points of high travel activity…." From the vantage point of users, T-4 is neither efficient nor simple. The single-track configuration behind T-4 means that users will have to select the station that will take them in the direction that they want to go. By contrast, the other alignments use double tracks, which provide the simplicity and convenience essential to attracting and retaining ridership. (0477, 0477-L –13)

Public Comment: The Draft EIS concludes that Alignment T-4 will have a much greater impact on communities and upon visual quality and aesthetics than any of the other alternatives. Further, the T-4 Alignment will have more physical intrusions, access changes, displacement and safety concerns. For example, the Draft EIS states "because of the leg along Westpark Drive, Alignment T-4 would have the greatest visual impacts of all the Metrorail alignments." One need only review the adverse impacts upon NADA's Headquarters and upon the Westpark Corporate Center as living proof that T-4 has the most pervasive adverse community impact. In the words of the Draft EIS, "The addition of aerial rail structure to this narrow, tree-lined street would constitute a substantial change from the current visual quality of the area." Consider the aerial rail structure's devastating visual impact upon NADA Headquarters Building and the Westpark Corporate Center. NADA's engineer graphically displays the impact of the aerial structure along the Westpark Drive. Further, "residential viewers along this route would be highly sensitive to changes in the visual environment." Finally, the report concludes that Alignment T-4 has more impacts on communities than the other rail alignments." (0477, 0477-L –17)

Public Comment: Alignment T-4 will have a devastating impact upon NADA. It will reduce the Headquarters Building's usable FAR. It will deter tenants from renewing their leases and perspective quality tenants from locating at the Headquarters Building. NADA will see the value of its limited partnership interest in the Westpark Corporate Center decrease because of the adverse impact of visual blight and noise upon the partnership's ability to attract and retain tenants and to charge market rates on market lease terms. T-4 makes the least sense economically, and its one-way stations will cause confusion and discourage ridership without any substantial countervailing benefits. Indeed, T-4 has the most adverse impact upon communities as compared to all the other alignments. (0477, 0477-L –18)

Public Comment: The Draft EIS clearly recognizes that Alignment T-4 will have a much greater impact on communities and upon visual quality and aesthetics than any of the other alternatives. Further, the T-4 Alignment will have more physical intrusions, access changes, displacement and safety concerns. For example, the Draft EIS states "because of the leg along Westpark Drive, Alignment T-4 would have the greatest visual impacts of all the Metrorail alignments." One need only review the adverse impacts upon 8484 Westpark Drive as living proof that T-4 has the most pervasive adverse community impact. In the words of the Draft EIS, "The addition of aerial rail structure to this narrow, tree-lined street would constitute a substantial change from the current visual quality of the area." Consider the aerial rail structure's devastating visual impact upon 8484 Westpark Drive, as graphically displayed by Exhibit E. Finally, "residential viewers along this route would be highly sensitive to changes in the visual environment." "The DEIS concludes Alignment T-4 has more impacts on communities than the other rail alignments." (0461, 0461-E –8)

Public Comment: Extension provides for elevated rail (approximately 40 ft., as I understand it) that would include two stations on Westpark Drive and would pass within close proximity to the Rotonda Condominium located on Westpark Drive between International Drive and Greensboro Drive. This would result in highly intrusive and disruptive facility adjacent to an existing residential complex. Most Rotonda owners, including me, are not in favor of this elevated loop. The Rotonda has been an attractive and livable condominium for 24 years. Together with other residential communities in this area, we have successfully shared the mixed land uses in West Park with office, retail, and hotels. While there is traffic congestion in this area, it peaks, then disperses, and we are able to enjoy a quiet peaceful atmosphere in the evenings and on weekends. The intermittent passing of elevated Metrorail trains would certainly destroy the pleasant surroundings. (0429, 0429-E –1)

Public Comment: T-4 is not necessary to complete the Dulles Corridor Project. It will not alleviate the congestion at Greensboro Drive and International Drive intersections. It will bring property values down. We do not want a 19th century innovation adjacent to our homes. New York City got rid of the 3rd Avenue L years ago; we don't want it on Westpark Drive. We do not want Westpark Drive to look like a 19th /early 20th century tenement district. (0411, 0411-L –2)

Public Comment: T-4 Alignment on Westpark Drive. The proposal of a heavy rail line and Station (B) immediately adjacent to an existing high-rise condominium on Westpark Drive seems to disregard the human factor and the welfare of the people actually living there (the southern leg through the commercial areas on Rte 123 and continuing on Rte 7 would be underground). Imagine a train on stilts stopping and starting every 15 minutes right outside your bedroom/living room. (0411, 0411-L –1)

Public Comment: I am DEAD SET AGAINST the T4 option for Metrorail, or any kind of elevated rail-due to the disruption, noise, and horribly unaesthetic prospect of us apartment owners' having to stare at an elevated railroad from an open window!! This would hurt property values everywhere in Tysons & just be plain ugly. (0030, 0030-CC-2)

Public Comment: My wife and I are very concerned about plan T-4 that is one of the options for the Metrorail Tysons to Dulles. Having Metro go through Westpark Drive is a very unstabilizing force for Building I and Building II of the Rotonda Complex of Condominiums (located between Westpark, International, Greensboro, and Springhill Drives). Thus for the safety of the residents of these units and the safety of their investments we urge you not to consider the plan T-4. (0028, 0028-L –1)

Public Comment: I am very much in favor of rapid transit and I appreciate the consideration for public comments. As a homeowner at the Rotonda I am very interested in the alignments proposed for Metrorail through Tysons Corner. There are more than 3000 residents at the Rotonda and large numbers of other residents in nearby condominiums and rental apartments. I believe these residents should not be subjected to the continual noise, vibration, and visual impacts of an elevated rail system running by their homes. (0124, 0124-E –1)

Public Comment: We would truly appreciate you reconsidering moving this project to the main corporate area of Tysons Corner for the convenience of the large corporation with their headquarters. (0033, 0033-CC-2)

Public Comment: Please reconsider construction of above ground rail system along intersection of International Dr. & Westpark. This is a residential area and the voice level will be very inconvenient to the residents of the Rotonda (8340 Greensboro Dr). (0033, 0033-CC-1)

Public Comment: We strongly oppose the Tysons Loop Alternative T4 with stations in the vicinity of Westpark Dr/Jones Branch Dr (Tysons Central A) and Westpark Dr/International Dr (Tysons Central B) for the following reasons:

- The median along Westpark Dr. is too narrow for the right-of-way/stations without severely narrowing or eliminating traffic lanes.
- There is no room for the two stations on Westpark Dr unless land is taken (purchased) from one or more of the adjacent properties (Right-of-way and Property Displacements).
- There will be vibration and train noise (Noise and Vibration).
- The view (Visual Aesthetics Impacts) for two of five Rotonda buildings will be destroyed thereby causing a decrease in property values for the entire complex (Secondary Impacts). (0021, 0021-L –2)

Public Comment: The above-ground option in Westpark is an abomination. The other rail options would really reserve the area. (0035, 0035-CC-1)

Public Comment: I object to the T-4 loop by the Rotonda as this would be outside my windows and this is very unfair as a taxpayer to do this to anyone. When I bought I never thought this is what could take place. Put it underground or keep everything on Route 7. (0037, 0037-CC-1)

Public Comment: All residents of 8340 Greensboro Drive better known as the Rotonda do not want your T4 Loop. Please choose any other alternative to the T4. (0057, 0057-CC-1)

Public Comment: I am strongly opposed to T-4. I live in the Rotonda and it would be right outside Building 2 & my part of building 1. They should go through a area that is all business. A lot of us are senior citizens & life savings invested in these properties. (0059, 0059-CC-1)

Public Comment: I am against metrorail's T4 option because it's in front of our windows, and will destroy our life! (0064, 0064-CC-1)

Public Comment: For this reason, I strongly oppose alignment T4. This aerial alignment has all the negative noise, vibration, and visual impacts on residents, and on overall environment and ambiance of the neighborhood. Alignment T4 is predicted to have higher annual operating costs and less ridership (both existing and new riders) than the other proposed alignments. Therefore it is hard to see a rationale for building T4. I would like to see alignment T4 eliminated from consideration. (01240124-E -2)

Public Comment: I am very much opposed to the potential plan of extending the metro rail loop or spur (T-4) from Tysons to Dulles behind Rotonda Bldgs. 1 & 2, 8340 & 8350 Greensboro Dr., via Westpark Drive. (0020, 0020-L –1)

Public Comment: I am against any "Rail Loop" going through, up, around, or anywhere near residential homes, such as the Rotonda. (0006, 0236-L –1)

Public Comment: The improvements to our transportation infrastructure currently being planned by various public entities are both complex and far-reaching. The improvements are, for the most part, anticipated by the owners of the Rotunda. One part of the plan being proposed for the rail improvements from Tysons Corner to Dulles airport, identified as option T-4, is strongly opposed by our residents. The T-4 option is an elevated rail loop that would traverse West Park Drive immediately opposite two-fifths of our residents. (0156, 0156-T –2)

Public Comment: NADA recognizes that the Draft EIS has identified problems with all the alternative alignments. Alignments T-9 conflicts with two planned highway interchanges, but neither of these have funding. While Alignment T-6 along with Alignment T-4 are the most costly, T-6 will have a substantially higher ridership. Both Alignments T-1 and T-6 will result in traffic tie-ups during the construction phase. Draft EIS 6-52 (ridership), 6-60 (cost). (0477, 0477-L –16)

Public Comment: Draft EIS at page 10-6. Although the goal of having a seamless system primarily relates to the type of rapid transit ultimately chosen, this attribute applies with equal force to the alignment alternatives that must provide for ease and continuity in using Rapid Rail [which Alignment T4 doesn't do]. (0477, 0477-L –15)

Public Comment: In short, we [The Rotonda] oppose any rail structure, either above or below ground, on any street adjacent to our property. The board of directors, and through them the ownership, are ready to meet with you and other representatives to further discuss the improvement plans, especially T-4. (0156, 0156-T –4)

Public Comment: One part of the plan being proposed for the rail improvements from Tyson's Corner to Dulles Airport, identified as Option T-4, is strongly opposed by our residents. The T-4 option is an elevated rail loop that would traverse Westpark Drive immediately opposite two-fifths of our residences. The anticipated noise, vibration and view stand to reduce the desirability of the affected units and thus reduce their resale value. This comment is based on the post construction value. The value of these units during construction would be even worse. This letter also represents the collective opinion of the Association Board. In short, we oppose any rail structure either above or below ground on any street adjacent to our property. (0220, 0220-M –1)

Public Comment: I have briefly examined the summary report document, as well as the traffic, transportation, ridership, and noise technical reports. Based on this limited review, I offer several observations that argue against the T4 alternative. - This projected difference in ridership between T4 and the other rail alternatives in not significant, and in some cases, serves fewer riders. (0429, 0429-E –2)

Public Comment: Opposes Alignment T4. (0511, 2-02)

Public Comment: Does not support Alignment T-4. (0513, 2-01)

Public Comment: Opposes Alignment T4 because it is too close to several residential communities (i.e., the Rotonda and the Lincoln). (0514, 2-01)

Public Comment: Opposed to Alignment T4 because it would cause maximum disruption and disturbance to the residential communities of the Rotonda and the Lincoln.(0515, 2-01)

Public Comment: Opposes Alignment T4. (0507, 2-01)

Public Comment: Opposes an elevated alignment close to the Rotonda, either on Westpark Drive or International Drive because the noise would undermine quality of life and property values. It would also increase the traffic problem around the Rotonda. (0332, 2-01)

> ***Response****: Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in the selection of the Locally Preferred Alternative (LPA). The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the LPA. Alignments T1, T4 and T9 were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Wants Final Plan to be Known

Public Comment: I'll want to know what the final plan is before voting the money. No more "maybe rail, maybe bus". The reason behind this: I need to know that multiple changes (between bus and train, or two trains) will not be necessary to get from the Dulles Corridor (Reston, in my case) to Washington. In fact no changes is by far better if you expect people to actually pay to ride this service, and use it with luggage (it is an airport link, after all). The overall issue is "long trip, waits for changes, forget it - - I'll risk the traffic and pay for parking". In case it isn't clear, I favor rail by far even if it costs more to build. (0114, 0114-E – 2)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Metrorail Extension as the Locally Preferred Alternative. It offers a seamless connection with the Orange Line and all Dulles Corridor trains will proceed into the District of Columbia.*

Metrorail Alternative Will Take a Long Time to Build

Public Comment: In the area of promises, I lived here in Washington when we were going to build the Metro, we were going to build a 100-mile system, and we'll build it out in 10 yrs. Well, 15. I think a number of people have retired and their children have joined the project and retired, and it's still not completely done. So I'm with the people about it's going to take a long time. (0191, 0191-T –4)

> ***Response:*** *The commenter is correct in stating that it will take several years to complete final design and construction for the Metrorail Alternative. As explained in Chapter 2 of the Final EIS, the Metrorail Extension would not be complete until 2015, assuming that the Project is fully funded.*

Metrorail Doesn't Serve Everyone

Public Comment: I am representing commuters who travel from all over the area to come to work in Reston and elsewhere in the corridor. We are dispersed all over the region. We live and work in different locations. Going from one area to another can be a challenge. It used to be that people would go to work from their homes in the suburbs to downtown D.C. Metrorail works great for that. But what about the rest of us? (0183, 0183-T –1)

> ***Response:*** *The selected LPA, the Metrorail Extension, is primarily intended to serve long-distance trips between the corridor and the region's core. The proposed transit route is also attractive for short-distance trips between activity centers within the corridor, because it offers time savings over existing transit services in the corridor for these trips.*
>
> *Most travelers in the Dulles Corridor are coming from dispersed, lower-density locations throughout the region, and traveling to dispersed destinations throughout the corridor and the region (some high-density, some not). While travel within the corridor and between the corridor and the region is significant, travel from each dispersed location is, in general, not significant enough to support a dedicated, point-to-point type of service. On the other hand, the Metrorail Extension includes several stations that can efficiently provide access for many travelers heading to and from multiple origins and destinations.*
>
> *Although the Metrorail Extension would not serve the travel needs of all trip makers in the Dulles Corridor, it—in combination with the planned transit-oriented urban form—offers alternative means of travel for the growing number of residents, employees, and visitors in the Dulles Corridor, helping to increase overall mobility in the corridor, the counties, and the region. Other transportation improvements (both highway and transit) are recommended in the Northern Virginia 2020 Plan, the Statewide Transportation Plan, and local comprehensive plans. This program of improvements, which is being pursued by VDOT, DRPT, and others, is intended to increase mobility and address the existing and potential future deficiencies in Northern Virginia.*

Proposed Project May Not Be Convenient

Public Comment: Although the idea of rail or bus service to Dulles is a good idea, I don't know how much it will be used and thus how much it will alleviate the environmental concerns with commuting. Taking mass transit will likely increase my commuting time and time is as important as money (cost of commuting). With all the stops proposed for the rail, rail would probably take longer. And by the time the rail riders got to West Falls Church, if they had to change trains, they would never get a seat or even a space on the first train. (0011, 0011-E –1)

> ***Response:*** *As part of the analysis in support of the Final EIS, the Project Team estimated the number of patrons and the change in travel times for users of the Metrorail Extension. These results are documented in Chapter 6 of the Final EIS.*
>
> *The results show that the Metrorail Extension to Route 772 would attract 47,800 new riders in 2025 (the planning year). New riders are those who would not otherwise be riding transit without the Extension. The Metrorail Extension also results in improved travel times for most trips studied. Some of the shorter trips did not show improvement, but all of the longer trips, including the corridor to downtown DC trips that account for most of the travel on the line, showed significant improvement.*

Suggestions for Enhancing System Connections

Public Comment: In addition, accurate schedules should be provided at all stops for both local and express bus systems; improvements in neighborhood service should be made wherever and whenever such opportunities may occur; schedules should periodically be fine-tuned to fit changing demand; and timed-transfer services should be extended beyond our very successful Town Center demonstration operation to other major activity centers throughout the Dulles Corridor and beyond. (0478, 0484-E –19)

> ***Response****: Responsibility for the improvements and enhancements suggested by the commenter is the responsibility of the local transit operators in the corridor. These operators include the Fairfax Connector and Loudoun County. Implementing these improvements is outside the scope of this project.*

Suggestions for Different Routing

Public Comment: We have some specific concerns regarding the Loudoun portion of the Dulles Rail project. We believe consideration should be given to running the rail up Route 28 and out Route 7 to connect to existing communities rather than be used to open up a completely new area to development. It would help to know how this would affect ridership and development patterns. We have concerns about proposals for as much as 16 million square feet of commercial development at the end station, what is being called Moorefield Station. While we support transit-oriented development, this is overkill given the vast amount of land already available for commercial development and this amount of office and commercial will prompt sprawl far to the west. (0149, 0205-M –4)

Public Comment: We believe consideration should be given to running the rail up Route 28 and out Route 7 to connect to existing communities, rather than be used to open up completely new areas to development. It would help to know how this would affect ridership and development patterns. (0251, 0251-T –6)

> ***Response:*** *The Loudoun County Revised General Plan and Countywide Transportation Plan has governed the general routing of the Project. The Project Team did not, therefore, entertain an alternate route or corridor, which did not conform to the County plans. The Revised Countywide Transportation Plan (adopted July 23, 2001) and the Revised General Plan (adopted July 23, 2001) specifically identified the Dulles Corridor Rapid Transit Project as a priority, and identified the same routing and stations for the project as proposed in the Draft EIS and as documented in*

the Final EIS, both in the text and on accompanying maps. Heavy rail transit has not been identified along Route 28 or Route 7, though these have been identified as transit corridors.

The commenter's proposed routing for the corridor would have also been inconsistent with another regional plan, the Northern Virginia 2020 Plan. This plan identified a light rail line extending along Route 28, and with a terminus north of the Dulles Toll Road, but south of Route 7. No future transit lines were identified along Route 7. Transit-oriented development and implementation of any site-specific private development opportunities within the corridor is under the control of local jurisdictions.

Need Further Investigation of Underground Alignment

Public Comment: At the earlier scoping hearings, I asked or suggested that the alignment through Tysons Corner be completely underground - from where it leaves the Dulles International Airport Access Highway to where it returns to it. As far as I can tell, this either was not investigated or the results were not made public. So I am asking again - what would be the additional cost to place the T6 alignment completely underground? Is it technically feasible? (0074, 0074-CC-1)

Public Comment: Underground on Rt. 123 as soon as trains leave Dulles Access Road. (0061, 0061-CC-2)

Public Comment: Are we politically and economically between such a terrible rock and a hard place that this is the best we can do at Tysons? Is there absolutely no solution we can afford that avoids miles of elevated tracks? Is the cost of an underground line along Routes 7 and 123 absolutely prohibitive? (0088, 0088-L –2)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. Alignments T1, T4 and T9 were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

In response to the above requests during the public comment period of the Draft EIS, the Project Team evaluated the suggested alternative using the same social, environmental, economic, and transportation factors used for the evaluation documented in the Final Alternatives Analysis Report *(May 2001). This new alternative, called Alignment T13, was identical to Alignment T6 except that it would have transitioned to an underground alignment in the median of the Dulles Connector Road, and continued west through Tysons Corner in a tunnel. The alignment would have resurfaced in the median of the DIAAH on the west side of Tysons Corner. All four stations for the alignment would have been underground. Alignment T13 was not recommended for further consideration in the Dulles Corridor Rapid Transit Project. The reasons for this recommendation are summarized below.*

Though Alignment T13 would have mitigated the visual and noise effects associated with Alignments T6, these effects could be mitigated through much lower cost mechanisms. A draft cost estimate for Alignment T13 indicated that it would have cost approximately $422 million more than Alignment T6 (the most expensive Metrorail alignment). Visual and noise effects for Alignment T6 are not expected to be substantial.

Alignment T13 would also have had additional costs and schedule risks. While it is customary to assess higher cost and schedule contingencies to underground construction to cover these potential exposures, it is not reasonable to assign a sufficient contingency to cover every risk, and maintain a level comparison among alternatives. Most of the significant risks relate to unknown subsurface conditions. Risks include escalating project costs; severe schedule impacts, leading to additional cost escalation; increased inconvenience to the public; and even delays in opening the project. The full evaluation for Alignment T13 is documented in a technical memorandum, now part of the Final Alternatives Analysis Report Addendum (October 2004).

Suggest Further Evaluation of Other Alignment Options

Public Comment: We recommend full evaluation of the following option: Building the first operational capability the length of the corridor down existing rights of way with on-grade stations and parallel with construction of Tysons Corner and Dulles loops. Adding the T-8 alignment down the Dulles connector road to the T-1, T-6 or T-9 alignment selected for Tysons Corner should save lapsed construction time and provide a permanent express route to the airport. This combination could give Tysons Corner and the rest of the corridor service around 2006 and appears compatible in cost and service to the T-4 option. (0170, 0170-T –7)

Public Comment: 2010 is a long time to wait for service. We are particularly concerned that the Tyson's Corner alignment will significantly delay service to the rest of the corridor. We recommend evaluation of a combination of the T-8 alternative (or something like it) with T-1 (or 6 or 9) and building - parallel with the construction of the Tyson's alignment -- the first operational capability the length of the corridor down the existing rights-of-way with at-grade stations. (0233, 0426-M –4)

Public Comment: I would favor building the line through from Falls Church to Dulles on the Dulles Corridor immediately and adding the Tysons' loop and the other stations, which will take more time to build, in parallel sequences, so that connectivity is achieved from D.C. <--> Dulles Asap. (0083, 0083-CC-2)

Public Comment: We recommend full evaluation of the following option: building the first operational capability the length of the corridor down existing rights-of-way with on-grade stations, in parallel with construction of the Tysons Corner and Dulles loops. Adding the T8 alignment down the Dulles Connector Road to the T1, T6 or T9 alignment selected for Tysons Corner should save elapsed construction time and provide a permanent express route to the Airport. This combination could give Tysons Corner and the rest of the corridor service around 2006, and appears comparable in cost and service to the T4 option. T8 is not a current rail alignment, but was studied previously and is in the BRT alternative. Evaluation of this combination should not unduly delay the EIS. (0210, 0210-M –4)

> ***Response****: The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. Alignments T1, T4 and T9 were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*
>
> *In response to the above requests, the Project Team evaluated the suggested alternative using the same social, environmental, economic, and transportation factors used for the evaluation of alternatives documented in the Final Alternatives Analysis Report (May 2001). This new alternative, called Alignment T12 was not recommended for further consideration in the Dulles Corridor Rapid Transit Project. The reasons for this recommendation are summarized below.*
>
> *Alignment T12 would have numerous deficiencies relative to the alternatives previously considered in the Final EIS. These deficiencies include increased costs, substantial impacts associated with shifting roadways to accommodate the alignment, reduced ridership, and operational complications. The full evaluation for Alignment T12 is documented in a technical memorandum, now part of the Final Alternatives Analysis Report Addendum (October 2004).*

Need to Access Office and Residential Development

Public Comment: Two possible alternatives identified below may (to different degrees) address the need to access the office and residential development in this area near Westpark Drive. These additional alternatives should be considered and compared to the current proposals in such areas as ridership potential both with and without an internal circulator system of shuttle busses, taxis, etc and the attendant surface facilities to accommodate these modes, costs, construction impacts, operational impacts and other environmental concerns such as noise, air quality, etc.

A. A variation of T4 which would propose double tracks along the Westpark Drive portion of the alignment between Route 7 and 123 and eliminate the single track segment between West Park Drive and 123 east of the Beltway. The alignment would include Tysons West, Tysons Central A, Tysons Central B and Tysons East Stations. It is recognized that this alternative would not serve the area along Route 7 near 123 nor would it connect directly to the two Tysons shopping centers. But these two areas could be served via an internal circulator system if one were provided. I would expect that the ridership analysis would assess the station location implications. (0387, 0387-L –4)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. Alignments T1, T4 and T9 were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

The visual effects of this proposed alignment would have been substantial. As discussed in Section 3.4 of the Draft EIS, Alignment T4 was expected to have much more substantial visual impacts than the other Metrorail alignments, due to the leg running along Westpark Drive—a relatively narrow, tree-lined street with many residential viewers. The aerial structure in this location would have been out-of-scale with the existing development and would require the removal of street trees. The alignment was also expected to have direct visual impacts on an adjacent hotel and office building along Westpark Drive. The effects of Alignment T4 along Westpark Drive could have only been mitigated by relocating the facility elsewhere. Adding a second track to Alignment T4 would have only exacerbated visual impacts that were already extremely difficult, if not impossible to mitigate, unless the alignment was moved.

Alignment T6, on the other hand, will have far less substantial visual impacts. Because the elevated portions of Alignment T6 primarily extend along relatively wide roadways, the visual impact for this alignment would generally not be as substantial. In addition, Alignment T6 includes lengthy underground sections along Route 123 and Route 7, reducing the visual effects of this alignment. Given that Alignment T6 is expected to attract high levels of ridership and primarily have moderate visual impacts, the commenter's suggested alternative was not recommended for further consideration in the Dulles Corridor Rapid Transit Project.

As outlined in Chapter 2 of the Final EIS the Metrorail Extension includes feeder bus service at all of the stations.

Suggests a Shuttle Concept in Tysons Corner

Public Comment: B. The second alternative is mainly an operational alternative related to T4. The one physical modification is to include a double crossover inbound of the Tysons West station. This alternative would supplement the regular through rail service (including "through service" that would terminate at Tysons West under the BRT/Metrorail and the initial phase of the Phased Alternative) with an internal Tysons Rail Shuttle service between the Tysons East and West stations. This would provide more frequent service between the single track Tysons Central Stations and the transfer stations at Tysons East and West where riders could board trains destined to stations inbound or outbound of Tysons. While this wouldn't totally eliminate the ridership loss associated with a required transfer, it would make the transfer as convenient as possible thereby minimizing any potential ridership loss. This shuttle concept has another positive benefit of providing high quality transit service within the Tysons area thereby reducing the need to depend on the private auto for internal trips for work, shopping, dining, etc. (0387, 0387-L –5)

Response: *The LPA includes Alignment T6 in Tysons Corner. Its rail geometry precludes a double cross-over inbound of the Tysons West Station. Moreover, since Wiehle Avenue Station will be the interim terminal station of the first phase of the LPA, there will be no turnback function at Tysons West Station.*

Suggests Operational Changes at Tysons and Reston

Public Comment: I believe both Tysons and Reston have unique internal movement issues that cannot be solved by multiple heavy rail stops. In fact, multiple stops in these areas will distract from the overall system. The airports are good examples of integrated solutions. The rail serving National Airport, for example, does not go to each major air carrier. Instead, they come to a single location and redistribute their passengers to the desired airline destinations. In this manner they only expedite the trip - not only expedite the trip, but make – more importantly, they retain the flexibility to reconfigure their internal transportation as the airport business environment changes. And I think we are going to see the same kinds of things in these regional areas. It is this flexibility that I believe would be retained if we create only one stop at those major population centers that really need their own internal transportation and distribution systems. And that would kind of facilitate the bus rapid transit. (0148,0250-T –3)

Public Comment: Preferred option would be to have Metrorail run along the DIAAH with a stop at the Tysons-West*Park Transit Center (0512, 2-02)

Public Comment: Routes thru Tysons are foolish & add enormous cost. Better to keep rail in the Dulles Road median & use monorail to service Tysons. (0073, 0073-CC-3)

Response: *Appendix H of the Final EIS (Alternatives Previously Considered), and the Project's Final Alternatives Analysis Report (May 2001), both discuss the Alternative T8 as a Metrorail bypass of Tysons Corner. As explained in the Final Alternatives Analysis Report, this alternative, which was suggested during the Project's scoping process, was eliminated from further consideration during the screening of alternatives. The analysis for this alignment option showed that bypassing Tysons Corner offers very little travel time savings. Moreover, given the length of most trips on the transit line, the time savings would be considered negligible. In fact, a larger number of Metrorail stations in Tysons Corner, rather than one, expedites trips for many travelers because it provides more direct access to many locations and does not force a transfer to another mode for distribution.*

Alignments that included connections to feeder systems within Tysons Corner were requested during the Scoping Process for the preparation of the Draft EIS. These alternatives were evaluated during the early stages of the Dulles Corridor Rapid Transit Project, and were eliminated from further study as detailed in the Final Alternatives Analysis Report.

Use Some Traffic Lanes for Transit Service

Public Comment: The [Pittsburgh East] bus rapid transit system also includes dedicated bus lanes in the downtown core and in the satellite employment center of Oakland, which tends to illustrate the flexibility of the bus rapid transit system in Pittsburgh, in Westmoreland County, to the buses down the busway into downtown Pittsburgh, if they just get a permit from Port Authority Transit and they are ready to roll. Here you could create loops that go through Tysons on bus lanes on the surface streets, go out to say Leesburg or to Ashburn or to Cascade or to Sterling Park or Herndon, and in the intermediate using part of the bus rapid transit system. (0255, 0255-T –4)

Public Comment: Quality of life issues with an aerial alignment or the construction of a tunnel on Westpark Drive, International Drive, and Spring Hill Road. Any of the other MIS Alignments (T1, T6, T9) would be preferred because they would not be located in dense residential areas. The BRT Alignments (BRT 1, BRT 2, and BRT 3) would provide the quickest solution to mass transit if the following were considered: dedicated bus lanes, the construction of a parking garage at the Tysons-West*Park Transit Center, and additional parking along the bus routes. (0515, 2-02)

Response: *BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

As described in Chapters 2 and 6 of the Draft EIS and Final EIS, several roadway capacity improvements are planned for Tysons Corner over the 20-year planning horizon, including

roadway widening and construction of grade-separated interchanges. VDOT and Fairfax County believe that these capacity improvements will be needed to meet increasing demand for travel to, from, and through Tysons Corner. However, as shown in Section 6.1 of the Draft EIS and Section 6.2 of the Final EIS, very few of these improvements are actually expected to improve the level of service on Tysons Corner roadways between 2000 and 2025. Many roadways are expected to experience worsening conditions, while others will remain at their current state of congestion.

Given that many roadways in Tysons Corner are expected to operate at or above capacity in the future, even after capacity increases, the roadway operators (including Fairfax County and VDOT) would have been unlikely to dedicate traffic lanes for transit service.

Concerns About Route 772 Station

Public Comment: Third, the Greenway suggests that the rail line terminate at the Route 606 station for several reasons. First, terminating the line at Route 606 will minimize the impact of this project on the Greenway and its customers. Second, Loudoun County's planning and zoning process does not support any significant parking near the Route 772 station, whereas the Route 606 station will have approximately 4500 parking spaces. We question the benefit of the Route 772 station in the absence of ample parking. (0257, 0257-T –8)

Public Comment: The Greenway suggests that the rail line terminate at the Route 606 station, for several reasons: First, terminating the line at Route 606 will minimize the impact of this project on the Greenway and its customers. Second, Loudoun County's planning and zoning process does not support any significant public parking near the Route 772 station, whereas the Route 606 station will have approximately 4500 parking spaces. We question the benefit of the Route 772 station in the absence of ample parking. Third, as a major Loudoun County taxpayer, the Greenway is concerned that the financial impact on Loudoun County of becoming an active member of the WMATA compact has not been discussed, and that the operational and capital improvement subsidies to be paid by Loudoun County to obtain benefits from the availability of mass transit while minimizing the capital cost and the subsidies. (0257, 0268-M –5)

Response: *As shown in Table 6.2-2 of the Final EIS, in the long-term, the Full LPA is not expected to worsen or improve traffic conditions on the Dulles Greenway. Under the 2025 No-Build Alternative and the 2025 Full LPA, between Route 772 and Route 659, the Greenway is expected to experience traffic volumes of 8,100 vehicles in the peak direction in the peak hour. This traffic volume results in LOS F for both alternatives, a level of service that reflects severely congested or gridlock conditions.*

During the construction of the Full LPA, it would be necessary to permanently relocate the lanes on the Dulles Greenway around the Route 606 and Route 772 stations and around the yard leads for the Metrorail Service and Inspection Yard. DRPT and WMATA would coordinate with TRIP II on the application of best management practices to minimize the disruption of traffic. These practices would be modeled after TRIP II's recent experience during the widening of the Dulles Greenway from four to six lanes. With respect to construction of the Metrorail line, yard leads, and stations in the median of the Greenway, again best management practices would be used for construction methods, access, haul routes, etc., to minimize disruption of traffic. Installation of the four pedestrian bridges over the Dulles Greenway will have minimal impacts, because any lane closures will be during off-peak hours, when traffic volumes are lowest.

As evaluated in the Supplemental Draft EIS as a revision to the selected LPA and further documented in the Final EIS and final General Plans, the Project Team reconfigured the park-and-ride program in Loudoun County. Route 772 Station increased from no park-and-ride facility to two structures of 3,300 spaces combined. Route 606 Station decreased from 4,750 spaces to 2,750 spaces.

Suggests Operational Changes

Public Comment: The environmental impact is greater with the rail proposals than with the bus rapid transit proposals, but once again, I think that what you need to do here is to scale back the number of stations and maybe end this thing at Dulles airport, get rid of some of the ones at Tysons, and really start to get some change in Tysons and other land use densities now before you can justify fixed rail there. (0112, 0245-T –11)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative.*

The terminus of the Locally Preferred Alternative is located in eastern Loudoun County in accordance with the Loudoun County Revised General Plan and Countywide Transportation Plan, and responds to anticipated growth in this portion of the county over the next 25 years.

As outlined in Chapter 10 of the Draft EIS, Metrorail (with multiple stations in Tysons Corner) will have several benefits relative to BRT. In general, Metrorail will be providing greater improvements in transportation service, greater increases in transit ridership, more support for future development, and it would better serve diverse populations.

Specifically, Metrorail will have the highest ridership, highest number of new riders, and highest corridor transit mode share among the Build Alternatives evaluated in the Draft EIS. Metrorail will be the most time competitive with automobiles for trips within the corridor. For these trips, as well as trips to and from the corridor, Metrorail will require the fewest number of transfers. Metrorail will provide greatest increase in person-capacity in the corridor. Metrorail also will provide the greatest benefits for the Orange Line, in terms of relieving overcrowding on the Vienna service.

In addition, Metrorail will support comprehensive plans in Tysons Corner better than BRT, and better will enhance Fairfax County's ability to focus growth in the corridor. As indicated in Chapter 9 of the Final EIS, the allowable transit-related growth will result in an increase in development in the immediate vicinity of stations throughout the corridor, but will not represent a dramatic increase over the overall level of growth allowed in Fairfax and Loudoun counties, as defined in their land use regulations. Rather, the comprehensive plans refocus the previously anticipated levels of growth into patterns that will increase the number of viable travel options available to corridor residents and employees, including transit, walking, and bicycling. As an additional benefit, compact development will reduce the cost of providing utilities, facilities, and services to new residential and commercial developments. The former, dispersed pattern of development would have been highly auto-oriented, leaving people with few travel choices and resulting in wide-spread congestion. While it is expected that increased density will result in localized traffic congestion in station areas, the new, transit-oriented urban form will help to increase overall mobility in the corridor, the counties and the region. Although these policies are intended to support transit within the corridor, the increase in growth associated with these policies is not part of the project justification.

The proposed Metrorail stations are at the locations determined to best respond to anticipated demand. Therefore, stations are located at existing and planned activity centers in the corridor and at existing park-and-ride locations. Average spacing for most stations in the Dulles Corridor is approximately one to two miles, which is consistent with that for heavy rail lines in general. In Tysons Corner, station spacing is somewhat closer, similar to station spacing in a high-density, metropolitan downtown. Given that Tysons Corner is currently larger —in both geographic size and employment—than many of the central business districts in major U.S. cities, and is one of the largest suburban business districts in the country, the number of stations proposed for this area is not unwarranted.

Supports Existing Washington Flyer System

Public Comment: Those of us in the vicinity of the West Falls Church Metro station (and anyone who can get to that station) already have a highly efficient public transportation system to Dulles, in the form of the Washington Flyer shuttle buses that leave the station two or three times an hour and get to Dulles nonstop in less than 20 minutes, arriving just outside the terminal. If that system were to be replaced by the proposed rail system, we would be required to take the Metro back to East Falls Church and reboard there on a train or bus going to Dulles and then ride through numerous stops before reaching Dulles. (0307, 0307-E –1)

> ***Response:*** *The commenter is correct in stating that passengers in the West Falls Church vicinity wishing to travel to Dulles Airport would transfer to the Dulles Corridor line at East Falls Church Station. The travel time from the East Falls Church Station to Dulles Airport Station is approximately 33 minutes. The travel time for Washington Flyer coach buses from West Falls Church Station to Dulles Airport Station averages 20 to 30 minutes, but is subject to change based on traffic and weather conditions. The frequency of Metrorail trains will be every 7 minutes during peak periods while the Washington Flyer coach buses are every 30 minutes.*
>
> *The Washington Flyer stop is two lanes from face of the terminal, while the center of the Metrorail platform is approximately 190 feet from the face of the terminal (to preserve MWAA's ability to construct its automated people mover system). The Metrorail travel path is completely enclosed whereas the Washington Flyer is not.*

B. Supplemental Draft EIS Comments

State Agency Comments

Effects of Phasing Issue

State Comment: If construction of Phase 2 is delayed, how will the Project address outstanding Phase 1 issues that will become prolonged and more critical as a result of this delay? (0091 0106-1)

> ***Response:*** *The Wiehle Avenue Extension was evaluated as an independent, stand-alone project in the forecast year of 2025. As such, the Final EIS documents potential effects of having the Wiehle Avenue Extension in operation past year 2011.*

Need to Identify Bicycle and Pedestrian Improvements

State Comment: The Supplemental DEIS states that the implementation of the design changes to the proposed LPA would have no additional effects on the existing and planned bicycle and pedestrian facilities in the Dulles Corridor. Although there would be no additional effects, please indicate how the Project will provide adequate bicycle and pedestrian access to the stations. (0091 0106-18)

> ***Response****: DRPT is the Project's sponsor and initial owner. However, the responsibility for modifications of sidewalks and trails as part of station access is with Fairfax County, Loudoun County, Town of Herndon, City of Falls Church and VDOT. DRPT will, though, coordinate with these jurisdictions and agencies during preliminary engineering and final design to determine the improvements for station access beyond the station site plans, as well as their ownership and maintenance. Close communication would also occur with the Fairfax County Non-Motorized Transportation Committee, private landowners and developers and other stakeholders. The Fairfax Countywide Trails Plan and the Loudoun County Trails plan have been and will be consulted. Comprehensive pedestrian circulation beyond the station site plans may be implemented in conjunction with other planned developments, County, and/or State projects and/or as elements of the Fairfax Countywide Trails Plan and the Loudoun County Trails plan.*

All stations will have bicycle racks and/or lockers adjacent to station entrances. Specific quantities will be determined as part of final design.

Parking Issues in Tysons Corner

State Comment: "…the reduction in parking capacity at this station (Tysons West) would result in a considerable decrease in project-related trips at the Tysons West Station for all years. However, this reduction would not necessarily result in significant improvements to traffic impacts, over those presented in the Draft EIS for the Metrorail Alternative (T6/Y15), since the background traffic volumes would remain extremely heavy near the station area…" Eliminating the formerly proposed large parking structure will result in less impact to the local road network from vehicles anticipated to use the parking structure, than that identified in the DEIS. However, the smaller parking facility will generate additional conflicting (left turn) movements. (0091 0106-9)

Response: *For Tysons West Station entrance and facilities, the Project Team recommended, and the decision-makers selected Option E site plan to replace the plan presented in the Supplemental Draft EIS and revised General Plans. Option E has its station entrance at the inbound, east end of the station near Spring Hill Road. The bus bays and Kiss & Ride of Option E are located between Tyco Road and Spring Hill Road, set back from Route 7.*

The 500-space park-and-ride would be part of a joint development project, so the private sector would be involved in the design and development. However, the specific location and design is not yet known. The park-and-ride would be accessed from local roads, and its cost is part of Wiehle Avenue Extension.

As shared with stakeholders in the Dulles Corridor, the Project Team notes that the traffic conditions of station access should not be a major concern to VDOT. The peak activity at the station will be early on weekday mornings and this small park-and-ride structure will likely be full before the local peak hour of Tysons Corner. For instance, the final park-and-ride customers of Metrorail would arrive before 7:00 a.m., while the local peak hour would be between 7:30 a.m. and 8:30 a.m.

Parking Issues at Herndon

State Comment: "With the design modifications, the effects of the proposed LPA would be similar to those presented for the Metrorail Alternative (T6/Y15) in the Draft EIS. However, if the full LPA is not constructed, 2,450 parking spaces would be constructed at the [Herndon-Monroe] station by 2025 to accommodate increased demand for transit services in the corridor." Since FTA is only considering funding Phase I at this time, it is unclear when the need for these spaces would be determined. Please clarify. (0091 0106-14)

Response: *Additional parking spaces at this station would be built as part of the LPA but would not be included under the Wiehle Avenue Extension. If the full LPA were not constructed by 2025, additional parking for express bus service would be needed at Herndon-Monroe and would be addressed by Fairfax County.*

Parking Issues at Other Locations

State Comment: "Based on the mode of arrival data presented in Table 6.2-5, the project related traffic effects of the proposed LPA and proposed LPA Phase 1 are anticipated to be significantly less than those presented in the Draft EIS for the Metrorail Alternative (T6/Y15), due to a reduction in parking capacity at the Route 606 Station. However, this reduction would not necessarily result in significant improvements to traffic impacts, over those presented in the Draft EIS for the Metrorail Alternative T6/Y15), since the background traffic volumes would remain extremely heavy near the station area." Please explain the rationale for reducing parking capacity at this location and consequently, the impacts to roads and other parking facilities along the line. (0091 0106-15)

Response: *In the Draft EIS, the Route 606 Station was intended to supply all of the parking for the two Loudoun County stations because the area surrounding the proposed Route 772 Station was planned as a high density, pedestrian-oriented development. Loudoun County had requested that no parking be developed at Route 772 because it was incompatible with this type of development. Public comments during the Draft EIS public hearings, as well as subsequent analysis, led the County to amend its request. Because of the addition of parking at Route 772, peak hour traffic would increase relative to the numbers given in the Draft EIS; however, plans for access paths to this station would be designed to accommodate this level of traffic.*

Potential Need to Conduct Noise Studies

State Comment: Relocation of Traction Power Substation #2 to the southwest quadrant of the Magarity Road underpass of the Dulles Connector Road

"..The new location is undeveloped public land of the Dulles Connector Road but on the residential side of the Road's wooden noise wall. The land is owned by FAA, leased by FAA to MWAA and maintained by VDOT."

The wooden fences along the Dulles Connector Road are basically for screening, not sound attenuation. These should be referred to as fences or some term other than "noise walls". If actual noise walls are necessary, the appropriate studies would be required to be performed and the materials would be required to meet the current FHWA/VDOT standards. (LD) (0149, 2-01)

Response: *The Project Team has chosen to use the term 'noise wall' for these wooden structures because they were originally designed and constructed as such by FAA to mitigate highway noise from the Dulles Connector Road.*

Construction of Noise Walls

State Comment: Option A location of Tie Breaker Station #2
"The Team recommends that a new wooden noise wall surround the TBS-2 for its security, for enhanced community safety, and for aesthetics of the neighborhood."
VDOT does not recommend the use of "wooden noise walls" because they are too noise reflective and not sufficiently noise absorptive. Consequently, VDOT generally does not use wooden noise walls in its projects and has no approved design specifications for wooden noise walls. Use of wooden noise walls would be considered acceptable by VDOT only under very rare and special circumstances, such as at locations where there are requirements for very shallow noise wall foundations that could not support heavier, concrete walls.

All noise walls within VDOT Rights-of-Way (R/W), whether constructed by VDOT or others, must be designed and constructed in accordance with VDOT's sound barrier design, construction and materials specifications. (ENV) (0149, 2-02)

Response: *The ownership, operation and maintenance of the Dulles Connector Road are unique. The Federal government owns the right-of-way and leases it to MWAA, but VDOT operates and maintains the roadway, its roadside, and the wooden noise walls on MWAA's behalf. The Project Team has presumed that the existing wooden walls were built in accordance with standards in effect at the time of their construction. Any section of these walls removed or relocated as a result of the Project would be constructed of like materials.*

Local Agency Comments

Pedestrian and Bicycle Issues in Tyson Corner

Local Comment: Pedestrian access to all stations needs greater attention from the Project Team. Station plans should clearly show pedestrian access points and necessary adjacent facility improvements such as cross walks and sidewalks/trails. Station plans should clearly show pedestrian access points and necessary adjacent facility improvements such as cross walks and sidewalks/trails. Alternate points of access to the Tysons West and Tysons Route 7 Stations should be evaluated. Staff is collaborating with a subcommittee of the County Non-Motorized Transportation Committee to identify pedestrian facility improvements that should be constructed between now and the initiation of rail service. (0083 0098-2)

Local Comment: Wiehle Avenue station: On the south side of the station, a pedestrian connection to the west should be provided that connects to a sidewalk on Association Drive or Commerce Park Drive; this connection should provide improved access from the residential areas along Soapstone Drive. (0093 0109-16)

Local Comment: Vol. II, p. 080 show pedestrian (e.g., crosswalks) improvements. (0093 0109-8)

> ***Response****: DRPT is the Project's sponsor and initial owner. However, the responsibility for modifications of sidewalks and trails as part of station access is with Fairfax County, Loudoun County, Town of Herndon, City of Falls Church and VDOT. DRPT will, though, coordinate with these jurisdictions and agencies during preliminary engineering and final design to determine the improvements for station access beyond the station site plans, as well as their ownership and maintenance. Close communication would also occur with the Fairfax County Non-Motorized Transportation Committee, private landowners and developers and other stakeholders. The Fairfax Countywide Trails Plan and the Loudoun County Trails plan have been and will be consulted. Comprehensive pedestrian circulation beyond the station site plans may be implemented in conjunction with other planned developments, County, and/or State projects and/or as elements of the Fairfax Countywide Trails Plan and the Loudoun County Trails plan.*
>
> *All stations will have bicycle racks and/or lockers adjacent to station entrances. Specific quantities will be determined as part of final design.*

Local Comment: At the Tysons West Station, consideration should be given to locating the parking facility and pedestrian access on the south side of Tyco Road. Locating the parking structure on the south side Tyco Road may be more favorable to joint development. Locating pedestrian access on the south side of Tyco Road may serve a greater number of pedestrians. (0083 0098-4)

> *For Tysons West Station entrance and facilities, the Project Team recommended, and the decision-makers selected Option E site plan to replace the plan presented in the Supplemental Draft EIS and revised General Plans. Option E has its station entrance at the inbound, east end of the station near Spring Hill Road. The bus bays and Kiss & Ride of Option E are located between Tyco Road and Spring Hill Road, set back from Route 7.*
>
> *The 500-space park-and-ride would be part of a joint development project, so the private sector would be involved in the design and development. However, the specific location and design is not yet known. The park-and-ride would be accessed from local roads, and its cost is part of Wiehle Avenue Extension.*

Local Comment: Section 6.3.2 With Wiehle as the Interim terminal station, will there still be no additional effects on bicycle and pedestrian facilities with the LPA Phase 1?

> ***Response:*** *Chapter 6 of the Supplemental Draft EIS addresses the physical effects of the proposed Dulles Corridor project on existing and planned pedestrian and bicycle facilities. The*

LPA and the Wiehle Avenue Extension are not expected to affect any existing or planned facilities in the Wiehle Avenue Station area.

Other Specific Pedestrian and Bicycle Issues

Local Comment: Vol II, p. 081 there are 2 "emergency stairs" proposed for the station. Could one of them be upgraded for use by regular pedestrian traffic? (0093 0109-10)

***Response**: No, the emergency stairs are for egress during station evacuation. Moreover, the stairs are not connected to the station mezzanine with its fare gate array.*

Parking Issues at Wiehle Avenue

Local Comment: The Board requests that construction of the parking structure at the Wiehle Avenue Station no[t] commence until the Full Funding Grant Agreement for Phase II is executed. However, deferring such construction should not preclude land acquisition and station access improvements at this station. (0083 0098-1)

***Response:** The following final recommendation of the Project Team explains the need for the park-and-ride at the start of Metrorail operations. With the exception of a new roadway connection to Sunset Hills Road, these station facilities would be situated upon the Reston East park-and-ride lot owned by Fairfax County. In the context of the Corridor's travel demand and of project justification by Federal criteria, there is a very important need to have adequate facilities at the end-of-line station at the start of Metrorail operations. The Project's goal of improved mobility must be supported by complete access to the station. With respect to the Federal criteria, FTA is placing increased emphasis on the cost-effectiveness of projects proposed for funding; the cost-effectiveness measure relies on the transportation benefits of the Project. Not to have the transportation benefits that the recommended park-and-ride facility offers would lower the FTA's rating of the Project and thus affect its prospect for funding. In addition, the Project's operating funding plan relies on the forecast ridership and revenue; reduced access translates into higher public subsidy.*

General Parking Issues

Local Comment: Vol. II, p. 080 Option B appears to better fit the "mixed use" concept for land use near the station. Clarify which improvements are proposed with the project, and for those that are not, include them in the mitigation chart, 6.2-7. (*0093* 0109-7)

***Response:** In accord with the final Team recommendations for Wiehle Avenue Station, the final General Plans include a site plan that accommodates future joint development at the station. The site of the joint development would be on the current Reston East park-and-ride facility along Wiehle Avenue. Chapter 6 of the Final EIS involves a summary of the mitigation measures for transportation effects.*

Fairfax County Supervisor Hudgins has appointed the Wiehle Avenue Steering Committee, which advise the County staff in the creation of a Request For Proposal (RFP) to solicit transit-oriented joint development proposals for a mixed use development of the County-owned parcel adjacent to the station. Using the conclusions from the Supervisor's Reston Charrette as a starting point, the committee is establishing the process, scope and criteria for the RFP.

Local Comment: Table 6.2-1 Does this take into account the proposed parking garage addition? (0093 0109-3)

***Response:** Yes. The data in Table 6.2-1 of the Supplemental Draft EIS was based on travel demand forecasts and traffic analysis with the park-and-ride structure of West Falls Church Station complete.*

Tysons West Station Alternatives

Local Comment: While Option E is an acceptable option and logical based on the Post-Hearing Conference, the County would like to pursue an option that uses the site of the Fire Station 29 for the rail station facilities. Such an option would require the relocation of Fire Station 29 to the current site of the Tysons West*Park Transit Station at the intersection of Jones Branch and International Drives. This option is referenced Option F below:

Option F has some advantages that make it worth further consideration:

- Provides a less constricted area for the bus bay and kiss-and-ride area.
- Has fewer business effects and requires less property acquisition.
- Provides two access points to the station facilities and provides a road connection between Spring Hill Road and Tyco Road.

A Proffered Condition Amendment ("PCA") and the removal of restrictive covenants are required for the Tysons-West*Park site to be converted to a fire station.

To finance the construction of the fire station, project funds from the cost-savings of implementing Option F would need to be transferred to the fire station construction. A market value for the County-owned land would need to be determined.

Logistically the fire station must be operational prior to closure of existing Fire Station 29. Consequently, it may be necessary to relocate the bus passenger transfer activity to an interim site during construction of the new fire station.

If Option F proves not to be feasible and Option E is advanced, we would like the road connection to Spring Hill Road to be included in the Rail Project, provided that the concerns related to the operation of the Fire Station 29 can be satisfactorily resolved. (0093, 2-01)

> ***Response:*** *The June 2004 recommendation of the Project Team still applies for what is now a formal County proposal. "If additional coordination on this issue is timely and formally requested by the County, the Team may consider an alternative site plan to Option E that might have less effect upon the Cherner Automotive Group's operations. DRPT will decide whether the schedule for the project's implementation can accommodate this alternative site plan, if it is formally advanced."*
>
> *Additional analysis would be required to determine if there are any cost reductions between Options E and F. DRPT will coordinate with Fairfax County during preliminary engineering to monitor the further development of Option F, assess its associated costs, and determine if it is a viable replacement for Option E.*

Public Comments

Potential Effects of Station Construction on Property Values

Public Comment: Option A would directly and significantly diminish the value of the property and would directly diminish the value of property of my neighbors in the [Baldwin Drive] cul-de-sac.

o ….we urge the Project officials to locate the [access drive] roadway parallel to and alongside of the property line separating the Kalet and Whitaker properties.

o …we are adamantly opposed to any surface [of the access drive] that is inconsistent with the neighborhood, including loose stone, paved stone, or pavement of any kind. …we urge Project officials to

select either the open concrete block or geo-grid materials for the roadway, since this is aesthetically and functionally superior to any other surface…Since the [tie breaker station] apron serves as a turn-around surface for vehicles that will access the building, we urge Project officials to construct the apron from the same material used on the roadway, which will also address drainage issues.

In light of the residential nature of the building's setting, we request that the building have the following characteristics:

Building color matching the color of the Kalet house;
Two-pitched, shingled roof matching color/material of the Kalet roof;
Gutters and downspouts consistent with the Kalet house; and
Surrounding grounds sloped to drain water away from Kalet house/yard.

Project officials should adopt a standard of status quo ante, that is, restoring the property to its pre-construction condition to the fullest extent possible. Under this standard, the Project would be responsible for:

Relocating arbor on Kalet property to location acceptable to Kalets;
Protecting existing trees as much as possible;
Planting white pine trees generously to mask the building's presence;
Restoring yard to preconstruction condition, including drainage;Replace wooden soundwall with conventional concrete soundwall that is ten (10) feet taller than the wooden soundwall. Soundwall color on side visible from the Baldwin Drive to match the color of the existing wooden soundwall.

I urge Project officials to adopt the following: upon written notice to WMATA from the Kalets of an impasse on any of the issues identified in these comments, WMATA would be required within ten (10) days to retain the services of an independent architect for purposes of non-binding arbitration…At this juncture, DRPT officials may not have the authority or ability to address the details identified in the Substantive Comments section …. But DRPT officials have the authority and the ability to direct their project manager, WMATA, to follow a mechanism that would ensure an effective check against arbitrary action by WMATA personnel…requiring WMATA to hire an independent architect for non-binding arbitration…(0025, 2-01)

Response: *The Project Team has recommended Option A as the location of TBS-2.*

The implementation of the detailed recommendations should mitigate any effect of TBS-2 on residential property values. DRPT will compensate the owner of 1836 Baldwin Drive for the permanent easement for the access driveway and apron at fair market value. TBS-2 itself will be located within the existing public right-of-way for the Dulles Connector Road. The Team recommends that that a new wooden noise wall surround the TBS-2 for its security, for enhanced community safety and for the aesthetics of the neighborhood. Since TBS-2 would not be visible from the Baldwin Drive neighborhood, it would not receive any architectural treatment. The new wooden noise wall would have doors at the location of the doors of the TBS-2 and the remote train control room. The height of the new wooden noise wall would be sufficient to screen the TBS-2, which has a height of 13 feet.

As currently planned, the location of the access driveway and any temporary construction easement will be fully within the property of 1836 Baldwin Drive. The centerline of the access driveway will be parallel with the property line between 1836 and 1838 Baldwin Drive. The driveway and apron of TBS-2 might be of alternate materials, such as geo-grid or open concrete block with grass turf in their cells; the type of materials will be determined during preliminary engineering and final design. During the same phases, the drainage of the TBS-2 site, including its driveway and apron, will be addressed. Specific arrangements regarding landscaping and mitigation of construction impacts will be addressed with affected property owners.

The Project Team will continue to coordinate with affected property owners on the design of this facility and construction scheduling.

Need to Reduce Visual Impacts of Station Buildings

Public Comment: …try to minimize the visual impact by locating as much of the building as possible on the Access Road side of the wall…

…and make the front of the building blend with the wall or a color that blends with the foliage.

It would be better if the 20? apron would be made of the something other than concrete, perhaps the blocks that allow grass to grow through the openings.

The driveway access from the cul-de-sac to the building may have to be wider for the construction phase but it would be less objectionable if the final access were build as narrow as possible to accommodate that pickup truck which you say will visit the site only once a month.

Currently there are mature flowering cherry trees, pink dogwoods, Leland Cyprus trees and landscaped flower beds lining both sides of the property line that provide both beauty and privacy between both properties. It would be better to if the driveway could be positioned to avoid disrupting this existing landscaping.

…planting a combination of large Leland Cyprus along the front and side of the building would help it blend with existing landscaping…

We know from experience with the construction of the Dulles Access road behind our house that if it isn't done right in the beginning it will never be corrected. Please help us see that this is done right this time.

I would suggest …that you make the building blend into the fence area in such a way that it would not be apparent that there's even a building there…If you take and make it in a way that it looks like a building was actually built there for…as a part of the neighborhood, that's not going to be good.

Mr. Hadd had suggested that, perhaps, if you guys took a 10-foot out of the wall and moved the wall back 10-feet back toward the roadway and had an additional to10-feet out here and made the fence go around in that direction, it would also help to hide the structure.

The roof of that building is also, if you can make it low enough that it is not going to protrude any higher than a foot above the existing wall, that will also be a help in hiding that structure.

…I don't know what the time period is that it's going to take to build it, but that would be helpful for us to know in the neighborhood. (0003, 2-01)

> ***Response:*** *The Project Team has recommended Option A as the location of TBS-2. The recommended location of Option A on the residential side of Dulles Connector Road's wooden noise wall is appropriate. The location cannot be shifted towards the Road since the TBS-2 would encroach upon the required clear zone of approximately 30 feet beyond the edge of the travel lane.*
>
> *The Team recommends that that a new wooden noise wall surround the TBS-2 for its security, for enhanced community safety and for the aesthetics of the neighborhood. Since TBS-2 would not be visible from the Baldwin Drive neighborhood, it would not receive any architectural treatment. The new wooden noise wall would have doors at the location of the doors of the TBS-2 and the remote train control room. The height of the new wooden noise wall would be sufficient to screen the TBS-2, which has a height of 13 feet.*
>
> *The width of the access driveway will be determined during preliminary engineering and final design. Specific arrangements regarding landscaping will be addressed with affected property owners. Landscaping on the side of 1838 Baldwin Drive will not likely be part of the*

arrangements, in that all construction activity will likely take place on the property of 1836 Baldwin Drive.

DRPT, the project sponsor, anticipates the start of construction in late 2006; the exact timing for the construction of ancillary facilities, such as TBS-2, will be determined during preliminary engineering and final design. Typically, construction of these facilities is completed in one year or less. The Project Team will continue to coordinate with affected property owners on the design of this facility and construction scheduling.

Potential Neighborhood Impacts of Tie Breaker Station No. 2

Public Comment: We believe that Tie Breaker Station No. 2 (TBS-2) and related equipment poses a serious and significant health and safety threat to Tuckahoe's 3200 members, many of whom are children. Further, the station will impose substantial aesthetic injury on the Club.

…Thus, the placement of TBS-2 on Tuckahoe property would be a classic "attractive nuisance."

…Given these incidents, it is not unreasonable to expect that there would be breaches of the security fences for TBS-2. With a direct current of 750-volts in the building, any such security breach could cause tragic or fatal injury.

…These meets bring hundreds of children to Tuckahoe…Again there is no way to avoid hundreds of children in direct proximity of the Tie Breaker Station, the remote control room and the underground electrical grounding grid.

The consequences of a fire at TBS-2 would be severe for Tuckahoe and its members. If any chemical fire suppressants were used to control the fire, the possibility exists that those chemicals could be introduced into the pools causing injury and/or closure of the pools and the entire facility.

It is quite likely that the placement of TBS-2 on Tuckahoe property would make it even more difficult for the Club to obtain liability insurance. If we were not able to obtain insurance,…Tuckahoe would hold the project and its operators responsible for and seek damages for the loss of use of the entire Club facility.

Tuckahoe is simply not in a financial position to bear the continuous risk of injury or death from the presence of TBS-2 on Tuckahoe property.…The resulting loss of membership revenue could threaten the financial viability of Tuckahoe.

The removal of Tuckahoe's old growth trees in the portion of the Club's property would give the Club a blighted barren look…. (0150, 2-02)

Public Comment: So it is a very family oriented club and I raise that issue to emphasize the point that it is –there are children who are involved in the clubs activities all year around…

…when there are dive meets, there are other teams that invited to Tuckahoe and they're setting up their spots on the lawn, some of which are quite close to the tie breaker station …

…there's a term in the law that's called "attractive nuisance" and children will be children. I raise this probably to address mostly the safety concern…(0151, 2-01)

Public Comment: I want to directly address two major issues. One, to hit again, even harder, safety and liability, which is very much a concern of the Board of directors.

It is of very much concern to Tuckahoe who will bear liability for any injuries that might result from accidents from kids climbing these fences. Will WMATA indemnify TRC if TRC is sued in such cases? Will WMATA agree to protect TRC from related increases in our liability insurance premiums, which have

tripled in the last three years? Will WMATA guarantee TRC's ability to obtain liability insurance which has been very difficult to obtain in recent years despite a clean claims history?

We need to make sure that access to TBS-2 from Baldwin Drive does not provide easier unauthorized access inadvertently to TRC property, with the resulting potential of vandalism and liability.

It is acknowledged that the structure would require the elimination of the miniature golf course; this golf course is a unique benefit to our more than 3,200 members and this golf course distinguishes TRC from our competition in the area of local recreation clubs.…There is no other level space on the property to relocate the miniature golf course without removing parking spaces; moving parking spaces requires the club to reduce its membership, which then reduces our annual revenue.

…the TBS structure will be visible from most areas of the club, even with a barrier or trees. This will reduce the open space and aesthetic appeal of the facility, damaging the value of the property and of a club membership and diminishing the members' enjoyment of the facility. (0152, 2-01)

Public Comment: [The conference record received from the Club president and general counsel a petition titled 'Metrorail Tie Breaker Station No. 2 Petition' 'I am opposed to the placement of the a Metrorail Tie Breaker Station on Tuckahoe Property' and signed by numerous individuals. (0153, 2-01)

Public Comment: The enormous safety and aesthetic problems inherent in placement of TBS-2 on Tuckahoe property makes this site completely unsuitable for such use and could lead to potentially tragic consequences.

It takes little imagination to envision a variety of plausible scenarios in which children would be placed in grave danger by the placement of TBS-2 on Tuckahoe property. …The site is also at risk for vandalism, falling trees or braches, a leaky roof…

The placement of TBS-2 at Tuckahoe would severely damage the Club's aesthetics. (0154, 2-01)

Public Comment: We have improved the house; we have expanded, we have 20-year old garden and if you build the Tie Breaker Station at Tuckahoe, the wires are going to go under our yard; under a 20-year perennial garden; under a brick patio; under a fabulous huge trees.

…the traffic noise on the other side of the wall has increased so much that I can't talk to my husband on the deck…adding something as visually unattractive to our neighborhood is a double burden for us…

And I don't want to sit in front of trees trying to grow to cover an eyesore that will be a daily reminder that I don't have control over what happens to my house, something that I have worked very hard for; worked very hard around and have no options. (0155, 2-01)

> ***Response:*** *The Project Team has recommended Option A as the location of TBS-2, which is within the existing right-of-way of the Dulles Connector Road. Access would be provided via a driveway from the Baldwin Drive cul-de-sac across residential property.*

Public Comment: We think that a greater effort should be made at getting access through Olney Park to put TB#2 at location C on the land locked property. (0003, 2-02)

Public Comment: We strongly urge you to use Alternative C for the Tie Breaker Station. Alternative C is on undevelopable, inaccessible, and uninhabited private land and thus would impose no safety hazards upon local residents. The placement of the TBS-2 at location C makes far more logical sense than either Alternative A or B. (0150, 2-01)

> ***Response:*** *The Project Team has recommended Option A as the location of TBS-2. Many of the potential impacts raised above are addressed by this selection. As the project design advances,*

the proponent will continued to work with residents and communities to address potential impacts of siting facilities.

Public Comment: Page A2 of the Post-Hearing Conference Report states that Option A has been selected. As the property owner of 1836 Baldwin Drive, I would like to add the following comments:

Surrounding the Tie-Breaker Station #2 (TBS#2) with the same wooden sound wall material that is currently in place is appropriate and would "mask" the view of TBS#2 from the street. This also obviates any need to provide architectural treatment to the TBS.

The replacement of those portions of the sound wall that must be removed to construct TBS#2 should be much higher than one additional foot. This neighborhood will experience noise over and above that which will be experienced by other areas along the Dulles Corridor, since the switching tracks will be located in the median of the Access Road directly opposite my home and the homes of my neighbors. We will all experience greater noise, and replacing the sound wall with a sound wall that is a mere ten (10) feet taller would not materially alter the aesthetics of the sound wall from the perspective of those traversing the Access Road. However, the additional ten feet will make a significant difference in the quality of life for all those living near the switch tracks, particularly those living in the cul-de-sac at the end of Baldwin Drive. All of these neighbors have expressed a desire for a higher sound wall and I wish to inform Project officials of this desire by the residents of Baldwin Drive.

I concur with the recommendation to make the roadway to TBS#2 parallel to the centerline of the property line between 1836 Baldwin Drive and 1838 Baldwin Drive. I would only add that if the roadway is not adjacent to the property line, then the Project should obtain an easement for all land between the east end of the roadway and the property line.

The material used to construct the roadway should be consistent with the surrounding surfaces, i.e., grass rather than pavement. This can be accomplished by using the geo-grid or open concrete block with grass turn in the cells. This would also be consistent with existing drainage and other issues. I ask that the Project officials implement this as part of the TBS#2 project.

Finally, the landscaping that is removed should be replaced in kind. The existing wooden arbor that is located in what is likely to be the roadway to TBS#2 should be moved at the expense of the Project, and not at the expense of the homeowners. (0025, 2-02)

Response: *The Team Recommendations of June 2004 recommended a wooden noise wall that would be one foot taller than the Tie Breaker Station #2, which has a height of 13 feet. This recommended wall, which would screen TBS-2, would not be 10 feet taller than the existing wall. Any section of the existing wooden walls removed or relocated as a result of the Project would be constructed of like materials.*

On the above topics of easement, pavement materials and landscaping, the Team has no change to its June 2004 responses and recommendations.

Need to Consider Joint Development

Public Comment: …look at integrating the Kiss & Ride and the bus facility into some kind of joint development of all this property, including Fairfax County property. (0117, 2-02))

Response: *The Team remains open to any initiative of the County or private sector for joint development for the Tysons West Station site facilities.*

Benefits are Understated and Costs Overstated for Rail Alternative

Public Comment: Supports the Project Team's recommendation of Metrorail Alignment T6, but support is based on the belief that the Draft EIS analysis understates Metrorail's ridership potential, air quality

benefits, and other general benefits; and overstates Metrorail's costs relative to BRT. Commenter notes that the Draft EIS analysis does not appear to consider the higher densities recently included in county comprehensive plans in its traffic projections. (0133, 2-01)

> ***Response:*** *For the Draft EIS, Supplemental Draft EIS, and Final EIS, the Project's ridership forecasts were developed using the Northern Virginia Major Investment Study Model. This model was developed for the original Dulles Corridor Transportation Study (June 1997), a major investment study, and was also utilized for the Metrorail I-66 to Centreville Major Investment Study. This model set was utilized instead of the COG Version 2 model because Version 2 had not yet been validated. A more detailed description of the selection of the model is outlined in Chapter 3 of the Travel Demand Forecasting Methodology and Results Technical Report* (June 2002). *The NVMISM model is not a replacement of the Version 1 Model but rather an adaptation and refinement of the model for more localized analysis. This approach was used because the Version 1 model is region wide and is meant to describe regional travel flows. The NVMISM model refines this model in terms of a more detailed highway and transit network, smaller transit analysis zones that more closely reflect the differences in land use, and the incorporation of BRT into the model. In addition, Version 1, because it is a regional model, does not estimate mode of arrival accurately at a station area level, thus making it difficult to plan for parking capacity and other station area improvements. Chapter 22 of the* Traffic Analysis and Station Access Study Technical Report (June 2002) *provides a detailed discussion of the development-related travel effects on the corridor's roadways. The analysis is also summarized in Section 9.3.4 of the Draft EIS. The air quality analysis was performed in accordance with NEPA requirements to evaluate and disclose the impacts of this project. The air quality analysis followed the guidance of EPA, DEQ, VDOT, and MWCOG.*

Arguments Against Alignment T12 are Irrelevant

Public Comment: Believes that most of the arguments against the proposal of an express track (Alignment T12) are irrelevant because the arguments were based on assumptions not offered by WATF including that the express track would be built and operated before Tyson's T-6/T-9 alignments and that an additional station would be included on the express track. WATF's proposal specified no stations on the express track and that the express track would come after the implementation of T6 or T9. The WATF will withhold further discussion concerning Alignment T-12 during the EIS phase of the project because they agree with the response in the *Public Hearings Report* stating that further evaluation of the extra space required for Alignment T-12 would delay the present EIS process. (0133, 2-02)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. Alignment T12 was eliminated from consideration during the public and interagency review and comment on the Draft EIS.*

Consider Transit and Highway Options for Dulles Corridor

Public Comment: Believes that the Dulles Corridor is increasingly becoming the 21st century's "Main Street" to the National Capital region because it links the federal center with the city's international gateway. However, the corridor will only achieve its full potential for the region's prosperity if transportation offers effective transit as well as effective highway options to the user. Commenter stresses the importance of cost control and the flexibility to embrace future options. (0133, 2-03)

> ***Response:*** *Comment noted; however, the study of alternative highway options is outside the scope of this project.*

Costs Need to be Contained

Public Comment: Believes that compared with BRT, Metrorail offers the region much greater potential to stimulate denser land uses around stations in the Dulles corridor and in Tysons Corner. Also states that

the obvious proviso to this Metrorail advantage is the need to ensure that the 24-mile Metrorail extension is not allowed to follow past Metrorail practice with respect to cost escalation and subsidy. (0133, 2-04)

> ***Response****: The financial analysis presented in the Final EIS are the summary results of the capital cost estimate, operation and maintenance cost estimate, projected revenue estimate and operating subsidy allocation. NEPA requires the environmental impact statements to succinctly describe the data and analyses used to understand the effects of the alternatives. Obviously, with any large complex project, schedule and cost risks are real. WMATA has proven itself in project delivery. For completion of its 103-mile program, opening between 1997 and 2002, WMATA was under budget by $286 million, and on-time or early by 10 months aggregate. Moreover, DRPT is primarily accountable for the cost-effective delivery of this Project as its owner and contracting authority. DRPT has entered into a PPTA contract with Dulles Transit Partners for the benefits of PPTA, which are explained at DRPT's web site, www.drpt.virginia.gov. Through the Federal Full Funding Grant Agreement, FTA will not participate in the funding of any cost overruns.*

Station Design Should Facilitate Air Rights

Public Comment: Believes that the long-term evolution of air rights above stations, as market demand warrants, will significantly increase ridership and reduce long-term subsidy burden on taxpayers. Therefore, station design should allow for the evolution of air rights. (0133, 2-06)

> ***Response:*** *With respect to air rights development above Metrorail stations, the Project Team acknowledges that the two Counties govern land use and that FAA, MWAA, VDOT and TRIP II, as the owners and operators of the DIAAH, Dulles Toll Road and Dulles Greenway, must be involved. Therefore, the Project Team will await any initiative of the two Counties with the involvement of the highway owners and operators.*
>
> *Pedestrian walkways are provided from stations in the median of the highways to both roadsides.*

Public Comment: Pleased with and largely accept findings and recommendations. Study is far superior and requires only a few modifications. (0013, 2-01)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative.*

Prefers Metrorail Over Roadway Widening

Public Comment: Agrees that Metrorail in the Dulles Corridor is a better capacity enhancement than roadway widening. (0013, 2-02)

> ***Response:*** *he Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The Metrorail Extension will provide the greatest amount of person-throughput capacity in the corridor.*

Metrorail Performance is Superior to BRT

Public Comment: Cites FTA and APTA reports that indicate rail carries people for less money per mile than bus. In the Dulles Corridor, both Metrorail and BRT should do better than average, as indicated in the Draft EIS for BRT but not for Metrorail. Commenter says not to count on BRT doing as well as predicted, but Metrorail should do better than predicted, based upon experiences almost everywhere. (0013, 2-03)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT,*

BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.

Cites Metrorail's Economic Value

Public Comment: The economic value of Metrorail is better because it results in lower tax rates. (0013, 2-04)

Response: *As described in Chapter 5 of the Final EIS, the Metrorail Extension will have a positive effect on the local economy as a result of construction expenditures. These effects include impacts on employment, output and earnings as funds are spent and re-spent throughout the economy. These are one type of economic impact, and do not necessarily the full cumulative effects of the project on the regional economy.*

The Project Team applied multipliers from the US Department of Commerce, Bureau of Economic Analysis' Regional Input-Output Modeling System (RIMS II). These multipliers, which reflect the industrial base of the region, are multiplied by the direct capital expenditures in order to calculate the total effects on the regional and state economy. The multipliers used reflect the economic base of Fairfax and Loudoun Counties combined, and it is not possible to break out the total effects by County.

Supports Alignment T6 and Yard Site 15

Public Comment: Strongly supports the selection of Metrorail Alignment T6 and Yard Site 15 as the Locally Preferred Alternative.(0141, 2-04)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner and Yard Site Y15 on Dulles Airport property as the Locally Preferred Alternative.*

Design team Needs to Focus on Issues not in DEIS

Public Comment: Agrees with the selection of Alignment T6 as the Locally Preferred Alternative. The design team now needs to focus on issues that were not discussed in the Draft EIS or *Public Hearings Report*. (0387, 2-06)

Response: *Comment noted.*

Need to Identify Opening Year

Public Comment: Commenter does not see an opening year (date) for the implementation of the Locally Preferred Alternative. Each year that goes by without this project means another year of increasing congestion. (0123, 2-01)

Response: *For the analysis in support of the Final EIS, the Wiehle Avenue Extension is expected to be complete by 2011. The Extension to Dulles Airport/Route 772 would complete construction of the LPA, extending the line from Wiehle Avenue, through Dulles Airport, to Route 772 in Loudoun County. This phase would include the construction of the new Service and Inspection (S&I) Yard on Dulles Airport property. It is anticipated that this second extension would be complete by 2015.*

The implementation schedule will be refined and updated during preliminary engineering. There are several factors that will affect the schedule, the most significant being the availability of federal and non-federal funding. There are many systems across the country competing for federal funding, and the Federal Transit Administration may not be able to commit funding in the amount needed to meet this schedule.

Concerns with the Underground Section Between Routes 7 and 123

Public Comment: Concerned with the impacts and costs associated with the cut and cover and mined tunnel of the underground section between Routes 7 and 123. This issue deserves a full vetting before various affected parties as well as local officials. (0387, 2-07)

> ***Response:*** *Value planning and engineering exercises will be performed during preliminary engineering and will examine alternative methods of underground construction, including an identification of costs, impacts, and feasibility of construction.*

Need More Work on Surface Facilities of Project

Public Comment: Significant work needs to be done in the access to and design and location of surface facilities, especially in Tysons Corner. Need to consider employer shuttles in design and improvement to pedestrian access of Tysons area. However, an effective pedestrian environment would reduce the requirement for shuttles and vehicular facilities at the stations. (0387, 2-08)

> ***Response***: *Station design will be part of continuing coordination with Fairfax and Loudoun counties. The counties govern development adjacent to stations through zoning and comprehensive planning procedures.*

Extend Metrorail to an Intermodal Terminal in Tysons Corner

Public Comment: Commentor wants to know if any study was done of a Metrorail spur from West Falls Church to a terminus at Tysons Corner, with a major park-and-ride and intermodal center. States that it intuitively makes more sense than Metrorail out into auto-dependent country beyond Tysons Corner. (0508, 2-01)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The effects of extending Metrorail from the Orange Line to an intermodal terminal at Tysons West were evaluated in detail in the Draft EIS as part of the BRT/Metrorail Alternative.*

Public Comment: I did not see this [a terminus at Spring Hill Road] addressed adequately in the SDEIS. I am curious if there would be any cost savings or other benefits of putting the rail terminus in Tysons Corner at Spring Hill Road, vs. Old Courthouse Road.(0112, 2-04).

> ***Response:*** *The purpose of the Supplemental Draft EIS was to provide additional opportunities for the public and agencies to comment on refinements that have been made to the LPA since the publication of the Draft EIS public hearings report. A number of alternatives, including various Tysons Corner alignments, were evaluated in detail in the Draft EIS and Section 4(f) Evaluation* (June 2002)*. Additional information on the alternatives considered, and the screening process used to evaluate the alternatives is included in the Final Alternatives Analysis Report (May 2001).*

Issues Relating Rail Yards and Communities

Public Comment: At the West Falls Church station with the improvements in the rail yard, you had the opportunity now to allow access from the north. And we think that could have done from around the edges of the rail yard and also be made secure so there would be no access from the rail yard. This would be a tremendous improvement of access to that station from all the residential areas to the north of the rail yard that people in the houses can see the station but have to walk a long way to get there. (0117 0146-3)

> ***Response:*** *Pedestrian improvements at the West Falls Church Station would not be completed under this Project. WMATA and Fairfax County may consider this under other programs.*

Public Comment: Another problem of particular concern to us is, is the one that exists at the West Falls Church S&I yard because phase one will not reach Dulles, will not have the benefit of the projected yard in the Dulles area, so therefore much greater demands are being made upon the West Falls Church yard.(0034 0143-4)

> ***Response:*** *The Wiehle Avenue Extension improvements at the West Falls Church S&I Yard include the addition of storage tracks and modifications to the existing Service and Inspection Building. As part of the mitigation, a covered box on the loop track and the new yard lead track would be built to help minimize sound from rail vehicles proceeding through the yard. These track and service building improvements are necessary for operation of the Wiehle Avenue Extension, but would be occurring at some time in the future to support WMATA operations even without implementation of the Project.*

Consider Phased BRT and Metrorail

Public Comment: Seriously consider the feasibility and benefits of BRT as an alternative to heavy rail. WRN believes that a more plausible and financially feasible scenario for the Dulles Corridor project is the one suggested by Federal Transit Administration Administrator Jennifer Dorn in a meeting with local officials a year ago: as a first phase, consider building rail to Tysons Corner and implementing a BRT system for the remainder of the corridor. A second phase could include extension of rail through the entire corridor if ridership and land uses can justify the investment. (0090 0105-2)

Public Comment: I would request the project team not advance this to preliminary engineering and instead terminate the rail line at Spring Hill Road and study a true BRT system all the way up to Leesburg that will include stations and other rider amenities that Metro only provides now for its rail customers. (0016 0122-11)

Public Comment: Why not just establish a tax district that includes Tysons, build the first phase to Tysons, come along with the second phase in the future when there is funding for it, and, in the meantime, establish a very enhanced BRT system in the Dulles Corridor. (0076 0087-1)

> ***Response:*** *The purpose of the Supplemental Draft EIS is to provide additional opportunities for the public and agencies to comment on refinements that have been made to the LPA since the publication of the Draft EIS public hearing report. A Bus Rapid Transit (BRT) alternative was evaluated in detail in the Dulles Corridor Rapid Transit Project Draft Environmental Impact Statement and Section 4(f) Evaluation (June 2002). Based on the analysis contained in the Draft EIS, public hearings held in July 2002, and comments received on the Draft EIS, the Metrorail Alternative (T6/Y15) was selected as the preferred alternative for the project by the Commonwealth Transportation Board (CTB) and by the WMATA Board of Directors in late 2002. See responses to comments in Section 2.2 above for additional details.*

Reconsider the Tysons Corner Stations & Tunnel

Comment Objective VHT data and other user data does not justify placement of four metro stations in the Tysons Corner area, nor is the need to dig a tunnel in the Tysons Corner area – with its massive dislocation during that protracted effort – analyzed or justified. (0068 0173-8)

> ***Response:*** *The placement of four stations in Tysons Corner is based on the significant ridership demand that the core of Tysons Corner provides and the compatibility with local land-use plans that promote transit oriented development in the area. The one-mile section of underground alignment in Tysons Corner was designed to minimize impacts to the adjacent areas, and the use of a mined-tunneling construction method instead of a cut-and-cover method would further minimize impacts to the surface roadways.*

Need to Identify Bicycle and Pedestrian Improvements

Public Comment: Since this is - - this project is taking place in Virginia, the first phase of the project is being funded by Virginians, and I think we should not be held to the WMATA Compact restrictions that restricted off-site pedestrian and bicycle improvements. (0065 0073-3)

Public Comment: Non-motorized access to Metro stations remains a very high priority for not only my constituents but also for me, and I hope you will keep that in mind as you move forward with this project. (0059 0061-1)

Public Comment: Both Loudoun and Fairfax County planning officials and elected representatives must work with Virginia Department of Rail and Public Transportation, WMATA and VDOT to assure that pedestrian access is an integral part of the development around these transit stations. (0067 0075-2)

Public Comment: Effective pedestrian and bicycle access to transit stations is essential. Both Loudoun and Fairfax County planning officials and elected representatives must take responsibility in assuring that there is close coordination with VDRPT, WMATA, and VDOT to assure that pedestrian access is not an afterthought in the development of land uses in the primary transit impact areas. A detailed comprehensive access plan for each transit station is essential. (0041 0042-7)

Public Comment: We need to design station areas that encourage a lot more bike and pedestrian access. Reston has a good system of bike trails, most of which are grade-separated from congested roadways, and a great number of bikers and walkers. Particular attention should be given to pedestrian and bike station access in Reston. (0060 0169-12)

Public Comment: We would like to conclude with a general point. Walkable design of the new stations will ensure maximize mobility and accessibility benefits for all patrons. We strongly endorse the proposals of the McLean Citizens Association for trails, crosswalks, sidewalks and design changes to improve pedestrian and bicycle access to the new stations. (0026 0027-19)

Public Comment: I think that this stage of the preliminary engineering is the time for more detailed pedestrian and bicycle plans as they relate to access to the stations, specifically, access through the planned parking areas and to the station and also off-site access to the stations. (0065 0073-2)

Public Comment: There are other things that are needed, specifically, where the bicycle parking facility is going to be located and what type of facilities will be located there. (0065 0073-4)

Public Comment: Will pedestrian access be provided west of Tysons West station? Currently to walk west on Rt 7 means walking in the road or in ditches. As Jim Scott said, non motorized access is very important. (0029 0030-2)

Public Comment: Be it further resolved that, among other matters, careful consideration be given to improving pedestrian and bicycle access to the proposed Metrorail stations in the Tysons area and that all the issues detailed by the MCA in Attachment A hereto be carefully addressed and resolved in a way that promotes increased public access; (0034 0035-1)

Public Comment: I also want to say I believe that if you're really going to make this work, you have to make Tysons Corner more pedestrian friendly. That's important. That means building more exits, more roads, giving people a chance to cross roads so they can walk three or four blocks to the metro station before they come in. (0119 0149-2)

Public Comment: Also, in the report in - - on page 6-24 Section 6.3.2, bicycle and pedestrian facilities, it's stated that the implementation of design changes to the proposed LPA would have no additional effects on the existing and planned bicycle and pedestrian facilities in the Dulles Corridor. I believe this is incorrect because there will be, as stated on page 6-16, increased traffic on local roadways around the

stations, and the level of service at the Wiehle Avenue station will be decreased. This is going to have an impact on pedestrians and cyclists who are trying to access these stations. (0065 0073-5)

Public Comment: Parking at the Wiehle station is an issue that the County needs to take the lead in and develop the concept designs and prepare design guidelines that accommodate pedestrian and bicycle access and TOD. (0060 0169-7)

Public Comment: We think that, by designing much better pedestrian and bicycle access to the station and increasing our feeder-bus service, we can certainly reduce the congestion impacts on Wiehle as a temporary end of the line. (0060 0063-6)

Public Comment: It is stated in several places (specifically p. 110, Response: at bottom of page; p. 111, Response: in second box from top) that the responsibility for developing "Roadways, pedestrian and bicycle facilities outside the station area" rest with local jurisdictions.

However, on p. 113, Response to comment 0109-1 states that "All measures proposed to mitigate anticipated effects of the Project will also be implemented as part of the Project, except where specifically stated otherwise in the document." This is a very important distinction. Because traffic at the Wiehle Avenue station will be greater during Phase I, there will be negative impacts on pedestrian and bicycle access to the station. This negative impact needs to be mitigated. According to the statement on p. 113, this mitigation can be accomplished as part of the Project.

Many individuals have commented on the need for better pedestrian and bicycle access to all of the new stations. These needs should not be left entirely with the local jurisdictions. They should be an integral part of the design of the stations, similar to how motorized access to the stations is addressed. I was encouraged to read on p. 155, in the response to the need for pedestrian access, that "Station access issues will continue to be explored in preliminary engineering".(0065, 2-01)

> ***Response:*** *DRPT is the Project's sponsor and initial owner but is not responsible for modifications of sidewalks and trails as part of station access. The responsibility is with Fairfax County, Loudoun County and VDOT. DRPT will, though, coordinate with these three parties plus the Town of Herndon during preliminary engineering and final design on improvements for station access beyond the station site plans, as well as their ownership and maintenance. Close communication would also occur with the Fairfax County Non-Motorized Transportation Committee, private landowners and developers and other stakeholders. The Fairfax Countywide Trails Plan and the Loudoun County Trails plan have been and will be consulted. Comprehensive pedestrian circulation beyond the station site plans may be implemented in conjunction with other planned developments, County, and/or State projects and/or as elements of the Fairfax Countywide Trails Plan and the Loudoun County Trails plan.*
>
> *All stations will have bicycle racks and/or lockers adjacent to station entrances. Specific quantities will be determined as part of final design.*
>
> *With respect to the Wiehle Avenue Station, the LPA and the Wiehle Avenue Extension are not expected to affect any existing or planned facilities in the station area.*
>
> *The references to mitigation of traffic effects in the Final EIS are for roadway improvements. The Project will bear the cost of those roadway mitigation measures.*

Public Comment: The opportunity to relocate the pedestrian connection as flipped provides increased coverage for residential and businesses in the western portion of Tysons Corner Center. (0053 0139-6)

> ***Response:*** *The Metrorail stations for the Wiehle Avenue Extension were designed and located based on proximity to residential, employment centers, entertainment centers and access. Further refinement to station design and orientation will occur during the preliminary engineering phase of the project.*

Public Comment: One aerial crossing from the Tysons East platform to the Kiss and Ride is insufficient. An elevated pedestrian crossing should occur across all four branches of the intersection at Rt. 123/Colshire Drive/Scotts Crossing Road. (0113 0132-14)

Public Comment: One aerial crossing from the Tysons East platform to the Kiss and Ride is insufficient. An elevated pedestrian crossing should occur across all four branches of the intersection at Rt. 123/Colshire Drive/Scotts Crossing Road. (0123 0158-16)

Public Comment: Sheets 086. Site Plan Tysons East Station 1. North Entrance Pavilion should be shifted to the north by spanning Scotts Crossing Road and building a stair, escalator with aerial walkway and ADA elevator tower to mezzanine level. (0113 0132-19)

Public Comment: Aerial walkways should be constructed across Colshire Drive, a second aerial walkway across Rt. 123 north of Colshire and Scotts Run Drive and north across Scotts Run Drive. (0113 0132-20)

Public Comment: Aerial walkways should be constructed across Colshire Drive, a second aerial walkway across Rt. 123 north of Colshire and Scotts Run Drive and north across Scotts Run Drive. (0123 0158-23)

Public Comment: There are no pedestrian connections to Pimmit Hills, the Commons, the Regency/Encore, the Colonies, or the Lincoln condos. This should be studied in the final plans. (0123 0158-27)

Public Comment: There are no pedestrian connections to Pimmit Hills, the Commons, the Regency/Encore, the Colonies, or the Lincoln condos. This should be studied in the final plans. (0113 0132-22)

Public Comment: The platform for the Tysons East Station should extend northeast approximately 150 feet and cross Scotts Crossing Road allowing elevator/stair tower access at the southwest corner of the Cleveland Site. (0123 0158-15)

> ***Response:*** *The Metrorail stations for the Wiehle Avenue Extension were designed and located based on proximity to residential, employment centers, entertainment centers and access. Further refinement to station design and orientation will occur during the preliminary engineering phase of the project. Coordination between DRPT, WMATA and adjacent property owners will continue throughout preliminary engineering and final design.*

Public Comment: At the West Falls Church station since there are going to be major changes to that station, this is a good time to add additional pedestrian and bicycle access points to that station. (0065 0073-6)

> ***Response:*** *The Wiehle Avenue Extension will include improvements to the West Falls Church Yard and will include the diversion of many of the feeder buses from the West Falls Church Station northside facilities to Wiehle Avenue Station. That diversion will decrease the patronage at West Falls Church Station. Thus, there are no major changes necessary at this station.*

Public Comment: The overhead pedestrian crossing from the station to the points east of Route 7 has an L shape with increased travel distances. (0053 0139-3)

Public Comment: We believe the pedestrian orientation may be better served with alternatives that relocate the mezzanine from the south-- from the north end of the station to the south end in the vicinity of Spring Hill Road. (0053 0139-5)

Response: *For the Tysons West Station entrance and facilities, the Project Team recommended, and the decision-makers selected Option E site plan to replace the plan presented in the Supplemental Draft EIS and revised General Plans. Option E has its station entrance at the inbound, east end of the station near Spring Hill Road. The bus bays and Kiss & Ride of Option E are located between Tyco Road and Spring Hill Road, set back from Route 7. The referenced L-shape pedestrian bridge across Tyco Road and Route 7 has been eliminated.*

Parking Issues in Tysons Corner

Public Comment: Reducing Tysons West parking facility to 500 spaces "to lessen traffic impact" is a farce. What about the 2500-space parking garage in a residential neighborhood less than a mile west of Tysons West? I guess politically it is okay to give McLean Bible Church whatever they want but not okay to provide tax paying citizens with a means for using public transportation. And the church will dump all 2500 cars on the road at the same time several times on Sunday and on many other occasions during the week. (0029 0030-1)

Response: *The Project cannot address the issue of parking at the McLean Bible Church. However, the difficulty of mitigating the traffic impacts of 2,000 spaces led to the decision to reduce the amount of parking proposed at the Tysons West Station.*

Public Comment: The impact on the established residential neighborhoods in the vicinity of the Route 7 line and its two stations would be huge. For one thing, providing auto parking spaces for each station would be a sizable undertaking. (0102 0119-3)

Response: *No parking is planned at the Tysons Central 7 Station. The parking at Tysons West has been reduced from 2,000 to 500 spaces specifically in response to concerns regarding traffic impacts.*

Public Comment: If indeed the purpose of the Tysons Loop is to get people to work, why do we need parking? It seems to us that a parking lot will only encourage more congestion in the Tyco Road Route 7 areas. We object to anymore congestion associated with this area since it is plenty congested enough. We can see very little purpose served by a 500 car parking facility located at Tysons West Station. (0004 0004-4)

Response*: The parking at Tysons West would be for people who live in Tysons Corner or east of Wiehle Avenue and desire access to Metrorail without traveling to West Falls Church. The parking at Tysons West has been reduced from 2,000 to 500 spaces specifically in response to concerns regarding traffic impacts.*

Public Comment: I am writing particularly about the improvements contemplated in the Tysons Corner alignment and in particular the Tysons West Station. By this letter, please be advised that the 79 business owners at Tyco Park Condominium Association do hereby strenuously object to construction [of] parking facilities [in] Tysons Corner. Furthermore, we strenuously object to elevated rail commencing at Tyco Road preceding towards the Dulles Toll Road. We could support an underground station between Springhill Road and Tyco/ of Westwood Center Drive extending out to the Dulles Toll Road. (0004 0004-1)

Public Comment: As proposed, the Tysons West Station is intended to be an aerial station. We strongly object to the disruption to the businesses located in the vicinity associated with this activity. Subterranean chaise is vastly superior. (0004 0004-2)

Public Comment: I read recently that the proposed garage at the planned Tysons West station at Tyco Road near Route 7 will be reduced in size from a garage that would house 2,000 cars to one that would house just 500 cars. I must object to that reduction. I currently live about a mile from the proposed Tysons West station and would use that station when built, and plan to park in that garage, for my commute to my

office downtown. I currently have a reserved space at the West Falls Church station (although I will be displaced during the period of the garage construction).

As you must be aware, parking at West Falls Church without a reserved parking space is extremely tight. It takes months if not years to get a reserved parking space because the Metro system has become quite popular and is very busy and crowded. It is quite likely that the planned parking garage at West Falls Church will be fully booked when it opens, also. There is a huge need for more parking capacity at the Metro stops since many people in the suburban subdivisions drive to the Metro, park, and take the train to their jobs. Reducing the size of the parking garage at Tysons West will not benefit either the Metro passengers nor those living in proximity to the Tysons West station. The garage will be too small to handle the demand, and Metro will be forced to build an additional garage eventually. Traffic will be worse around that area as "kiss and ride" Metro passengers will be dropped off by drivers who will have to return for the pick-ups. It is possible for a larger scale garage to be designed as (0009 0009-1)

> ***Response*:** *For the Tysons West Station entrance and facilities, the Project Team recommended, and the decision-makers selected Option E site plan to replace the plan presented in the Supplemental Draft EIS and revised General Plans.Option E has its station entrance at the inbound, east end of the station near Spring Hill Road. The bus bays and Kiss & Ride of Option E are located between Tyco Road and Spring Hill Road, set back from Route 7.*
>
> *The parking at Tysons West has been reduced from 2,000 to 500 spaces specifically in response to concerns regarding traffic impacts. The 500-space park-and-ride would be part of a joint development project, so the private sector would be involved in the design and development. However, the specific location and design is not yet known. The park-and-ride would be accessed from local roads, and its cost is assumed as part of Wiehle Avenue Extension.*

Public Comment: Based on our experience in land use applications in Northern Virginia and preparing traffic impact studies, we concluded that the proposed configuration had limitations:
1. Pedestrian conductivity to businesses and existing residences. We question if Tyco Road is the best corridor for pedestrian connections for transfer facilities
2. One access to Tyco Road in close proximity to the Route 7 traffic signal, which experiences excess delay during the peak periods.
4. The overhead pedestrian crossing has a L shape to crossover 7 and Tyco Road, increasing walk distances (0053 0054-1)

Public Comment: The attached Exhibit 1 highlights the 1/4 mile walk radii changes if the pedestrian connections were flipped. We suggest this be studied and relocation of the Route 7 pedestrian overpass should be considered as part of the bus transfer facility studies in order to promote improved pedestrian access to the residents and businesses in the western portions of Tysons Corner. Based on our initial review and as generally confirmed by WMATA and CTC staff, this would not affect train operations at the proposed station, if one entrance were maintained. (0053 0054-4)

Public Comment: PHR + A suggest that the team consider the following criteria in the Tysons West support facility locations:
- Consistency with Fairfax County Board of Supervisors Comprehensive Plan,
- Minimize land impacts to Route 7 frontage,
- Maximize pedestrian flexibility,
- Promote access circulation flexibility
- Allow for efficient bus transfers from the Rail Station,
- Recognize redevelopment potential
- Consider Acquisition costs (0053 0054-5)

Public Comment: Finally, alternative locations south of Tyco Road may be considered which still maintain Route 7 commercial frontage, but locate the bus and kiss and ride facilities towards the rear of the County's Overlay District. As shown in Exhibit 5, the alternative allows more than 1 driveway to Tyco,

for buses to turn left out of the facility. A portion of alternative may utilize the existing C-7 property used by the existing Buick Lot, but is at the rear of the site. (0053 0054-9)

> ***Response:*** *For the Tysons West Station entrance and facilities, the Project Team recommended, and the decision-makers selected Option E site plan to replace the plan presented in the Supplemental Draft EIS and revised General Plans.Option E has its station entrance at the inbound, east end of the station near Spring Hill Road. The bus bays and Kiss & Ride of Option E are located between Tyco Road and Spring Hill Road, set back from Route 7. The access point for the station facilities is at Tyco Road with adequate distance from the Route 7 intersection.*

Public Comment: p. The SDEIS is flawed in its contemplation of no Kiss & Ride or Park-and-ride facilities at two of the four Tysons Corner Area Stations (i.e., apart from the fact that four stations are outrageous, costly surplusage for Tysons Corner area) (at 2-21). The notion that these stations can accommodate suburban users with buses and pedestrian facilities without the use of vehicular parking is nothing short of ludicrous. (0068 0173-33)

Public Comment: q. Parking capacity at the Tysons stations, if any end up being built, needs to be drastically increased. Any effort to push all parked cars out to Wiehle Avenue is being driven by special interests, not user data. For example, elimination of a 2000-space park-and-ride structure from the T6/Y15 vision, with reduction to 500 spaces, would be a disaster resulting in gridlock and massive frustration. (0068 0173-34)

> ***Response:*** *The park-and-ride capacity at Tysons West Station was reduced due to traffic concerns. Park-and-ride facilities at the three other Tysons Corner stations were not pursued because these stations are being designed as urban stations oriented to pedestrian access to reflect the county's plans to transform Tysons Corner into a more densely developed pedestrian-oriented urban center.*

Parking Issues at Wiehle Avenue

Public Comment: Wiehle Avenue structured parking should be built close to station, while the lot further away to the north reserved for future development (0064 0152-3)

Public Comment: The Wiehle Avenue parking should be close to the station. There are two sites: one of them is the surface park right now. That should be reserved if any site is reserved for future development. Any parking structure should be right near the train station making it convenient for the people who are due in there. (0064 0072-3)

> ***Response:*** *In accord with the final Team recommendations for Wiehle Avenue Station, the final General Plans include a site plan that accommodates future joint development at the station. The site of the joint development would on the current Reston East park-and-ride facility along Wiehle Avenue.*
>
> *Fairfax County Supervisor Hudgins has appointed the Wiehle Avenue Steering Committee, which will advise the County staff in the creation of a Request For Proposal (RFP) to solicit transit-oriented joint development proposals for a mixed use development of the County-owned parcel adjacent to the station. Using the conclusions from the Supervisor's Reston Charrette as a starting point, the committee is establishing the process, scope and criteria for the RFP.*

Public Comment: There is insufficient parking proposed at the interim rail terminus (Wiehle Avenue) for the amount of ridership projected. The project team is only providing 2,300 parking spaces, yet projects (in opening year, 2009) 7,432 boardings at the Wiehle Station. This means you are only providing parking for 31% of total station activity. Parkers constitute 42% of Orange Line users (at least according to your 2000 Base statistics. The project team is making overly optimistic assumptions of how many people will arrive at the rail stations by bus, dropoff or on foot versus car. (0016 0122-19)

Public Comment: [R]idership to Wiehle does not match parking demand. (0016 0122-7)

Public Comment: [Y]ou are only providing 2,300 spaces at two stations. This is appallingly low. I don't see how you can estimate 25,000 opening year riders at the new Wiehle line without providing sufficient parking? (0016 0122-8)

Public Comment: The other problem I noted in the SDEIS is insufficient parking and again, overly inflated ridership data. (0016 0122-5)

> ***Response:*** *The demand forecasts reported in the Supplemental Draft and Final EIS take into account the park-and-ride capacity at each station. Ridership arriving at each station by automobile is constrained, if necessary, by park-and-ride capacity limitations. Higher arrivals via modes other than auto reflect these constraints. Further, bus service plans have been developed to reflect these constraints, providing high frequency connections to Wiehle Avenue from Herndon-Monroe, which would act as a satellite facility to the parking facilities at Wiehle Avenue.*

Public Comment: Impacts of the limited parking availability on Wiehle Ave not addressed. I live near the Dunn Loring Metro Station. Our communities feel the impacts of inadequate parking with Metro riders parking in the neighborhoods. A full discussion in the DEIS needs to address the impacts insufficient parking measures create on neighborhoods. (0110 0129-4)

> ***Response:*** *DRPT will continue to coordinate with City of Falls Church, Fairfax County, Loudoun County and the Town of Herndon to develop parking management strategies for areas near proposed stations.*

Public Comment: We further urge that the above recommended Fairfax County comprehensive planning study proceed with due diligence, in close coordination with the Preliminary Engineering work for the project, so that construction of a new air rights parking garage above the Wiehle Avenue station can be completed by the time rail service to Wiehle is initiated. (0040 0041-9)

Public Comment: While the number of spaces [at Wiehle Avenue] hasn't increased over the original DRAFT EIS, their 2,300 units, certainly the designs proposed are lackluster. They are not what we quite had in mind when we designated the Wiehle Avenue Station as a potential joint-development site. (0060 0063-4)

Public Comment: Fairfax County should explore using air rights over the Dulles Toll Road to provide parking, development immediately adjacent to the stations, as well as county facilities and a diversity of housing types. This “found” land could be used to address a number of county and project objectives. Engineering for the project should allow for future air rights projects. (0060 0169-9)

> ***Response:*** *With respect to air rights development above Metrorail stations, the Project Team acknowledges that the two Counties govern land use and that FAA, MWAA, VDOT and TRIP II, as the owners and/or operators of the DIAAH, Dulles Toll Road and Dulles Greenway, must be involved. Therefore, the Project Team will await any initiative of the two Counties with the involvement of the highway owners and operators.*
>
> *Pedestrian walkways are provided from stations in the median of the highways to both roadsides. As designed, the proposed stations, guideways and other facilities do not preclude future air rights development by others; however, at this time no specific provisions are planned to accommodate such development. Technical issues of specific accommodations could best be addressed if specific air-rights project(s) were proposed during the current preliminary engineering.*

Public Comment: [Reston Association] supports the Fairfax County position urging that the existing parking at Wiehle Avenue not be expanded until there is a Full Funding Grant Agreement (FFGA) for extension of the rail system beyond Wiehle Avenue. (0039 0040-5)

Public Comment: [Reston Citizen's Association] supports the Fairfax County position urging that the existing parking at Wiehle Avenue not be expanded until there is a Full Funding Grant Agreement (FFGA) for extension of the rail system beyond Wiehle Avenue. (0040 0041-8)

> ***Response:*** *As stated In the final Team recommendations, for the Project Team, which has an overview of the Corridor's travel demand and of project justification by Federal criteria, there is a very important need to have adequate facilities at the end-of-line station at the start of Metrorail operations. The Project's goal of improved mobility must be supported by complete access to the station. With respect to the Federal criteria, FTA is placing increased emphasis on the cost-effectiveness of projects proposed for funding; the cost-effectiveness measure relies on the transportation benefits of the Project. Not to have the transportation benefits that the recommended park-and-ride facility offers would lower the FTA's rating of the Project and thus affect its prospect for funding. In addition, the Project's operating funding plan relies on the forecast ridership and revenue; reduced access translates into higher public subsidy. In order to be responsive to the above comments, the Project Team formulated an approach that achieves a balance of land-use objectives and mobility improvements. For the Wiehle Avenue station, It recommended that Fairfax County, with DRPT and WMATA assistance, solicit joint development proposals that would incorporate both the Project's station facilities and the community's desire for transit-oriented mixed-use development at this site.*

Public Comment: The SDEIS needs to clarify the meaning and impact of a parking structure at Wiehle Avenue Station that "would no longer rely on joint development for implementation, as the parking is required to accommodate project ridership in 2009 as an interim 'end-of-line' station." (SDEIS, 2-10). (0068 0173-10)

> ***Response:*** *In the Draft EIS and the proposed General Plans (June 2002), the Project Team had postponed preparation of a site plan of station facilities for Wiehle Avenue Station, in the belief that joint development of the Reston East park-and-ride site would incorporate the facilities. Commencing with the Supplemental Draft EIS and the revised General Plans (October 2003), the Team has presented site plans, given the understanding that the Wiehle Avenue Extension cannot await the outcome of a joint development solicitation. The current site plan of the final General Plans does accommodate future joint development along Wiehle Avenue itself.*

Parking Issues at Herndon

Public Comment: The Herndon Park & Ride, I understand now is at 70 percent of capacity. It will exceed capacity at 2009 when the subway elevated Metro is built out to that point. We cannot wait to 2015 to build additional parking at that site. (0064 0072-2)

Public Comment: Herndon Park and Ride will exceed capacity before phase II in 2015. Phase I planning for 2009 should include increased capacity (0064 0152-2)

Public Comment: [Reston Citizen's Association] supports incentive for people to change their mode of access to the [Wiehle Avenue] station such as expansion of the Herndon-Monroe parking garage as soon as possible. (0040 0078-1)

> ***Response:*** *The proposed opening year for The Wiehle Avenue Extension is 2011. The Wiehle Avenue Extension would terminate at Wiehle Avenue and therefore would not include Metrorail service to Herndon-Monroe. Providing additional parking capacity at Herndon-Monroe would be the responsibility of Fairfax County. The ridership estimates shown in the Final EIS already reflect available capacity and are constrained by that capacity.*

Parking Issues at Other Locations

Public Comment: I am particularly concerned by the language in the Loudoun County Comprehensive Plan that specifically prohibits transit-related parking at the Route 772 station even though this station is the terminal station in Loudoun County. While I agree that commercial, residential and public uses should be emphasized at this station, I believe that the total prohibition of transit-related structured parking will prove detrimental to reasonable access to the transit system, and result in serious "bootleg" parking violations in the neighborhoods surrounding the station. (0041 0042-12)

Public Comment: We are particularly concerned about the language in the Loudoun County Comprehensive Plan that prohibits trans-related parking at the Route 772 Station. We feel that this is something that needs to be changed and addressed. (0067 0075-8)

Public Comment: We urge that the counties work with Virginia Department of Rail and Public Transportation, WMATA, to assure structured parking opportunities at all transit stations. This is particularly important for the Reston Town Center Station and Route 772 Station in Loudoun County. (0067 0075-7)

> ***Response:*** *Commencing with the evaluation in the Supplemental Draft EIS, extensive park-and-ride facilities and Kiss & Ride areas, as well as major off street bus facilities, were added to the Full LPA in response to Loudoun County's recognition that this end-of-line station was far too significant to preclude such essential access facilities. Planned developments on either side of the Greenway have likewise recognized the benefits of these improvements and would provide proffers to accommodate them. A total of 3,300 park-and-ride spaces are now part of the approved site plan for Route 772 Station.*
>
> *Consistent with the Fairfax County Comprehensive Plan, there are no provisions for parking at the Reston Parkway Station as originally documented in the Draft EIS.*

Public Comment: The SDEIS fails to describe or provide for commuter parking lots other than at future stations. (e.g., at 2-17). This ignores current use patterns (e.g., use of the Herndon-Monroe and Reston East stations for commuters using buses to reach West Falls Church metro. (0068 0173-12)

> ***Response:*** *Chapter 2 of the Final EIS describes the project's intentions for the existing Herndon-Monroe and Reston East park-and-ride lots. Under the Wiehle Avenue Extension, Herndon-Monroe would be a satellite facility to the Wiehle Avenue Station, with high frequency bus service between Herndon- Monroe and Wiehle Avenue to facilitate this role. In the Full LPA, the Herndon-Monroe Park-and-Ride would be expanded to support the Herndon-Monroe Metrorail station to be located in the median of the DIAAH, as would the existing Dulles North Transit Center at the Route 606 station. The existing Reston East facility would be expanded as part of the Wiehle Avenue Extension to support the interim end-of-line terminus at Wiehle Avenue and would continue to support the Wiehle Avenue Station when the Full LPA is constructed.*

Need to Notify Landowners

Public Comments: We live at 1824 Baldwin Drive and are opposed to the tie station proposed to be constructed at the end of Baldwin Drive. Please be sure we are notified of the upcoming neighborhood hearings on that topic so we may attend and express our views. (0124, 2-01)

> ***Response:*** *The property owners and tenants of the Baldwin Drive residences participated in the May 2004 post-hearing conference and associated outreach activities.*

Important Information Omitted

Public Comment: We question, however, the decision to omit from Appendix E the attachments to HBL's December 29 written submission. Users of the appendix are not able to see the drawings of the final

specific alternatives HBL suggested for the Tysons West Station facilities. The public also may miss the comments (submitted through HBL as attachments) of two prominent area property owners in support of HBL's concerns. Additionally, we believe it would be helpful to stakeholders and the public at large to post the appendices to the Public Hearings Report on the project website (www.dullestransit.com). (0070, 2-02)

> ***Response:*** *The Project Team added the color version of the attachments to Appendix E of the Supplemental Draft EIS Public Hearings Report. There has not been a demand that the public hearings record be posted at the project web site. In addition, the record is so voluminous that the posting would be impractical and costly.*

More Parking at Wiehle Avenue Station

Public Comment: I think that expanding the parking at Reston East on Wiehle Avenue should be a separate item from the Dulles Corridor project. More parking needs to be created sooner rather than later regardless of the progress (or lack thereof) of light rail or rapid bus transit. The lot fills up much earlier than it used to forcing us to get up and out of the house earlier. (0135, 2-01s)

> ***Response:*** *Fairfax County had initiated a feasibility study of Park-and-Ride expansion, but placed that study in abeyance in 2001 while it awaited the outcome of the Dulles Corridor Land Use Task Force and the results of the NEPA analyses for the No-Build Alternative of the Dulles Corridor Rapid Transit Project. In the NEPA analysis, the Project Team assumes that the Reston East parking facility will have 2,300 spaces before 2010. In other words, if the Project is not built, Fairfax County would likely expand the park-and-ride structure.*

Inadequate Number of Parking Spaces in Corridor

Public Comment: Again, it appears the project team failed to address the statistics I provided above, particularly on the ratio of parking to passengers at the western-most Orange Line stations, vs. the paltry amount of parking provided at the proposed Dulles Rail stations. I request the project team address their overly optimistic assumptions of having people take buses to the Wiehle Station versus those who want to park and ride. Again, how can you anticipate 29,000 riders on LPA 1 if you only are providing 2,800 parking spaces at stations and 6,180 spaces total, including bus lots. And, you now have to factor out express bus riders from Loudoun County as per the request of the Board of Supervisors (see Email from Karl Rohrer to John Clark)? (0112, 2-05)

> ***Response:*** *The number of park-and-ride spaces in the Dulles Corridor has been determined based on travel demand, available land, the capital funding plan and the currently-adopted plans of local jurisdictions for park-and-ride expansion. The travel demand forecasting analysis has taken into account that number as well as the number of riders that will access the Metrorail stations by bus, Kiss & Ride and walking. The methodology of the demand forecasting is documented in the Travel Demand Forecasting Methodology and Results Report (June 2002). The commenter also incorrectly used two sets of numbers in his evaluation: his citation of 29,000 boardings is for the LPA in 2025 and his citation of 6,180 park-and-ride spaces is for the Wiehle Avenue Extension in 2011.*

2.3 SUPPLEMENTAL DRAFT EIS ALTERNATIVES

A. Draft EIS Comments

No comments pertaining to this topic were received

B. Supplemental Draft EIS Comments

Federal Agency Comments

Recommend Build the full LPA

Federal Comment: We encourage the development of the full Metrorail alternative because with the highest ridership, it will have the greatest capacity of moving people through the corridor, and should have the greatest impact on reducing congestion and air pollution. (0085 0100-2)

> ***Response:*** *Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in revising the LPA.*

State Agency Comments

Need for Concurrence with Comprehensive Planning

State Comment: Please reference the possible future profile of Route 7 that would conflict with the relocation of the Tysons Central 7 Station entrance and specifically describe the conflict. It should be noted that any future roadway improvements envisioned in Tysons Corner are based on the Fairfax County Comprehensive Plan 2000 and were applied in VDOT's Transportation Collocation Study 2003. The design shown in the Collocation Study is just one possible future option for Route 7 in the vicinity of Tysons Central 7 and no profiles for this design have been published by VDOT. Further analysis is required to determine if moving the station entrance to the middle or west side is feasible. (0091, 2-01)

> ***Response:*** *As indicated in the General Plans (Final EIS Volume V), the entrance for the Tysons Central 7 Station is located at the inbound/east end of the station. Relocation of the Tysons Central 7 Station entrance to the outbound/west end of the platform would result in conflicts with existing development, and with possible future profiles of Route 7 envisioned by VDOT. The VDOT Transportation Collocation Study depicted a grade-separation of Route 7 beneath Westpark Drive as part of a proposed interchange. Elements of that interchange would be in conflict with a station entrance at the outbound end of the platform. Making provisions for a second entrance and the associated mezzanine and support facilities would have a substantial capital cost premium. The benefits in terms of any additional ridership would be minimal, and significant additional yearly operational and maintenance costs would result.'*

Tysons West Station Entrance and Facilities

State Comment: Needless to say, there is substantial concern that the Project Team's assessment is correct and that the proposed station would increase traffic congestion, be inconvenient to pedestrians and discourage ridership.

The EIS proposal also appears unnecessarily costly. (0156, 2-01)

State Comment: The success of the Dulles Rail Project is vital to Northern Virginia. Yet, unless costs are controlled and the needs of pedestrian and commuters are served to the fullest possible extent, the Project map be placed in jeopardy. I share the concerns of the McLean and Fairfax organizations as well as the Fairfax Board of Supervisors and urge you to adopt an alternative that would meet their goals and respond to their concerns. (0156 2-02)

> ***Response:*** *The Project Team conducted a post-hearing conference on the Tysons West Station entrance and facilities. The decision-makers selected Option E site plan for the Tysons West station facilities to that of the Supplemental Draft EIS and revised General Plans. Option E has its station entrance at the inbound, east end of the station near Spring Hill Road. The bus bays and Kiss & Ride of Option E are located between Tyco Road and Spring Hill Road, set back from*

Route 7. In comparison to other options considered, Option E was foremost in transit customer convenience and safety and best serves the goals of the Project.

Your statement's citation from the Project's Station Access Study was applicable when the Station had a 2,000-space park-and-ride facility. In response to the public hearing record of Summer 2002 and based on the cited study, the Project has programmed only 500 spaces. Based on WMATA's experience with existing stations, this reduced facility would be full prior to the morning peak hour. Therefore, it should not cause an impact on the adjacent roadways.

Regional Agency Comments

Impacts on the Dulles Toll Road

Regional Comment: The discussion of the proposed Route 28 Station (page 2-32 of the SDEIS) indicates that the DIAAH would need to be realigned to accommodate the proposed station, and that the Dulles Toll Road would need to be realigned to allow future construction of a third lane in each direction on the realigned DIAAH. The SDEIS declares that the "future effects of this widening are no longer assumed to be a direct effect of the Dulles Corridor Rapid Transit Project." The Airports Authority strongly disagrees with this assertion. In our August 27, 2002 comments on the Draft EIS, we stressed our future plans to widen the DIAAH to six lanes, and we emphasized the need for the Dulles Corridor Rapid Transit Project not to infringe on the right-of-way for the future widening. Realignment of the Toll Road to preserve this right-of-way is indeed a direct effect of the Dulles Corridor Rapid Transit Project, and the effects of this realignment need to be addressed in the EIS for the Dulles Corridor Rapid Transit Project. (0131 0166-4)

Response: *If the program of the Metropolitan Washington Airport Authority to widen the DIAAH to six lanes is before, during or soon after the completion of the Full LPA, the Project Team will consider the realignment of the Dulles Toll Road as a direct effect of the Project. If the program to widen the DIAAH is long after the completion of the Full LPA, the Project Team will regard the realignment of the Dulles Toll Road as an effect of the widening project. For the purposes of the Final EIS and General Plans, the Project Team will incorporate the widening project into both documents.*

Need Memorandum of Understanding for full LPA

Regional Comment: The Airports Authority is disappointed that the Federal Transit Administration is considering only a first phase on construction, from West Falls Church to Wiehle Avenue, for inclusion in the FY 2004-2009 New Starts Program, and is making no commitment to funding the completion of the project to IAD and beyond. Nevertheless, we are pleased that the proposed Phase I does not stop at Tysons Corner, but carries the project back to the median of the Dulles International Airport Access Highway (DIAAH).

The Authority's continued support of the project is subject to three conditions: 1. The FTA reauthorization process needs to recognize the ultimate goal to complete the rail line out to and beyond IAD. 2. Advanced additional engineering, must proceed beyond the initial segment and include the entire project. 3. There needs to be a Memorandum of Understanding among the local partners that captures a joint commitment to see the entire project through to completion. (0131 0166-1)

Response: *It is proposed that the Full LPA be constructed. However, based on agency coordination, DRPT and WMATA have revised the LPA to allow for construction of the project in two phases. Guidance on federal funding limitations and the timing of local funding availability were considered in determining the proposed phasing. An interim end-of-line at Wiehle Avenue would allow the initial Dulles Corridor line to provide the maximum benefit possible with the available resources. When the Wiehle Avenue Extension is complete, the initial segment of the Dulles Corridor line would serve approximately 65 percent of the passengers attracted to the full*

LPA. DRPT will continue to coordinate with MWAA to address the concerns identified in the above comment.

Local Agency Comments

Need to Consider Alternative Parking Locations

Local Comment: It should also be noted that in your operating plan for Phase 1 we feel it would be much more advantageous to build commuter parking at the future Rt. 772 station than to expand parking at Dulles North, where we currently have several hundred excess spaces. (0084 2-04)

Response: *In response to the request of Loudoun County, the Project Team has redefined the Wiehle Avenue Extension assumptions, particularly the bus operating plan and the General Plans, so that there is a transit center with bus facilities and park-and-ride at the future Route 772 Station. The Team has deleted references to the supplemental park-and-ride from the site of the future Route 606 station facilities. The Route 772 transit center uses the site of the north side park-and-ride structure of the full LPA. However, the site and its neighboring parcels are undeveloped as is the roadway network. If the roadway network, which will be built by future, adjacent development, does not exist in advance of the opening year of the Wiehle Avenue Extension, DRPT will consider the postponement of the construction of the transit center; its intermodal functions of park-and-ride and bus bays may be temporarily located in the locale of the site. In addition, DRPT will be determining the funding sources of this transit center during the preliminary engineering phase.*

Endorsements of the LPA

Local Comment: Loudoun County strongly endorses this project. It is vital to our future economic success, the management of traffic congestion, improved air quality and will be a major determinant of how we mature as a region. (0066074-4)

Local Comment: TOWN OF HERNDON, VIRGINIA, RESOLUTION, AUGUST 13, 2002. Resolution-Recommending a Locally Preferred Alternative (LPA) and Other Considerations to be Forwarded to the Washington Metropolitan Area Transportation Authority (WMATA), the Virginia Department of Rail and Public Transportation (VDRPT) and the Commonwealth Transportation Board (CTB) as a Response to the Draft Environmental Impact Statement and Proposed General Plans of the Dulles Corridor Rapid Transit Project. (0132 0171-06)

Response: *Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in developing the LPA.*

Recommend Build the Full LPA

Local Comment: Economic reality in Federal appropriations may require that the project be divided into two phases, but it must be viewed as one project. It should be noted that Loudoun County has put in place funding mechanisms to fully fund its share of the project. There has never been any doubt as to Loudoun's financial commitment to this project either with the original single project or the currently proposed two-phase project.
66 0074-1

Response: *Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in revising the LPA.*

Vehicular Access to Parking at Stations

Public Comment: On the two Route 7 stations, we believe that there needs to be additional look at where those stations entrances are. We believe that those stations should both have entrances at both ends, if possible. (0117 0146-1)

Public Comment: For the Tysons Central 7, the underground station, we think that if it can't have two entrances that-- and it has only a single entrance, that entrance should be on the west end and not the east end. (0117 0146-2)

> ***Response:*** *The Project Team conducted a post-hearing conference on the Tysons West Station entrance and facilities. The decision-makers selected the Option E site plan, which has its station entrance at the inbound, east end of the station near Spring Hill Road. The bus bays and Kiss & Ride of Option E are located between Tyco Road and Spring Hill Road, set back from Route 7.*
>
> *For Tysons West Station and Tysons Central 7 Station, making provisions for a second entrance and the associated mezzanine and support facilities would have a substantial capital cost premium. The benefits in terms of any additional ridership would be minimal, and significant additional yearly operational and maintenance costs would result.*

Parking Related to Development Opportunities

Local Comment: Tysons West station: consideration should be given to locating the bus facility and parking to the south side of Tyco Road; the purpose is of relocating the facility is to improve joint development opportunities, to improve pedestrian access and to have potential improvement in bus access; for example, two points of access (one from Tyco Road and one from Spring Hill Road should be considered for this facility.(0093 0109-18)

> ***Response:*** *The Project Team conducted a post-hearing conference on the Tysons West Station entrance and facilities. The decision-makers selected the Option E site plan, which has its station entrance at the inbound, east end of the station near Spring Hill Road. The bus bays and Kiss & Ride of Option E are located between Tyco Road and Spring Hill Road, set back from Route 7. In comparison to Options A, B, C and D, Option E was foremost in transit customer convenience and safety and best serves the goals of the Project.*

Local Agency Comments

Commitment Should Remain for full LPA

Local Comment: The most pressing issue is the need to complete the full Locally Preferred Alternative (LPA) by the current scheduled date of 2015. There are those who would oppose this on the grounds of cost and number of riders served. This is based on the false assumption that Bus Rapid Transit (BRT) can handle the future transit needs of the Dulles Corridor. The use of BRT in lieu of rail takes on some apparent credibility when viewed in the strict context of Environmental Impact Analysis. The analysis year of the EIS is 2025, with phase 2 not operational until 2015. It is shortsighted to measure a system that will last a century by what it will deliver in a decade.(0074-3)

> ***Response:*** *2025 was used as the project horizon year because it allows a comparison to be made of the alternatives in a future year in which they would have achieved their full potential. The Project Team has used the Metropolitan Washington Council of Government's (MWCOG) Cooperative Land Use Forecasts - Round 6.3, which does have a later forecast year of 2030. However, to remain consistent with past NEPA analyses and results that are documented in the Draft EIS and Supplemental Draft EIS, the Team has retained a forecast year of 2025 for the analyses in support of the Final EIS.*

Local Comment: Loudoun County takes strong exception to the statement in the Executive Summary, "FTA had determined that the first phase now being considered for the funding has independent transportation utility even if the subsequent phase is never built." (p. s-3) To terminate this project at Wiehle Avenue would undermine land use policies of neighboring Fairfax County, and would forever condemn the economic future of one of the premiere development corridors in the United States. (0066 0074-2)

> ***Response:*** *Based on agency coordination, DRPT and WMATA revised the LPA to allow for construction of the project in two phases. Guidance on federal funding limitations and the timing of local funding availability were considered in determining the proposed phasing. An interim end-of-line station at Wiehle Avenue would allow the initial Dulles Corridor line to provide the maximum benefit possible with the available resources. When the Wiehle Avenue Extension is complete, the initial segment of the Dulles Corridor line would serve approximately 65 percent of the passengers attracted to the full LPA.*

Public Comments

Need to Consider Other BRT Alternatives

Public Comment: This is a terrible waste of money! I won't use it but will have to pay for it. Go with the cheaper bus proposal. (0457, 0457-L –1)

> ***Response****: Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to the Project Team and were considered by decision-makers in the selection of the Locally Preferred Alternative. The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. BRT, the BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Public Comment: BRT could offer express service from Dulles airport or Tyson's corner, significantly reducing travel time. BRT also could offer flexible service, operating both on separate rights-of-way and around office parks, malls, and neighborhoods. (0444, 0444-E-4)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. BRT, the BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS. The BRT service for the Dulles Corridor Rapid Transit Project analyzed in the Draft EIS was intended to serve the same type of travel needs as the proposed Metrorail service. The proposed stations for both modes were placed where they best respond to anticipated demand in the corridor. Therefore, stations are located at or near existing and planned activity centers in the corridor and at existing park-and-ride locations.*
>
> *It would be very difficult to provide a cost-effective service for the Dulles Corridor using several, dedicated express routes. For a point-to-point transit service to be as efficient as possible, it must be able to attract a large number of travelers within a relatively small area at the origin end that all want to go to the same destination (or multiple destinations within a small area). Travel time at the "circulation and distribution" end of the trip should not be more than 10 minutes, or the increased travel times make the dedicated service a less attractive travel alternative.*
>
> *Most travelers in the Dulles Corridor are coming from dispersed, lower-density locations throughout the region, and traveling to dispersed destinations throughout the corridor and the region (some high-density, some not). While travel within the corridor and between the corridor and the region is significant, travel from each dispersed location is, in general, not significant enough to support a dedicated, point-to-point type of service. Therefore, it would not be efficient*

or feasible to provide rapid transit improvements in the Dulles Corridor primarily using a series of "one-seat ride" express services with circulation/distribution at either end.

Public Comment: I support BRT in the Dulles Corridor as well as along I-66 from the Vienna Metro out to Haymarket with corresponding BRT stations at Route 123, Fair Oaks, Fairfax Pkwy, Route 28, Compton Rd, Route 234 Business, Route 234, PW Pkwy, Route 29, and finally Route 15. Furthermore, this I-66 line and the Dulles line should intersect BRT lines that operate along the Beltway, Fairfax Parkway, Route 28 and the PW Parkway in dedicated HOV lanes. Where these concentric lines intersect VRE, there should be major stations to facilitate intermodal transfers. In time, select BRT lines could be upgraded to light rail as needed. (0408, 0408-E –1)

***Response**: The Draft EIS considered rapid transit improvements within the Dulles Corridor. Alignments outside the Dulles Corridor are beyond the scope of the study. Other transportation improvements (both highway and transit) outside the Dulles Corridor are recommended in the Northern Virginia 2020 Plan, Statewide Transportation Plan, and local comprehensive plans and are being pursued by VDOT, DRPT, and others. This program of improvements is intended to increase mobility and address the existing and potential future deficiencies in Northern Virginia.*

Need for Additional Public Forums

Public Comment: The NMTC is disappointed, however, that the Project Team will not conduct a similar conference for the Tysons Central 7 station. The NMTC continues to believe strongly that the proposed station entrance design is not a good one for pedestrian and bicycle access. The Project Team needs to give much more thought to alternative designs for this station. A post-hearing conference would be a very good way to receive input from stakeholders, reassess the access needs for this station, and discuss the site issues that affect the ability to implement the various alternatives. Because of this, the NMTC requests that the Project Team conduct a conference for this station. (0117, 2-01)

***Response:** As indicated in the General Plans (Final EIS Volume V), the entrance for the Tysons Central 7 Station is located at the inbound/east end of the station. Relocation of the Tysons Central 7 Station entrance to the outbound/west end of the platform would result in conflicts with existing development, and with possible future profiles of Route 7 envisioned by VDOT. The VDOT Transportation Collocation Study depicted a grade-separation of Route 7 beneath West Park Drive as part of a proposed interchange. Elements of that interchange would be in conflict with a station entrance at the outbound end of the platform. Making provisions for a second entrance and the associated mezzanine and support facilities would have a substantial capital cost premium. The benefits in terms of any additional ridership would be minimal, and significant additional yearly operational and maintenance costs would result. The Project Team will continue to coordinate with Fairfax County, VDOT, property owners/developers and other stakeholders on issues of pedestrian access to the Tysons Central 7 Station.*

Commitment Should Remain for full LPA

Public Comment: The Fairfax County Non-Motorized Transportation Committee (NMTC) is pleased that the Project Team has recommended that the Tysons West station entrance be placed at the eastern (Spring Hill Road) end of the station. The NMTC supports this recommendation.

We offer the following additional comments on the proposed station design:

1) We believe that the entrance to the pedestrian bridge over Route 7 should be located at, or at least nearer to, the corner of Rt. 7 and Spring Hill Rd. rather than at the proposed location adjacent to the Kiss-and-Ride and bus facility. The proposed location is convenient for those arriving by car or bus, but less convenient for all other pedestrians entering the station from the north side of Rt. 7 (this is likely to be the majority of people entering the station from that side). If the proposed location is used, pedestrians approaching the station entrance along Rt. 7 would first have to walk a ways up Spring Hill Rd., enter the pedestrian bridge, and then backtrack along Spring Hill Rd. on the bridge to the station. Locating this

entrance at the corner makes it more convenient for all pedestrians entering the station from the north side of Rt. 7 without adding any distance to the walk of people arriving by car or bus.

2) We believe that the station design should not preclude easily adding a second station entrance at the west (Tyco Rd.) end of the station. The station design should allow this entrance to be added inexpensively in the future if and when development and demand is adequate to justify it. (0117, 2-03)

Public Comment: (1) consideration be given to adding second entrances to the two proposed stations along Route 7; (2) failing that, there should be at the very least provision in the initial construction of those stations for additional mezzanines or supporting piers and other structural elements that would avoid undue expense and operational interference if second entrances are added at later dates; (3) if there is to be only a single entrance at the Tysons Central 7 station, it be located at the middle or west end; and (4) at the Tysons West station, the platform be extended over Spring Hill Road and Tyco Road to reduce the need for pedestrians to cross those busy streets.(0034 0035-2)

Public Comment: The biggest thing is for the two stations on Route 7, we would like to see if at all possible two entrances on each station. And if that's not possible for financial reasons, we think that there should be taken at least the prudent step of providing the mezzanines or the support columns or whatever other support structures are necessary to assure that when at some future date second entrances are added, it could be done without interfering with existing service or experiencing undue cost.(0034 0143-2)

Public Comment: If there is to be single entrances, we suggest that the Tysons Central 7 station that they be located either at the middle of the station area or on the west rather than the east where it's located presently. The east presents a substantial problem of pedestrian access.(0034 0143-3)

Public Comment:…we would hope that the station would be designed with the ability to have a pedestrian bridge at the west end since you're now going to put the station, the entrance of course on the eastern end, we would hope that you would not preclude the ability to have a pedestrian crossing on the Route 7 on the western end…at Tyco Road. (0117, 2-05)

Public Comment: If the Kiss & Ride and bus transfer facilities are shifted east, we would urge VDRPT and WMATA to consider the inclusion of pedestrian access to the Tysons West Metro Station from the western end of Leesburg Pike….the elimination of a pedestrian connection near Tyco Road (as originally planned) would be a significant loss. The western pedestrian connection to the Station is desirable as it will allow many nearby properties to be well-served by convenient, safe access to the proposed Transit Station. (0075, 2-01)

> ***Response:*** *The issues are which set of patrons will be inconvenienced and to what degree the Cherner Isuzu-Kia dealership is affected by the pavilion location.*
> *In the current site plan, patrons arriving via the sidewalk of the Route 7 would have a walk of 150 feet to the base of stairs of the north entrance pavilion, or about 280 feet to the base of the escalators the pavilion. The dealership retains its frontage on Route 7 and has a low number of display spaces displaced by the piers of the bridge. In the proposed site plan, patrons using the sidewalk of the Route 7 would have a shorter walking distance (about 120 feet), to the base of escalators, which would remain oriented towards the bus facility. Patrons arriving via feeder bus and Kiss & Ride would have the same overall distance to the station mezzanine but would walk longer to reach the full enclosure of the north entrance pavilion. In this case, the dealership would lose its corner frontage and several display spaces. In consideration of a patron's total travel time and distance and to minimize impacts to the existing automobile dealership, the Project Team is advancing the current Option E site plan into preliminary engineering.*
>
> *The location and number of entrances has been a part of the analysis and the subject of continuing coordination with Fairfax County throughout the environmental review process. The documentation provided in the Final EIS and final General Plans represents the consensus relative to serving the rail passenger demand, existing and future development, and consideration of available funding. Making provisions for a second entrance and the associated mezzanine and*

support facilities has a substantial capital cost premium. The benefits in terms of any additional ridership would be minimal, and significant additional yearly operational and maintenance costs would result.

The plan of the station's mezzanine level includes not only the fare gate array and the pedestrian bridge connection, but also various rooms for Metrorail operations. These rooms are located at the opposite end of the station in the place of the proposed second entrance, escalators and stairs. To accommodate a future second entrance, these rooms would need to shift onto an extension of the station's mezzanine beneath the revenue and pocket tracks outbound of the station, design changes that would substantially increase the Project's capital costs. If constructed, a second entrance would nearly double the operating costs for a given station. Until recently, no Metrorail station in Virginia had a second entrance. At this time, King Street Station is receiving a minor second entrance, which was initiated by the City of Alexandria and Ballston Station might receive one, as planned by Arlington County and WMATA. Given these aspects, the Project Team is not considering accommodation of a second entrance at this station.

Relocation of the Tysons Central 7 Station entrance would result in conflicts with existing development, and with possible future profiles of Route 7 envisioned by VDOT.

Potential Economic Impact of Relocations/Station Construction at Tysons West Station

Public Comment: HBL of Tysons makes a significant employment and financial contribution to Fairfax County and to the Commonwealth of Virginia. HBL's current data show that, during 2004, it employs 359 persons. The following table shows the taxes HBL paid or collected during 2003 and expects to pay or collect for 2004…These tax payments reflect $300 million in HBL annual sales and services.

Displacing HBL's business on the north side of Route 7 and impairing HBL's remaining operations, on the south side, as would result from the adoption of Option A, would have major adverse direct economic impacts on HBL. It would eliminate between 100 and 150 jobs. Annually, it would cause Fairfax County and the Commonwealth of Virginia to lose between $3 million and $4 million in tax revenues and it would eliminate approximately $100 million in business activity in Virginia. (0070, 2-03)

Public Comment: …we feel that Options A and B are not workable in their current form in terms of the impacts to the commercial properties along Route 7 and their redevelopment potential. (0053, 2-01)

Public Comment: Like the Cherners, my father and grandfather started this business. We owned four pieces of property in the Tyson's area….We have one other small one and, of course, our dealership, which is Option B…And this is all we have left….This is our sole asset. There's this one dealership, no other used-car lots anywhere; no Starbucks in another place; no office buildings that we own. This is it for my family. My grandfather comes to work; me, who comes to work; and my father. The choice of B would be devastating to my family.

Also, like the other two businesses, [Option B] would be devastating to our employees. We have some employees who have been with us for decades.

I would implore you to try to find an option that could save the three businesses; but yet still have a Kiss-and-Ride; still allow people to walk to the Metro station; allow us to develop the properties when the time comes for something beautiful, for something nice….find an option that will save everyone's jobs, keep taxes coming and allow us to prosper. (0158, 2-01)

Public Comment: …we feel that Options A and B are not workable in their current form in terms of the impacts to the commercial properties along Route 7 and their redevelopment potential. (0053, 2-02)

Response: *The Project Team recommended and the decision-makers selected the Option E site plan for the Tysons West station facilities, which is a variant of Option C.*

Support for Tysons West Option B

Public Comment: To be successful, RMC-TYCO believes that the traffic considerations in the future should outweigh other considerations. It is obvious that Option B has the best properties for a successful station in the future, followed closely by Option A. (0157, 2-01)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Option E site plan for the Tysons West station facilities, which is a variant of Option C. The Tyco Road access to the station facilities would affect the access to the nine businesses of the RMC-TYCO property by closing the east entrance of the property.*

Opposition to Tysons West Option B

Public Comment: We emphatically oppose Option B because of its devastating impact upon the Peacock family's principal assets-their dealership and the land on which it sits. Compounding the inequity of selecting Option B is the fact that this would become the second property the family has owned in Tysons taken for public use. The first property became the location for a county fire station.

Regardless of any purported technical advantages, it would be indefensible to displace Peacock Buick while the Security Storage site lies vacant. We understand that the Ourisman family now owns the parcel and has leased it to HBL. Again, any hardship that either of those parties may suffer falls into the category of self-inflicted wounds. They had full knowledge that the Project Team had selected the north side of Tyco Road for the Facilities. That alone should have averted them to the prospect that the Security Storage Property could become the site for the Facilities. In any event, as between a family business that has remained at the same location for over a quarter of a century and a huge multi-state constellation of dealerships that has leased a vacant tract that would not displace an existing business, the hardship factor should tip the balance to the Security Storage site or other more benign locations in the area.

Further, we will request that the Fairfax County Board of Supervisors consider this hardship factor and other aspects of the site selection as between the three options and others that may emerge. We will ask the Board to refine its position accordingly. In any event, we respectfully request that the Project Team as the final arbiter reject Option B. (0136, 2-05)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Option E site plan for the Tysons West station facilities, which is a variant of Option C.*

Need to Conduct a Soils Study Prior to Site Selection

Public Comment: The RMC-TYCO property is home to nine businesses that likely employ a total of approximately 100 people. Because the RMC-TYCO property is one of the few properties with an I-5 zoning category, it would be virtually impossible for these businesses to relocate anywhere nearby.

…I am sure that cost is a major factor…the warehouse building in the rear of the Cherner Property was built on a significant amount of fill material in the mid-1960's… We would recommend that you commission a soils study before selecting either Option C or Option D…In addition…there is an underground structure between the Cherner Property and the RMC-TYCO Property…. 24" concrete piers every two feet, on center, running along the entire property line. Each pier contains a steel I-beam and sink to a depth of 18 to 20 feet each…to guard against the possibility of damage from any shifting soils on the Cherner Property. (0157, 2-02)

> **Response:** *The Project Team recommended and the decision-makers selected the Option E site plan for the Tysons West station facilities, which is a variant of Option C. Option E reduces the property acquisition and business effects in comparison to Option C by not removing a building on the RMC-TYCO, LLC property. Therefore, the businesses located in that building would not be displaced.*

The Team did not consider capital costs as a determinant in the evaluation of the options, as explained in the Technical Memorandum. Option E is upon the Cherner property that is earthen fill; the proposed bus loop is adjacent to the property line that is the location of the underground retaining wall. The Project Team will investigate both the fill and wall during preliminary engineering and final design.

Support for Alternative Facility Location

Public Comment: We're an independent service facility…we have over 5000 active clients in the Vienna/McLean area…we operate 12,500 feet, we'd like to stay there as long as possible…Zoning in Tysons Corner for I-5, very limited. If, in fact, you go with options C or D, I would like to see somebody stand up strong to try and offer some more I-5 zoning for us. (0159, 2-01)

Response: *The Project Team recommended and the decision-makers selected the Option E site plan for the Tysons West station facilities, which is a variant of Option C. Option E reduces property acquisition and business effects in comparison to Option C by not removing a building of the RMC-TYCO, LLC property. Therefore, the businesses located in that building would not be displaced.*

Potential Displacement Impacts

Public Comment: Currently, Cherner employs over 120 individuals from diverse ethnic, social and economic backgrounds. With family members, Cherner provides a livelihood for over 400 people. Cherner utilizes its entire property, including 8550 and 8536 Leesburg Pike and 1530 Spring Hill Road.

Parallel to our neighbors HBL and Peacock's opposition to Options A and B, the property required in Option C, is largely owned and occupied by Cherner Lincoln/Mercury Isuzu and Kia. This parcel is not only important to the ongoing operation of Cherner, it is critical. It provides essential parking for hundreds of Cherner's vehicles, including new inventory, service vehicle and body shop patrons. In addition, the property houses the Cherner Collision center which generates over 60 percent of Cherner's total profitability. In no uncertain terms, adoption of Option C will force the closure of the entire dealership.

Given limited manufacturer flexibility, and minimum nearby affordable property, Cherner does not have an option to relocate or move any portion of its facilities or business. The loss of 1530 Spring Hill Road would devastate Cherner Lincoln/Mercury Isuzu Kia.

I would like to include for my record, my letter dated February 25, 2004 to Mr. Karl Rohrer, which not only outlines many of the comments this evening, but also several other issues raised by Option C. These include an overall inefficient use of precious property in proximity to a Metro station; the placement of essentially rectangular use in a triangular-shaped property; the negative impact upon 8536 Leesburg Pike, known as Cherner Isuzu/Kia and the isolation of 1568 Spring Hill Road, known as the Miller and Smith Building, which is owned by the Cherner family.

Letter of February 25, 2004

…I would like to express my strenuous objection to Option C provided in the public hearings report…The loss of any portion of this property will destroy the financial viability of the entire Cherner operation….Option C appears to be an underutilization of precious Tysons Corner property…

The property required for Option C currently houses the Cherner Collision Center, is utilized for vehicle preparation, parts storage, primary storage for Lincoln Mercury, Isuzu and Kia vehicle vehicles as well as the Tysons West location of Enterprise Rent-A-Car which operates under a long term lease…This results in the need to carry several hundred vehicles for sale to meet manufacture sales quotas (planning volume).

Option C effectively isolates this property ["East-West Mortgage" building located at 1568 Spring Hill Road]….As such, the potential of a combining the parcels is entirely lost…

Option C will also have a dramatically negative impact on the future redevelopment potential of several surrounding parcels by effectively placing a parking lot in the middle of properties that logically should be combined for a higher and better use.

…the proposed overhead walkway runs directly above a 10,000 gallon gasoline underground storage tank, a gasoline dispensing pumping and is within very close proximity to an existing structure.

Finally, the Comprehensive Planned extension of Greensboro Drive seems to have been ignored and could result in yet another taking of land to the West of our property. (0134, 2-02)

Public Comment: Cherner, Peacock and HBL has several variations of this surface lot that deserve review and further study. These options were developed for study by the architectural firm Davis Carter. … I humbly request that WMATA's project team work with us. And with Chairman's Connolly's office to further study these and even develop other options that share the burden of the required kiss-and-ride facilities. (0134, 2-05)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Option E site plan for the Tysons West station facilities, which is a variant of Option C.*
>
> *Option E is similar in concept to alternative site plans suggested by various parties in the post-hearing conference record and seeks to maximize use of existing County-owned property behind Fire and Rescue Station No. 29. Although Option E does not entirely eliminate impacts to the buildings and businesses operated at 1530 Spring Hill Road, the total amount of property required has been reduced. The Project Team understands that these businesses are related to the automotive dealership operations and has worked diligently to minimize, to the extent possible, the overall effects to the Cherner property and preserve room for replacement of these operations on site. Because Option E would require the closure of access to the Cherner Automotive Group's operations from Spring Hill Road, alternative access to this portion of their property would be developed in coordination with the property owner during preliminary engineering.*
>
> *The Team is also aware that the affected property owners may seek to advance redevelopment proposals that include land proposed for station facilities. If such a proposal is provided on a timely basis, incorporates the necessary program requirements of the transit facility, and permits the facilities to be in operation upon the station's opening, the Team would consider this proposal in lieu of the recommended site plan.*
>
> *With respect to the extension of Greensboro Drive, the Project Team has suggested to Fairfax County that it consider a grid of local streets in lieu of a multi-lane collector that is currently envisioned in the Comprehensive Plan. Option E offers an option for the future construction of the first of these local streets, connecting Tyco Road and Spring Hill Road.*

Economic Contribution of Nearby Businesses

Public Comment: HBL of Tysons makes a significant employment and financial contribution to Fairfax County and to the Commonwealth of Virginia. HBL's current data show that, during 2004, it employs 359 persons. The following table shows the taxes HBL paid or collected during 2003 and expects to pay or collect for 2004…These tax payments reflect $300 million in HBL annual sales and services.

Displacing HBL's business on the north side of Route 7 and impairing HBL's remaining operations, on the south side, as would result from the adoption of Option A, would have major adverse direct economic impacts on HBL. It would eliminate between 100 and 150 jobs. Annually, it would cause Fairfax County

and the Commonwealth of Virginia to lose between $3 million and $4 million in tax revenues and it would eliminate approximately $100 million in business activity in Virginia.

HBL submits, however, that the Project Team's discussion reveals clearly how the options rank based on the staff's assessments described in the Technical Memorandum. The following chart was prepared by HBL…Summing the individual scores for the six criteria yields an overall score for the option. Thus, Option C scores the highest, while Option A scores the lowest…HBL agrees that those six evaluation measures are appropriate, and HBL does not disagree with the factual determinations stated by the Project Team in the Technical Memorandum.

…HBL has contended during earlier hearings that the significantly lower land acquisition costs for Option C are a factor that merits weight, given that project capital costs clearly are large…

Thus, Option C appears preferable in terms of the selection criteria described by the Project Team in the EIS process and by citizen/pedestrian advocates such as the McLean Citizens Association and the Non-Motorized Transportation Committee.

…while the technical memorandum does not expressly score the four options, I believe from a close reading a clear - or a preferred option - can be gleaned. And that would be Option C if this is to be decided from purely a transportation system perspective. (0070, 2-04)

Public Comment: Neither of the two new alternatives (Option B (Figure 6-2) or Option C (Figure 6-3)) mirror precisely the final specific alternatives suggested by HBL. Although Option B varies from some of the criteria HBL identified as important (e.g., preservation of valuable Route 7 frontage for future development), both alternatives present fair options for further evaluation. Missing from the Public Hearings Report discussion is any explanation concerning the source of the two new options, other potential options that were rejected by the staff, or the respective benefits and shortcomings of the three options. Also, the Report discussion does not disclose the criteria the Project Team intends to employ in evaluating and recommending among the options. HBL will provide its perspective on each option, but developing helpful comments would be facilitated by knowledge of the Project Team's rationale for selecting the three options as well as the decision criteria controlling the evaluation and recommendation process. We request that this information be made available to all interested parties before any studies or evaluations conclude, to allow for adequate public review and possible input. (0070, 2-01)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Option E site plan for the Tysons West station facilities, which is a variant of Option C.*

Support for Tysons West Option C

Public Comment: …our position … is based on a design criterion that should be the basis for the Tysons West Station...that criterion should be at or near Spring Hill Road…Spring Hill Road is much closer to the main part of Tysons Corner than the west end of the station…pedestrian flow on Spring Hill Road from both directions and along the power-line right-of-way which will eventually have a trail leading to Spring Hill Road. …It also reduces pedestrian and vehicle conflicts. …C would be the closest of the ones on the table so far…
(0117, 2-04)

Public Comment: Option C divides, we think wisely, pedestrian from the vehicular access by using Tyco for vehicular access and keeping Spring Hill Road for pedestrian access.…Spring Hill Road is the natural corridor for residences and Rotunda and other places and businesses.

Option C station entrance is at the south end and that's closest to the local users, whereas Option D would push the entrance northward away from most pedestrian users. (0034, 2-01)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Option E site plan for the Tysons West station facilities, which is a variant of Option C.*

Opposition to Tysons West Option C

Public Comment: Cherner Lincoln Mercury, Isuzu and Kia (Cherner) is a third generation family owned business which has operated on this property for 35 years. Cherner employs approximately 120 people and utilizes the entire property (comprised of 8550 and 8536 Leesburg Pike and 1530 Spring Hill Road) for its automobile operation. The loss of any portion of this property will destroy the financial viability of the entire Cherner operation resulting in the loss of the dealership, the jobs of those individuals it employs and the loss of significant County and State tax revenues in addition to having catastrophic impact on the future development potential of the remaining properties owned by the Cherner family. The proposal described in Option C also appears to be an underutilization of precious Tysons Corner property while providing a less than efficient solution to the underlying dilemma of adding a bus terminal in proximity to the Tysons West Metro Station.

The property required for Option C currently houses the Cherner Collision Center, is utilized for vehicle preparation, parts storage and primary storage for Lincoln Mercury, Isuzu and Kia vehicles as well as the Tysons West location for Enterprise Rent-A-Car which operates under a long-term lease. Without adequate on-site vehicle storage, Cherner's ability to sell vehicles would be irreparably impaired.

In addition to the three properties mentioned above, the Cherner family owns the "East-West Mortgage" building located at 1568 Spring Hill Road. Option C effectively isolates this property from ever being combined with the adjacent Cherner properties. As such, the potential of a combining the parcels is lost entirely and the larger objective of efficient redevelopment in the immediate proximity of the Tysons West Station is impacted.

Option C will also have a dramatically negative impact on the future redevelopment potential of several surrounding parcels by effectively placing a parking lot in the middle of properties that logically should be combined for a higher and better use. The placement of the bus terminal as described in Option C is simply inconsistent with good planning and aesthetically destroys the County's planned mixed use of this area by not providing ample space for adequate setbacks off a main thoroughfare required by large scale development.

Option C would result in an excessively long walk from the furthest bus drop-off point and even a further walk from the short-term parking area. The proposed overhead walk way described in Option C appears to be the longest of the three proposals and would place commuting pedestrians at the wrong end of the station platform. The impact of the drop off location and the lengthy walkway upon handicapped and disabled riders would also be significant and presumably would be contested by advocates for these individuals.

In addition, the proposed overhead walkway runs directly above a 10,000 gallon gasoline underground storage tank, a gasoline dispensing pump and is within very close proximity to an existing structure. Also, the length of the proposed bus terminal from Spring Hill Road to Tyco Road is lined with an extensive network of above ground, high-tension electrical cables that would require relocation.

The odd shape of the proposed bus terminal in Option C dramatically underutilizes the property in comparison to the same use on a rectangular shaped property. Option C appears to require more property than that reflected in Options A and B. Clearly, a great deal of consideration was given to the design depicted in Option A. The current tenant of the Templeton Property leased that property with full knowledge that WMATA had planned a kiss and ride bus parking facility for that Property. Therefore, the future use of the Templeton Property by WMATA was expected and anticipated by the current tenant. In addition, the contract purchasers of the "Security Storage" parcel (Ourisman Family) intend to build a new Lexus dealership on the property. I think it is fair to assume the Ourisman Family's intent is not to build a brand new, multi-million dollar facility and then hope to redevelop the site once Metro is in place. Aside from the massive investment required to build an automobile dealership, all manufacturers appointing a new franchise require a minimum of 20 years of "site control" at a location. If this assumption is correct, such a development will essentially isolate the "Templeton" property from being joined with the adjacent

"Security Storage" site. Thus the County plan of high-density urban development in the immediate vicinity of the Tysons West Station will be at best postponed for decades if not lost altogether on these key sites.

Finally, the Comprehensive Planned extension of Greensboro Drive seems to have been ignored and could result in yet another taking of land to the West of our property.
It is my conclusion that Option C should not be given further consideration. Given the tremendous impact that Option C would inflict to the future viability of Cherner, the resulting the loss of 120 jobs, the loss of long-term development potential of the Cherner property and the isolation of the East-West Mortgage property from the adjacent Cherner properties, Cherner intends to strenuously object to any taking of its property and to utilize all of the resources at its disposal to insure that its legal rights are protected. (0134, 2-01)

Public Comment: Peacock Buick regards the proposal Alternative C-1 [by HBL], however well intentioned, as both premature and seriously flawed….without further discussions with the Project Team, Fairfax County, members of the Board of Supervisors and other stakeholders, we regard the timing of Alternative C-1 as premature and unnecessarily divisive when open dialogue and consensus have become urgent and immediate needs in this late stage of the process. (0136, 2-01)

Public Comment: …HBL has worked diligently to confer with other stakeholders in an effort to see if transportation benefits on par with Option C could be achieved through a variant of Option C or D.

Now, we have an alternative that we have discussed with some of the stakeholders and, while it is not mature as of today, we did a handwritten drawing which I would like to submit for the record… this alternative would be an amalgam of Option C and Option D. It would preserve a Spring Hill orientation for area pedestrians like C…

…the variant that HBL presented during the May 18 conference was amalgam of Options C and D …it was drawn by hand and required further professional work and analysis…submitted for consideration as Option C-1…Option C-1 has as its principal objectives maintaining the advantages of Option C, while dramatically reducing the taking of Cherner and Tyco LLC properties. (0070, 2-05)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Option E site plan for the Tysons West station facilities, which is a variant of Option C. The Team determined the suggested Option C-1 was not viable since it lacked certain required elements, such as a bus recirculation.*

Support for Tysons West Option D

Public Comment: Generally, in principle, Peacock Buick prefers Option D over the other options. We should underscore that Peacock Buick only supports this option as the least of the worst choices. It would rather have no Facilities on its property.

There is no law that says condemnation cannot be used to take the dealership and the land on which it lies from a family that has invested three generations….But there is fairness and there is decency and there is equity. And I would hope that when there are viable alternatives that Option D is set aside for that reason….Option D is conceptually acceptable to us and we do not have a strong view about one particular version of this… (0136, 2-02)

Public Comment: Option D has several merits: It protects the existing businesses from being taken. By not forcing a business out of business, it allows the current land owners to develop their property in a timeframe of their choosing when market conditions dictate. It allows for a sensible develop plan for the long term future of Tysons West. And, lastly, it consumes more modestly developed properties to the west and north and even surplus property behind the Spring Hill Road Fire Station. …[Cherner] does not endorse it as it is currently drawn, as such. (0134, 2-03)

Public Comment: We previously submitted a document dated April 27, 2004, providing our technical analysis of the Tyson's West Station options….In short, Alternative D was what we determined was the preferred alternative. Our analysis focused on three things: Vehicular access and circulation; pedestrian access and circulation; and future development potential in the area. (0160, 2-01)

Public Comment: As described in the May 18 testimony of Douglas Kennedy, HBL's consulting engineer, there are two adjustments to Option D that HBL would urge. First, the mid-block point where the pedestrian walkway joins the entrance pavilion should be moved east to avoid a safety problem…Second, we believe that the vehicle access road to Tyco from the Kiss & Ride should be moved north, to where it is under Option C.

We understand that Option D is deliberately designed for the area businesses to share the burden of the station's attendant to this new station. If that is the preferred philosophy, HBL can support Option D or some reasonable modification of it. Regarding Option D, we would urge some modifications and HBL's engineer will elaborate in detail…but we would urge that first the walkway be shifted…slightly to the east. (0070, 2-06)

Public Comment: The four elements that I would like to discuss would be: No. 1 in Option D, we believe that the south pavilion should be shifted slightly to the south between the Rosenthal and HBL and Mercedes parking lots to provide improved orientation of pedestrian access to the Spring Hill Road corridor…The walkway length in Option D, we believe can be shortened by two elements in two proposals we have provided in exhibit form is to angle the bridge crossing along Route 7 to line up between Peacock and Cherner buildings …A second alternative, perhaps, to be considered would be a bridge through the Cherner property elevated to go to the proposed parking lots. The third element is important …is to consider moving the access onto Tyco Road to the location further east on Tyco Road as envisioned by the alternative C concept. …Finally the options should look…to reduce the footprints of the properties away from Route 7; we think a smaller footprint can be accommodated, which would avoid demolition of the Cherner body shop on Spring Hill Road…We think the alternatives, as considered, would reduce the cost to the development team; improve the circulation; orient pedestrian access toward the Spring Hill Road corridor to the south; and, also, without disrupting excessive destruction to the businesses. And we, think finally, is consistent with the long-term development plans in the County Comprehensive Plan to preserve the development and redevelopment opportunities for properties on Route 7. (0053, 2-03)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Option E site plan for the Tysons West station facilities, which is a variant of Option C. The Project Team ultimately rejected Option D because of its property acquisition requirements and the long walking distance (700 feet) between the station entrance and facilities. This walk distance would negatively affect transit customer convenience and safety, reduce ridership potential, and conflict with a primary goal of the Project – improving Metrorail passenger access and mobility. In addition, its second access, a connection with Spring Hill Road, cannot be advanced at this time due to its proximity to the driveways of Fairfax County Fire and Rescue Station No. 29.*

Opposition to Tysons West Option D

Public Comment: The MCA prefers Option C to Option D…Option D bus Kiss & Ride space is entirely too long from the entrance to the Metro station. It is more than 700 feet from the nearest point of the facility. (0034, 2-02)

Public Comment: Sunbelt's property is adjacent to the proposed Option D for Tysons West Station Facilities. Sunbelt opposes Option D for the following reasons:

1) Option D will create significant increased traffic on Spring Hill Road. This increased traffic will adversely affect not only Sunbelt, but the other office and retail businesses in the facility of the contemplated Kiss & Ride entrance on Spring Hill Road contemplated by Option D. We understand that the installation of a traffic light at such entrance is unlikely due to the location of the other traffic lights on

this road. As a result of this additional burden on the road and the high density of the area, we believe that the employees and customers of the businesses on Spring Hill Road will face unsafe conditions while attempting to enter and exit from these businesses, and may ultimately result in less business for these companies and/or higher traffic accident rates in this area.

2) In Option D, a building adjacent to the Sunbelt building will be demolished. As a result… Sunbelt must renovate the façade wall of the Sunbelt building which previously was not required to be finished as well as add additional fencing to secure the Sunbelt location. These expenses would create a hardship on Sunbelt that is not anticipated in your plan.

3) The entrance / exit lane for the Kiss & Ride will be close to the Sunbelt building. Such proximity may cause excessive vibration within the Sunbelt building that would adversely affect Sunbelt's business. (0161, 2-01)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Option E site plan for the Tysons West station facilities, which is a variant of Option C. Option E does have a possible, later connection with Spring Hill Road at the same location as Option D, but that connection cannot be advanced at this time due to its proximity to the driveways of Fairfax County Fire and Rescue Station No. 29.*

Need to Balance Project and Business Needs

Public Comment: …we [three auto dealerships] have the heightened concern that the Project Team may prematurely settle on a configuration for the Facilities that unnecessarily displaces one or more of the dealers, constrains flexibility and fluidity that can accommodate virtually certain changes in Fairfax County's Comprehensive Plan for parcels surrounding the Tysons West Station and that allow for incorporating the Facilities in future development.

Peacock Buick requests that the Project Team consider measures to bridge the gap between the Project Team's need for certainty and the other stakeholders' need for flexibility.

The prospect of finding solutions later in the process offers little confidence to Peacock or others whose businesses face extinction if the Project Team selects an option that consumes a substantial amount of their property.

We are presently in an annual plan review…There are many, many nominations of parcels along Route 7 in this annual plan review that will propose changes built on the concept of a Tysons city…. it may be useful for the project team and for you in your final deliberations to have an option that you can see today that works and a contingent option for the future that may fit, assuming that some of the amendments are made and dramatically change the face of the area. (0136, 2-03)

> **Response:** *The process of environmental review and facilities planning is at a close. The Project's next phase of the preliminary engineering will advance the selected location and design of the Tysons West Station and facilities.*
>
> *The Team is aware that the affected property owners may seek to advance redevelopment proposals that include land proposed for station facilities. If such a proposal is provided on a timely basis, incorporates the necessary program requirements of the transit facility, and permits the facilities to be in operation upon the station's opening, the Team would consider this proposal in lieu of the recommended site plan.*
>
> *The Project Team does await the effort of Fairfax County to coordinate a relocation of Fire and Rescue Station No. 29. If that coordination is timely, the Team and the County may consider an alternative site plan with less effect upon the Cherner Automotive Group's operations.*

Need to Revise Tysons West Option C

Public Comment: Since no long term park-and-ride spaces will be provided in the station plan, the kiss-and-ride spaces become hugely important. Feeder bus bays must be as close as possible as bus passengers have already to walk to the bus and will have to walk again from the train.

If Option C can be rearranged to add kiss-and-ride spaces, that becomes the obvious best choice. Option D is just too far away.

I am enclosing feeder bus plans to prove that only seven (7) bus bays are needed for Tysons West.

Design can change human nature. The areas of Tysons Corner outside the rail walking distance are very thin transit territory. They need service but existing buses can serve them. We need to remove buses to accommodate rail, not add more.

…Pedestrians must be considered first because you can't have a Metro station without pedestrians and they have be able to get therewith a willingness to approach it.

…there have to be Kiss & Ride spaces for as many people as possible…a reasonable number, like 75 spaces, 60 spaces; not one with 30 spaces or 29.

Bus circulation, I think, is too much…you could do with 9 bus bays or even 9 instead of 11…

Property owners should be protected as much as possible, absolutely, but I'm sure you'll have to pay them if you hurt them. (0054, 2-01)

Public Comment: Of the three that we saw, the one that Mr. Goodman mentioned for a modified version of Option C would be the preferable. However, that seems to involve a substantial walk for the pedestrians, as well as does Option D. And it would also seem to involve a reduction in the Kiss & Ride facilities (0034, 2-03)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Option E site plan for the Tysons West station facilities, which is a variant of Option C and which serves pedestrians better than other options. The Kiss & Ride spaces of Option E are still low in number, less than 25. The number of bus bays has been reduced to 8.*

Need to Incorporate Potential Expansion Elements

Public Comment: This and every Metrorail station should be developed with expansion in mind. Specifically, all stations should allow for future 'express' lines that could bypass certain stations. For example there could be an express train that leaves Dulles Airport and does not make another station stop until reaching Tysons East.

Furthermore, the Tysons Corner stations should be designed in such a way that a future 'loop' could be incorporated. The idea would be that a rider could get off at Tysons West or Tysons East and transfer seamlessly to another system - whether it be Metro or monorail or trolley - that would circulate through all of Tysons Corner. (It is not difficult to imagine that such a loop would be needed within the next thirty years, and so it makes sense now to plan accordingly.) (0162, 2-01)

> ***Response:*** *A third track for express trains is desirable for any rail rapid transit system. However, funding and right-of-way constraints do not allow for a third track. The medians of the Dulles Connector Road and Dulles International Airport Access Highway have sufficient width to accommodate two Metrorail tracks at their closest spacing. The addition of a third track would require a wider median, which would require reconstruction of both the Dulles International Airport Access Highway and the Dulles Toll Road.*

The Project Team did study feeder systems for the Tysons Corner stations as an alternate means of serving the Tysons Corner area, but concluded they were not cost-effective at this time. Additional information is provided in Final Alternatives Analysis Report (May 2001). Fairfax County plans to operate bus circulator service in Tysons Corner to provide service between these Metrorail stations.

Need to Consider Comments in the Decision-Making Process

Public Comment: We have the following comments to make, and we hope these comments and the concerns that are reflected will be given consideration in the future

If in fact, Option E is selected and acted upon, we would request that you consider placing Option E half way on our property and half way on our adjacent neighbor's property. As Option E is presently drawn, 100% of Rosenthal Honda's frontage on Route 7 could be displaced, this frontage is invaluable and cannot be replaced. Instead of dispossessing Rosenthal Honda of ALL of its' Route 7 frontage, we would respectfully request that Option E. be realigned such that the frontage lost between Rosenthal Honda and its' adjacent neighbor be shared equally. We believe that this would be an equitable apportionment of this burden.

If Option E is adopted and pursued and does in fact impact upon Rosenthal Honda, we request that Rosenthal Honda be accorded every opportunity to participate in this project in order to minimize any potential disruption that this project could have upon the dealership's operations. In specific, Rosenthal Honda requests that its' engineers consultants and other professionals be afforded an opportunity to review any future design or configuration of Option E, or any other option that might impact Rosenthal Honda.

Rosenthal Honda would request that any option or design that is adopted, account for providing Rosenthal Honda with maximum efficiency in terms of permitting Rosenthal Honda to continue to use any space that is not absolutely necessary to the operation of the metro station. For example, if the metro station is fundamentally going to be located on above ground platforms, any potential space available on the ground below the platform should be allocated as much as is feasible for Rosenthal Honda's continued use.

Any future construction affecting Rosenthal Honda's property should be conducted with as minimal disruption on Rosenthal Honda's property as possible.

Any signage located on the corner of Route 7 and Spring Hill Road that is lost as a result of this project by Rosenthal Honda, and, or Rosenthal Jaguar/Landrover should be permitted to be relocated and replaced at a reasonably acceptable location, and it is hoped that Fairfax County authorities will cooperate with permitting the dealerships to replace and relocate lost signage.

This project will most likely create disruption and additional parking burdens as well as other operating burdens for Rosenthal Honda. It is requested that Rosenthal Honda be provided with alternative replacement parking and or parking concessions by local government to account for parking deficiencies created by this project. Any parking relocation assistance would be appropriate.

It is requested that Rosenthal Honda be kept fully informed of all developments relating to this project and that the project management cooperate in every manner possible in addressing Rosenthal Honda's future concerns with respect to the impact of this project upon Rosenthal Honda. (0163, 2-01)

Response: *The station entrance of the selected Option E site plan is primarily determined by the north side station facilities, including their pedestrian bridge and pavilion. The pedestrian bridge connects to the station mezzanine at the east or inbound end of the station proper. At this east end is the fare gate array and the south side pavilion, located on the frontage of Rosenthal Honda. There are no practical alternatives to the location of the fare gate array at the east end of the station. To place the fare gate array such that the south pavilion is centered on the property*

line between Rosenthal Honda and HBL Mercedes would shift the pedestrian bridge between the Cherner automotive dealerships and shift the north pavilion from Spring Hill Road and its pedestrian facilities. Such a site plan resembles Option D, which was eliminated from further consideration.

The Tysons West Station straddles the service road and its median with Route 7. To the knowledge of the Project Team, there is no ground level space under the station that is available for dealership use.

Treatment of signage and parking for Rosenthal Honda and other businesses during and after construction will be addressed during preliminary engineering and any right-of-way acquisition negotiations. During preliminary engineering, DRPT and WMATA will continue to coordinate with Rosenthal Honda on the layout and design of the south pavilion in order to minimize the project's effects upon the dealership. A meeting with Rosenthal Honda was held during the review period of the Post-Hearing Conference Report.

Opposition to Tysons West Option E

Public Comment: I have received and reviewed the above-mentioned report and to say the least, I am very disturbed. I have taken the liberty of attaching the letter that I wrote dated February 25, 2004 which details the dramatic impacts that the proposed Option E will have on my family's business. In summary proposed Options C and Option E will force the closure of Cherner Lincoln Mercury and will result in the loss of more than 100 jobs of Cherner employees with broad ethnic and social backgrounds.
The shame of this situation is that there are other options available to WMATA that would not impact existing businesses. The most noteworthy option involves the relocation of the Fire Station to a more suitable location and the utilization of the East West Mortgage parcel (owned by Cherner) along with a portion of the adjacent paved parking area (owned by Cherner). If this option were to be considered, the Cherner family would work closely with your office to explore its physical and financial feasibility. In addition, many of the affected property owners had tentatively agreed to an option that will impact some owners but not destroy existing businesses. Apparently, this option was not given serious consideration.
In all humility, I certainly hope that our stance to vigorously defend a business that has taken three generations to build is not considered unreasonable by WMATA and the Fairfax County Board of Supervisors. We believe that, as fellow members of this community, our situation deserves careful consideration. We hope that any option that will minimize impact to our business will be thoroughly reviewed. Hopefully, such consideration will be to the "alternative site plan to Option E" noted at the end of the Post Hearing Conference Report.

Letter of February 25, 2004
…I would like to express my strenuous objection to Option C provided in the public hearings report…The loss of any portion of this property will destroy the financial viability of the entire Cherner operation…. Option C appears to be an underutilization of precious Tysons Corner property…

The property required for Option C currently houses the Cherner Collision Center, is utilized for vehicle preparation, parts storage, primary storage for Lincoln Mercury, Isuzu and Kia vehicle vehicles as well as the Tysons West location of Enterprise Rent-A-Car which operates under a long term lease…This results in the need to carry several hundred vehicles for sale to meet manufacture sales quotas (planning volume).

Option C effectively isolates this property ["East-West Mortgage" building located at 1568 Spring Hill Road]…. As such, the potential of a combining the parcels is entirely lost…

Option C will also have a dramatically negative impact on the future redevelopment potential of several surrounding parcels by effectively placing a parking lot in the middle of properties that logically should be combined for a higher and better use.

…the proposed overhead walkway runs directly above a 10,000-gallon gasoline underground storage tank, a gasoline dispensing pumping and is within very close proximity to an existing structure.

Finally, the Comprehensive Planned extension of Greensboro Drive seems to have been ignored and could result in yet another taking of land to the West of our property. (0134, 2-04)

> **Response:** *The Project Team will advance the development of Option E during preliminary engineering. However, in response to the Post-Hearing Conference Report, Fairfax County has formally proposed its development of Option F. That alternative site plan would lessen the effects upon the Cherner Automotive Group but would relocate Fire Station 29 and remove the East-West Mortgage office building.*
>
> *DRPT will coordinate with Fairfax County during preliminary engineering to monitor the further development of Option F, assess its associated costs, and determine if it is a viable replacement for Option E.*

Need to Amend Tysons West Option E

Public Comment: Throughout its participation in this process, Peacock has urged that the Project Team mitigate the adverse impact of the Project Team's siting configuration upon all the potentially affected automobile dealers. Consistent with that position, we urge the Project Team to consider changing Option E, if Fairfax County timely relocates the county's fire station from its present site on Springhill Road to a more central site in Tysons Corner.

Peacock also appreciates that in the Report the Project Team stated a willingness to modify Option E to accommodate the redevelopment of the Peacock and Cherner parcels and changes to the Fairfax County Comprehensive Plan for those parcels. We understand that time constraints exist that may ultimately constrain the Project Team's ability to make such changes but applaud the Project Team's willingness to work with the property owners both with respect to design and the form of any future takings.

The Project Team's willingness to accommodate new redevelopment and planning realities reduces the likelihood that the Project's financing and procurement considerations will (1) foreclose desirable redevelopment for the parcels; (2) preclude transportation solutions that may better serve commuters; (3) prevent the needless erosion of the county's tax base by stifling fiscally attractive redevelopment options and the whole or partial displacement of auto dealerships that contribute to the tax base and provide employment to hundreds of workers and vital services to customers.

Finally, with respect to the siting of the Facilities, Peacock requests that the Project Team seek solutions that reconcile the Project Team's need for certainty and Peacock's and other impacted parcel owners' need for flexibility. These solutions may include:

- recognition by the Project Team (which it has already done in the Report) that its site selection decisions for the Facilities could change if the property owners offer alternatives that will better serve specific redevelopment for the subject parcels while satisfying the Project Team's site selection criteria for the entrance and the Facilities;

- obtaining agreements from Peacock and other parcel owners (or their successors) that would run with the land that their redevelopment would accommodate the Facilities (subject to commensurate density credits or other mutually agreeable compensation);

- assisting Peacock, and other impacted owners in crafting proposed amendments to the Fairfax County Comprehensive Plan and Zoning Ordinance to assure consistency between any such proposals with the Project's needs

- a conveyancing agreement by the Commonwealth and landowners that would implement the foregoing objectives, which for illustrative purposes, might involve the Commonwealth's acceptance of an easement rather than the taking of the fee from participating property owners;

- exploring solutions with the FTA to allow for fluidity in the selection of Facilities;

- structuring the design- build contract to allow for fluidity in siting the Facilities;

In conclusion, Peacock supports Option E as proposed in the Report. Peacock would oppose any variation to Option E that would imperil the Peacock dealership and the land occupied by the dealership. However, if Fairfax County timely relocates the county's fire station from its present site on Springhill Road to a more central site in Tysons Corner, we urge the Project Team to change Option E by using the vacated county property to mitigate Option E's impact upon Cherner. (0136, 2-04)

> ***Response:*** *The Project Team will advance the development of Option E during preliminary engineering. However, in response to the Post-Hearing Conference Report, Fairfax County has formally proposed its development of Option F. That alternative site plan would lessen the effects upon the Cherner Automotive Group but would relocate Fire Station 29 and remove the East-West Mortgage office building.*
>
> *DRPT will coordinate with Fairfax County during preliminary engineering to monitor the further development of Option F, assess its associated costs, and determine if it is a viable replacement for Option E.*
>
> *Changes in local land use policies and zoning designations necessary to allow the suggested redevelopment are Fairfax County's responsibility. Accommodations for future redevelopment opportunities will be discussed during preliminary engineering and addressed during DRPT's right-of-way negotiations with the affected property owners and businesses.*

Need to More Finalize Option E Prior to Finalizing NEPA

Public Comment: As the Project Team prepares its supplement to the Conference Report, HBL would urge the Project Team to clarify and limit certain suggestions in the Conference Report that the Project Team might entertain material changes to Option E indefinitely into the future. Further clarification is needed to protect the integrity of the EIS and Record of Decision (ROD) and to provide the public and stakeholders the finality and certainty they deserve after two years of public engagement in the EIS process. In particular, the Project Team should clarify three important concepts:

(1) The scope of permissible development alterations to Option E that might be entertained by the Project Team…to protect the integrity of the Dulles Rail Project's EIS and ROD, the Project Team may wish to clarify the substantive pre-conditions envisioned by the Conference Report. The Conference Report currently states that a property owner may 'advance redevelopment proposals that include land proposed for station facilities.' This should be clarified to specify 'the land proposed for station facilities under Option E.' And where the Conference Report requires a future development proposal to 'incorporate the necessary program requirements of the transit facility', the language should be clarified by specifying the 'program requirements' of the transit facility that must be incorporated;
(2) The timeframe that will be considered "timely" for the proposed development alterations to Option E…. if material and significant variances from the location and configuration of Option E are contemplated, then such variances should be finalized and approved no later than the time the final EIS is submitted to FTA for its preparation of a ROD in the Fall of 2004; and
(3) The process the Project Team would implement to afford the public and/or any stakeholder impacted by any potential development alterations to Option E the opportunity to review and comment…If the Project Team contemplates consideration of one private landowner's proposal of material variances from the final option decision, then a public review and comment process should be provided. This would

provide the public certainty, protect the interests of other stakeholders who might be impacted by any changes, and ensure the integrity of the EIS and ROD.

Without more clarity as to these issues, HBL is concerned that any material changes to Option E in the future may make the EIS and ROD vulnerable. (0070, 2-07)

> ***Response:*** *The Project Team will be proceeding with the development of Option E in the phase of preliminary engineering. The final Team recommendations incorporated the suggested rephrasing of one recommendation, as follows: "advance redevelopment proposals that include the land proposed for station facilities under Option E."*
>
> *The Project Team cannot and will not define the timeframe in which "affected property owners may seek to advance redevelopment proposals that include the land proposed for station facilities under Option E" or the timeframe for the County to develop Option F.*
>
> *Any substantive change to the Project would be re-evaluated in accordance with the National Environmental Policy Act and FTA's implementing regulations and be subject to public review.*

Consider Enhancements to the Existing Bus System

Public Comment: The no-build option is underestimated in that simple and inexpensive enhancements of the current bus system will increase ridership tremendously. (0061 0136-7)

Public Comment: The "no build" option patronage forecasts is underestimated in that simple and inexpensive enhancements of the current bus system will increase ridership. These steps include bus shelters, posted route and schedule times, shelter marquees, and accurate relevant transit information available by telephone. Please revise the "no build" numbers to reflect the increased patronage from bringing the current bus system up to modern standard (0061 0117-10)

Public Comment: Please calculate the effect on ridership for a no-build option if a state of the art telephone enabled transit routing information service could be provided for the bus routes now in operation. (0061 0117-15)

Public Comment: The No Build option is underestimated in that simple and inexpensive enhancements of the current bus system will increase ridership. These steps include bus shelters, posted routes, schedule times, sheltered marquees, and accurate relevant transit information available by telephone. (0061 0069-8)

> ***Response:*** *The No-Build Alternative includes improvements that are included in local and regional long-range transportation plans, including some transit system improvements. Because telephone-enabled routing information systems are not identified by the local jurisdictions as part of their plans, they were not included in the definition of No-Build Alternative. Moreover, the travel demand forecasting model is not sensitive to such passenger-information systems.*

Public Comment: In preparing the No-Build numbers for the DEIS and SDEIS, detail the current patronage figures from the existing bus services by route number and explain your assumptions for the future. Include bus lines 551, 553, 557, 585, 605, 951, 952, 505, 984 and 556 at a minimum. Explain what percentage of carrying capacity each of these lines currently carries, both at rush hours and other times. Also detail usage as a percentage of capacity for the RIBS Reston bus service. (0061 0117-13)

> ***Response:*** *Current ridership figures for these bus routes can be obtained from the Fairfax County Department of Transportation, the operator of this service. This data is not used to estimate future bus ridership in 2025, the analysis included in the Supplemental Draft EIS and Final EIS.*

General Support of the LPA

Public Comment: I'm here to go on the record to say we strongly support this Metro Rail Project. It will go a long way to help resolve many transportation issues that currently exist in Fairfax and Loudoun Counties. (0052 0144-1)

Public Comment: The bottom line is this is really a good idea. We need rail, more rail transit. (0119 0149-1)

Public Comment: I am strongly in favor of rail to Dulles, having experience as both a commuter and now a retiree who uses public transportation to go to activities in DC and beyond. (0120 0154-1)

Public Comment: Rail must happen now. EIS has proven that fact. (0123 0158-13) (0113 0132-11)

Public Comment: Dozens of other nation's capitals in the world have modern high speed transit linkages from their major international airport to the capital. It's time for the United States to catch up if it is, in fact, a world power. (0041 0042-2)

Public Comment: Rail mass transit as an alternative to vehicular access is essential to connect Dulles Airport, Herndon/Reston corridor, and Tysons Corner with the rest of the region. (0042 0043-1)

Public Comment: As I have done in the past, I am here to go on record to say that we strongly support this Metrorail project. It will go a long way to help resolve many transportation issues that currently exist in Fairfax and Loudoun Counties. (0052 0053-1)

Public Comment: I hope that we will be able to complete our commitment that we made when we supported the local preferred alternative in the Corridor. (0058 0059-1)

Public Comment: It is essential that the locally-preferred alternative move forward. (0114 0133-1)

Public Comment: Let's get going with rail. It is way overdue, I face a major challenge in getting downtown. Enough already, let's get on with rail. At least to Reston!! (0030 0031-1)

Public Comment: It is clear that this rail service is imminent, and we are optimistic that this will occur sooner rather than later. (0052 0053-3)

Public Comment: We are pleased to see that the first phase does end at Wiehle, because it does bring it into the corridor, and it will provide a straight shot to Dulles Airport. (0060 0134-2)

Public Comment: We support and are pleased to see that the first phase of the project will end at Wiehle Avenue. This station is a good deal closer to Washington Dulles International Airport than Tysons Corner. (0060 0169-2)

Public Comment: [W]e support rail as the Locally Preferred Alternative but we are here today to support the Phase I plan out to Wiehle Avenue. (0060 0063-1)

Public Comment: I'm very strongly supportive of this application, including the terminus at Wiehle Avenue. (0065 0073-1)

Public Comment: The traffic would be unpleasant during the period that Wiehle is the terminus, but it will be unpleasant during construction and I'd rather endure a mile or two of traffic getting to the Metro than 28 miles of traffic getting into DC. Please don't let a small group of loud activists deter you. It is easier to rile people up to oppose something than it is to support something. Many of my neighbors and colleagues support the Wiehle terminus plan. (00570058-2)

Response: *Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in revising the LPA.*

Endorsements of the LPA

Public Comment: The time is now. We have to move forward with this project. I just won an election saying that rail to and through Tysons on the way to Dulles is my top transportation priority and I promise you, over the next four years, it is going to be the top transportation priority of Fairfax County. (0077 0089-1)

Public Comment: The time is now. We have to move forward with this project. I just won an election saying that rail to and through Tysons on the way to Dulles is my top transportation priority and I promise you, over the next four years, it is going to be the top transportation priority of Fairfax County. (0077 0089-1)

Public Comment: Loudoun County strongly endorses this project. It is vital to our economic success, the management of traffic congestion, improved air quality, and will be a major determinant of how we mature as a region. (0114 0133-3)

Public Comment: [Whereas] The Greater Reston Chamber of Commerce (GRCC), representing nearly 1,000 businesses throughout our region and their 90,000 employees, has long supported efforts to increase the mass transit options along the Dulles Corridor; [Whereas] GRCC's commitment to increased transit opportunities and transit-oriented development remains steadfast as shown by our support of the recommendations of the Dulles Corridor Land Use Task Force; (0023 0024-1)

Public Comment: I FULLY support the LPA, including the Phase 1 project to Wiehle Av. Further, I believe the SDEIS is complete & adequate. This project, the LPA, is NEEDED. Please build the project! (0032 0033-1)

Public Comment: I reiterate the Board of Trade's support for the Locally Preferred Alternative because it will produce both the highest ridership levels and provide the greatest support for transit-oriented development. (0069 0077-1)

Public Comment: Tysons Corner Center strongly supports the extension of Metrorail through Tysons Corner onto Dulles Airport and ultimately to Loudoun County. (0075 0086-1)

Public Comment: Today I strongly urge all affected state, local, regional and federal officials to expedite their final review of this supplemental draft EIS, and to move quickly into the final planning and design phases necessary to begin construction of this system. (0041 0042-13)

Public Comment: I know I speak on behalf of the citizens in my area who ask that we build Dulles Rail now. The Dulles Corridor Rail Association organized 20 groups as diverse as the Washington Board of Trade and the Sierra Club, the AAA and League of Women Voters, to say that we support Dulles Rail now. (0037 0060-1)

Response: *Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in revising the LPA.*

Recommend Build the Full LPA

Public Comment: I emphasize that, although we do support the plan as presently structured with two phases, we want to make it as clear as possible that we think it is very important to this area that it be extended all the way through Herndon to the airport and to Loudoun County.(0034 0143-1)

Public Comment: What I'm proposing is that we untie, that we cut the gordian knot on this and allocate the phases not in terms of geography but terms of the layer of infrastructure, and begin with what is most important which is to build the rail, build all the rail. (0118 0148-1)

Public Comment: Wiehle Avenue should NOT be considered a terminus for the rail extension, but rather a BRIEF TEMPORARY END to the first phase of the entire 23 mile extension.(0040 0041-1)

Public Comment: [Reston Association] supports extending rail into the Dulles Corridor as proposed in the Supplemental Draft EIS. We believe that it is essential to get rail beyond Tyson's Corner and into the Corridor in the first phase of rail construction. (0039 0040-1)

Public Comment: To this end, we also urge your consideration of the early opening of the Herndon-Monroe and Dulles Airport Rail Stations. (0069 0077-3)

Public Comment: We respectfully urge you to move forward with Phase I of the Locally Preferred Alternative to be completed in 2009 and in doing so commit to completing Phase II of this project ending at Route 772 in Loudoun by 2015. To this end, we also urge your consideration of the early opening of the Herndon Monroe and Dulles Airport rail stations. (0078 0091-1)

Public Comment: I strongly support the construction of the full 23-mile rail transit system from Falls Church to Dulles Airport and beyond, even if this requires a phased funding formula to implement. I, as a citizen and homeowner in Fairfax County, am willing to pay my fair share of the cost to complete the full extension of the transit system in the Dulles Corridor. (0041 0042-1)

Public Comment: I strongly support the construction of the full 23-mile rail-transit system from Falls Church to Dulles Airport and beyond even if this requires a phased-funding formula to implement. (0041 0066-1)

Public Comment: DCRA supports the proposed phased approach for implementing the Dulles rail extension. We emphasize that the Dulles rail extension is a single, 23-mile construction project. (0060 0169-1)

> ***Response:*** *Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in revising the LPA.*

Advantages of Rail Transit

Public Comment: If you look at K Street, you're going to get eight miles an hour with bus rapid transit. You get five miles an hour now, so it would be a big improvement, but we can't use eight-mile-an-hour transit out here. We need 30-mile, 40-mile-an-hour transit, and with Metrorail we'll get it. (0054 0142-2)

> ***Response:*** *Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in revising the LPA.*

Support for the DEIS/SDEIS Process

Public Comment: We believe that the Supplemental EIS does not need to be revised, altered or re-advertised to accomplish the two tax district approach, nor are any additional notices of public hearing required to proceed to complete the EIS, obtain a Record of Decision from FTA and commence preliminary engineering. (0123 0158-1)

Public Comment: I now write to reaffirm that support, and to expressly endorse the revisions as shown in the Supplemental Draft Impact Statement and Section 4(f) Evaluation and as highlighted in the associated Executive Summary.(0001 0001-1)

Response: *Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in revising the LPA.*

Expedite the Process

Public Comment: We, the organizations listed below, having endorsed rail as the locally preferred alternative for the Dulles Corridor, urge the United States Congress to include the Dulles Metrorail extension from West Falls Church to Washington Dulles International Airport and into Loudoun County in the reauthorization of the surface transportation program act. (0037 0038-1)

Public Comment: Staff working this project should make all aware of the benefits of moving quickly! Help area to comply with USEPA air pollution laws. Help to employ and train construction trades workers. Improve quality of life. Save energy. (0013 0014-1)

Public Comment: Fairfax County and the Commonwealth of Virginia should make it clear to Congress and the Federal Government that this is a 23.1-mile project to Dulles Airport and Loudoun County, and should request that the Congress formally adopt the full project as a Federal Government commitment. (0039 0040-6)

Public Comment: Fairfax County and the Commonwealth of Virginia should make it clear to Congress and the Federal Government that this is a 23-mile project to Dulles Airport and Loudoun County, and should request that the Congress formally adopt the full project as a Federal Government commitment. (0040 0041-3)

Public Comment: [M]ove quickly into the final planning and design stages so that we can make this a reality, rail to Dulles and Loudoun County, as soon as possible. (0067 0075-9)

Public Comment: We respectfully urge you to move forward with Phase 1 of the local preferred alternative to be completed in 2009 and, in doing so, commit to completing Phase 2 of this project ending at Route 772 in Loudoun by 2015. (0069 0077-2)

Public Comment: I applaud your efforts to get this project moved forward as quickly as possible. (0001 0001-2)

Public Comment: We are pleased that the first phase of funding brings rail into the Corridor. We support that phase of funding as you have proposed in the Supplemental Draft EIS. We ask, however, that the funding phases not affect the construction schedule. In that regard, we request that the preliminary engineering be done for the entire project and that the phasing of the financing be seamless in order that the construction be seamless. (0037 0060-2)

Public Comment: Delays in attempts to phase the construction would only add to its cost and would confuse the design and application of the stations. (0037 0060-3)

Public Comment: The economy of the Commonwealth is in trouble unless Northern Virginia continues to grow. The corridor needs rail infrastructure to support this growth. Finally, as the name of our organization implies, we were formed to advocate rail to Dulles Airport and beyond into Loudoun County. We look forward to working with you to expedite the project to Dulles Airport and Route 772 in Loudoun as quickly as possible. (0060 0169-15)

Response: *Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in revising the LPA.*

Preference for Roadway Enhancements

Public Comment: - Metro in the Dulles corridor will not enable people to give up their cars.
- People in the Dulles area do not want to give up their cars.
- People don't want Reston/Herndon/Leesburg to be "urbanized". (Most folks moved here to get away from the city.) (0044 0045-3)

Public Comment: What we really need in the Washington area: more highways. We have enough rail. We have a lot of mass transit. What we don't have are the express highways and parkways to get the traffic off the local roads. (0016 0140-4)

Public Comment: On behalf of the National Motorists Association in Virginia, I would like to state our absolute opposition to the Dulles Rail plans. This proposal would burden the people, motorists, and businesses of the area with huge bills to build the system and then ever increasing subsidies as the system becomes a reality. Any system that cannot be paid for by its users is an unfair burden on the rest of us. Metro is a huge turkey who will cost the area and national taxpayers billions more in the coming years just as they did in constructing it.

We don't need or want any more taxpayer-supported transit projects, period. (0015 0016-1)

> ***Response:*** *Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in revising the LPA.*

Rail is not Cost-Effective

Public Comment: More people walk and bike to work than take transit. Yet, Virginia is only spending 14 cents per person per year of the federal transportation money it receives on these modes, the fourth lowest rate in the country. Dulles Rail, in contrast, will cost $47,000 per year in true subsidies per round trip full time commuter. (0061 0168-1)

Public Comment: One of the conclusions we've come to is that this rail project that you're hearing about tonight is so over-designed and over-expensive that if it were up and running and paid for, it would be so expensive and so deficit-ridden it would make sense to decommission it the day it opened. (0061 0136-1)

Public Comment: I am very much in favor of cost-effective and expeditious mass transit in the Northern Virginia region. Because Metrorail would not provide either cost-effective or expeditious mass transit, I must continue to oppose its use as a Locally Preferred Alternative (LPA), regardless of whether the project is considered as a single buildout or in two phases heading westward. (0068 0173-1)

> ***Response:*** *Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in revising the LPA.*

Public Comment: The fixed-rail system that seems to be getting the most attention is too expensive. Not only is it not good value for the reported cost, but it is very unlikely that it will ever be constructed because the necessary funding is not available. More economical and flexible alternatives need to be considered. Alternatives with lower front-end costs and that can expand from lower initial use should be investigated. (0007 0007-1)

> ***Response****: Other modes, including the No-Build Alternative, were considered in the Draft EIS published in 2002 for the Dulles Corridor Rapid Transit Project. Based on the analysis contained in the Draft EIS, public hearings held in July 2002, and comments received on the Draft EIS, the Metrorail Alternative (T6/Y15) was selected as the LPA by the Commonwealth Transportation Board and by the WMATA Board of Directors in late 2002. The purpose of the Supplemental Draft*

EIS was to provide additional opportunities for the public and agencies to comment on refinements that have been made to the LPA since the publication of the Draft EIS.

Rail will not Reduce Congestion

Public Comment: We don't need the capacity that rail will give us. (0073 0083-4)

Response: *Travel demand forecasts completed for the Supplemental Draft EIS and for the Final EIS indicate that significant demand exists for rail service in the Dulles Corridor and further that trains in the corridor will be near a desirable carrying capacity (120 passengers per train car) in the peak hour within the corridor and will exceed desirable carrying capacity in the peak hour further east along the Orange Line in Arlington.*

Public Comment: Our research has indicated that urban areas that have invested in the rail have worst traffic congestion than urban areas that haven't. In short, the research done by LOWER and others indicates that Dulles Rail is a complete waste of money. (0061 0136-11)

Public Comment: The fact that Virginia is seriously considering spending $4 billion on a project that, by its own analysis, will not relieve congestion is a testament to decades of poor planning and an unwillingness to consider new approaches.(00630151-9)

Response: *Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in revising the LPA.*

General Opposition

Public Comment: Another theme has been that the Metrorail alternative has a higher capacity than bus transportation systems. Properly stated, Metrorail has a higher theoretical maximum capacity than bus rapid transit systems, but this theoretical maximum is irrelevant if there aren't enough riders to use it. It is also a poor bargain if the total costs and cost per passenger are excessive, diverting resources from other worthy transit initiatives in the region. Ultimately, the objective should be to move people, not vehicles. (0095 0111-3)

Public Comment: I do not support this transit project.(0109 0147-1)

Public Comment: I do not favor the heavy rail option as discussed in the SDEIS for mass transit from West Falls Church Metro Station to Wiehle Avenue. (0110 0129-1)

Public Comment: In conclusion - Don't build (0033 0034-3)

Public Comment: I, number one, oppose the plan as it is presently constituted. (0072 0082-1)

Public Comment: My analogy for what this project is; it is a broken Cadillac when we should be restricting ourselves to a Toyota Corolla, something practical and inexpensive. (0071 0080-1)

Response: *Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in revising the LPA.*

Public Comment: I do not recommend approval of the Dulles Corridor Rapid Transit Project, Phase I to Wiehle Ave. for numerous reasons, including the following:

1. I do not believe that an objective analysis of heavy rail vs. alternative forms of mass transit was conducted. The study was biased toward heavy rail.
2. The heavy rail system proposed for Tyson's Corner has insufficient coverage to warrant the huge cost.

For example, it would be approximately a one mile walk from the Gannett/USA Today building to the nearest heavy rail station.

3. Heavy rail is by far the most expensive option.
4. There is a serious question of heavy rail's viability west of Tyson's Corner.
5. Financial issues such as cost overruns have not been properly addressed.

I strongly support mass transit but believe that the project, as proposed, is poorly conceived. It will do much to harm the cause of mass transit which Northern Virginia so desperately needs. (0112 0131-1)

> ***Response:*** *Other modes, including the No-Build Alternative were considered in the Draft EIS published in 2002 for the Dulles Corridor Rapid Transit Project. Based on the analysis contained in the Draft EIS, public hearings held in July 2002, and comments received on the Draft EIS, the Metrorail Alternative (T6/Y15) was selected as the LPA by the Commonwealth Transportation Board and by the WMATA Board of Directors in late 2002. The purpose of the Supplemental Draft EIS was to provide additional opportunities for the public and agencies to comment on refinements that have been made to the LPA since the publication of the Draft EIS.*
> *Financial analysis of the system has been an integral part of the project analysis from the very beginning of the project. The financial analysis is documented in Chapter 8 of the Final EIS.*

Vehicular Access to Parking at Stations

Public Comment: 2) Those areas will capture much of eastbound Dulles Greenway traffic seeking to park at the Route 606 station, and to the extent they do so, avoid putting that traffic onto the second road system. Direct access from the Dulles Greenway greatly reduces the number of vehicles which will need to make left-turn movements from eastbound Route606 to the northbound Route 789. The elimination of this movement markedly improves the level of service at the Route 606/Route 789 intersection. (0111 0145-5)

Public Comment: 3) The time and distance for the commuter to locate a parking space is substantially reduced by having direct access from the Dulles Greenway to a parking facility. If commuter will, instead, meet the to park at the SDEIS parking location, then traffic will need to draw it past this location, proceed east on Route 606, currently by a left turn, turn left onto Route 789 and again turn left into the parking facility. Left turns are especially problematic and should be avoided if reasonably possible. (0111 0145-6)

Public Comment: The SDEIS Route 606 station is too remote from future development planned as a transit related employment centers to adequately serve it.(0111 0145-2)

Public Comment: The Greenway was designed and constructed to accommodate the Route 606 rail station in the median at the MIS station location meeting then more modest standards. This benefit is defeated by moving the station to the SDEIS station location.(0111 0145-3)

Public Comment: The supplemental draft environmental impact statement at page 075 of the proposed general plans shows all proposed parking associated with the Route 606 rail station on parcel north of the Dulles Greenway, quote the "SDEIS parking location." Because of the limited size of this parcel, the 2000 Park & Ride spaces must all be within a multilevel structured facility. We propose that parking be located at one or two other areas, each situated on the south and west sides of the ramp for eastbound traffic exiting the Dulles Greenway at Route 606. These alternative parking sites provide the following and other benefits:1) Major cost savings will be realized by substituting surface parking for structured parking.(0111 0145-4)

Public Comment: 4) Impacts on future development will diminish so that greater ridership opportunities can be realized.(0111 0145-7)

Public Comment: Dulles Corridor Rapid Transit Project Route 606 Station and Parking Analysis Performed For Dulles Gateway Associates, L.L.C. and TAB I Associates, L.L.C. 23 December 2003 (0111 0130-1)

Public Comment: We propose that certain adjustments be made to the design of the facilities so that they will far better meet the goals and objectives set out in Table 1.4-1 at page 1-26, Volume 1 of the draft EIS dated June 2002. To meet those goals and objectives, we believe the station needs to be moved back to where it was generally located in the main investment study and that parking should be moved from the north side of the Dulles Greenway to south of the Dulles Greenway. The net effects of making these changes are that project costs will be reduced, ridership increased, traffic disruption during construction lessened, future development better served, travel time for commuters reduced, and long-term level of service of traffic operations in the vicinity of the station substantially improved.(0111 0145-1)

Public Comment: We urge that the Route 606 station be moved to the location identified previously in the Major Investment Study to permit closer access to the planned development.(0060 0169-5)

Public Comment: A major commuter-parking garage should not occupy the "100 percent", highest value site next to the rail station. Rather, efforts should be made to shift the parking to the south where direct access could be provided from the Dulles Greenway and congestion on Route 606 minimized. Please review and select one of the parking alternatives suggested by Dulles Gateway Associates, LLC.(0060 0169-6)

> ***Response:*** *Dulles Gateway Associates, L.L.C. and TAB I Associates, L.L.C., the owner and developer of undeveloped property to the north of the Route 606 Station and the Dulles Greenway, has commented on the Route 606 Station location, access and facilities during the two public comment periods for the Draft EIS and Supplemental Draft EIS and during several coordination meetings with the Project Team. In this Chapter 2 of Appendix J, his comments appear under the commenter identification numbers 0248 for the Draft EIS and its proposed General Plans (June 2002) and under 0111 for the Supplemental Draft EIS and revised General Plans. For the comment period of the Draft EIS, the owner-developer submitted a February 3, 1994 plan titled "Transit Station Site 5-A, Dulles Toll Road Corridor". For the comment period of the Supplemental Draft EIS, the owner-developer submitted a technical report by his consultant, titled 'Route 606 Station and Parking Analysis' (December 2003), on alternatives for the Station's park-and-ride structure and other facilities.*

With his comments on the proposed General Plans (June 2002) the owner-developer submitted an undated development site plan titled "Dulles Gateway North, Sterling Virginia - Antigone Properties" prepared by Leo A Daly. The site plan shows two major developments that are separated by the stream valley and flood plain of Broad Run. Loudoun County in its revisions to its General Plan (a County title for its land use plans) designated the major development north of **Commitment Should Remain for full LPA**

> *the Route 606 Station and east of Broad Run to be a transit node and a Transit-Related Employment Center (TREC). The other major development west of Broad Run is not part of the transit node and can be a TREC only upon certain conditions set forth in the revised General Plans. The owner-developer has identified the development east of Broad Run as Area 1 and west of Broad Run as Area 2. In addition, the owner-development has a land-locked parcel south of the Dulles Greenway and Broad Run and north of Route 606, which he has designated as Area 3. The route from Route 606 to the station facilities is via the existing Route 789.*
>
> *<u>Station Location</u>*
> *The location of the Route 606 Station in the final General Plans is west of the Route 606 overpass of the Dulles Greenway. The Greenway was planned, designed and constructed with a section of wide median to accommodate the future station. The Project Team's design in the final General Plans reveals that the width of median is not sufficient and, therefore, a westbound section of the Greenway must be moderately shifted outward from the median.*

The Route 606 Station has its facilities of bus bays, Kiss & Ride and park-and-ride structure north of the Dulles Greenway on Airport property. North of the station facilities is the Area 1 TREC development.

The station location in the proposed General Plans (June 2002), revised General Plans (October 2003) and the final General Plans differs from the station location that DRPT had identified in its Dulles Corridor Transportation Study of the mid-1990's. The study has been also known by its Federal definition, Major Investment Study or MIS. During the preparation of the proposed General Plans (June 2002), the Team shifted the station approximately 400 feet eastward or inbound from its MIS location for three reasons:

4) *to minimize the height and extent of Station's retaining walls and fill,*
5) *to avoid potential impacts to the existing Dulles Greenway bridges over Broad Run, and*
6) *to avoid impacts to the horizontal clearances between the eastbound lanes of the Dulles Greenway and the southern abutment of the Route 606.*

The owner-developer has consistently commented in the two public comment periods and requested in several coordination meetings with the Project Team that the Route 606 Station be restored to a location that he believes is the one identified in the MIS.

For the coordination meetings and for the Public Hearings Report (February 2004), the Project Team prepared Figure J.2-1 in order to depict the General Plans location versus the MIS location of the Route 606 Station. But, the MIS location differed from the location that the owner-developer believes is the one identified in the MIS. His location is approximately 700 feet further west or outbound from the General Plans location.

In the comparison of the General Plans and MIS locations of the Route 606 Station, the pedestrian bridge between the station and the station facilities (park-and-ride structure, bus bays, and Kiss & Ride) remains in the same location. The travel path from the platform to pedestrian bridge to the station facilities is aligned for extension to a proposed transit node and TREC. The Project Team will be coordinating with the owner-developer so that this pedestrian link will be efficient and attractive.

In his comments, the owner-developer has requested a shift of the station and a second pedestrian bridge and station entrance to serve the development west of Broad Run. WMATA and industry standards assume that ¼ mile is a reasonable walking distance, and ½ mile represents the outer limit of distance that most persons will choose to walk. Most of the Area 1 development is within ½ mile of the center of either the MIS or final General Plans station location, and could be accessed through the station facilities to the north (as noted above). Conversely, none of Area 2 development is within ¼ mile of either platform location, and only a small portion is within ½ mile. The Project Team utilizes the 1989 WMATA study Development Related Ridership Survey II as a reference for the determination of ridership by development type and distance. It revealed that the walk mode share decreases by 0.76 percent for each 100-foot increase in distance from the station. The additional rail transit trips by walk mode to and from the Area 2 development would, therefore, be negligible due to the prohibitively long walk distance.

The sketch plan and profile submitted with the comments would move a large portion of the platform below grade, increasing construction costs, and increasing the distance from the platform to the mezzanine and pedestrian bridge level, which still must clear the Dulles Greenway below. Since the capital and operating costs of a second station entrance are significant and the additional ridership and revenues negligible, the Project Team declined this suggestion, as it previously did in a coordination meeting with the owner-developer. The economical solution for access from the Area 2 development west of Broad Run should be private shuttle buses, for which the Project Team would provide spaces at the station facilities.

Park-and-Ride Alternatives

The owner-developer in his comments on the Draft EIS and proposed General Plans encouraged the reduction of the 4,750 park-and-ride spaces at Route 606 Station. In the Supplemental Draft EIS, the Project Team proposed, later recommended, and the decision-makers selected a reduction to 2,750 spaces.

In his February 1994 plan and his December 2003 technical report, the owner-developer suggests that the Project Team consider the reduction of capital costs by the use of a surface park-and-ride facility in lieu of a structured one for the Route 606 Station. He also suggests the relocation and reconfiguration of the park-and-ride facilities by using Airport property north and south of the Dulles Greenway and using Area 3 of his ownership..

The Project Team discourages the separation of station facilities, particularly those of moderate size, such as the proposed 2,000-space structure, since a park-and-ride customer of Metrorail would not readily and conveniently reach one facility if the other becomes full first. The Project Team also discourages the separation of the station bus and Kiss & Ride facilities from the Area 1 TREC development, since there can be intermodal transfer and direct connections between the station facilities and the TREC development.

Interchange Modifications

The owner-developer has consistently commented in the two public comment periods and requested in several coordination meetings with the Project Team that the eastbound exit ramp of the interchange between the Dulles Greenway and Route 606 be modified in order to serve the alternative park-and-ride facilities south of the Greenway.

Through its travel demand forecasting and traffic analysis, the Project Team has shown that Project does not necessitate improvements to the interchange between the Dulles Greenway and Route 606. The traffic analysis in support of the Final EIS reveals that the intersection of Route 606 and Route 789 will degrade from Level of Service B in the current year to Level of Service F in the Project's forecast year of 2025, in the No-Build Alternative, that is, without the Project, due to the forecast land use. Level of service at an intersection is measured by the delay in seconds for drivers traversing the intersection. In the opening year of 2015 and in forecast year of 2025, the Full LPA increases the delay. The Project's mitigation for the opening year of 2015 is the addition of a right turn lane from southbound Route 789 to westbound Route 606. As shared with other stakeholders in the Dulles Corridor, the Project Team notes that the traffic conditions of station access should not be a major concern to the County nor to the owner-developer. The peak activity at the station will be early on weekday mornings and the park-and-ride structure will likely be full before the local peak hour of local development. For instance, the final park-and-ride customers of Metrorail would arrive before 7:30 a.m., while the local peak hour would be between 7:30 a.m. and 8:30 a.m.

The suggested modifications of the interchange are not in conformance with A Policy on Geometric Design of Highways and Streets (Green Book) of the American Association of State Highway and Transportation Officials (AASHTO). In particular, the modifications create an interchange between the Dulles Greenway and two crossroads and place a driveway on the eastbound exit ramp. An interchange with two crossroads, in this case, Route 606 and the development roadway, creates complex signing for the exit; moreover, the driver will have unconventional decision-points in a short length of travel. The presence of the ramp toll plaza exacerbates the signing, the line of sight to the decision-points and the inherent weave between the plaza and ramp terminal,

The driveway on the exit ramp violates the denial of access line established for this freeway by the owner of the Dulles Greenway. That denial of access is an integral element for safe and efficient operations of freeways.

While there are other reasons for eliminating this suggestion for modifications, one to add is that the driver, having exited the Dulles Greenway via the eastbound exit ramp and then the development roadway, will not have a clear understanding of the return to the Dulles Greenway. His orientation will be confused, unlike the exactness of the conventional exit maneuver to the primary crossroad, Route 606.

In the formulation of its Team recommendations (February and March 2004), the Project Team concluded, as it did in October and November 2002 Team recommendations, that it could not accommodate the suggested alternatives of the owner-developer.

Following the revising of the LPA and approval of the revised General Plans, the Project Team participated in a May 2004 meeting with the owner-developer, his consultants, and a member of the Commonwealth Transportation Board, MWAA, TRIP II, and Loudoun County. The purpose of the meeting was to review the above issues with all interest parties. The meeting did not result in a change in the selected LPA and approved General Plans.

As stated in the final Team recommendations, the Team will continue to coordinate the pedestrian connections between the station facilities and the proposed development north of Route 606 Station.

Public Comment: Slip ramps from Wiehle Avenue parking should be available for those folks who park at the station to get on the westbound toll road, rather than going back to Wiehle Avenue.(0064 0152-4)

Public Comment: Slip ramps from Wiehle parking should be available for riders to get onto the Dulles toll road rather than going back onto the Wiehle Avenue interchange. If they go through the interchange, that will just screw things up worse.(0064 0072-4)

Response: *Slip ramps for park-and-ride access would be in conflict with ramp access for bus movements to and from the station as shown in the final General Plans. Intersection improvements and other traffic mitigation measures are planned to accommodate the additional traffic volumes using the Wiehle Avenue Station*.

Public Comment: One access [point] provided for the bus stop for Tyco Road may be inadequate due to its close proximity to the Route 7 traffic signal.(0053 0139-1)

Public Comment: We believe HBL's problems could be solved and the transportation scheme improved concomitantly at a reduced cost if the Kiss & Ride bus and parking facility were moved to the south side of Tyco Road and the station access reoriented to the Spring Hill Road intersection to improve pedestrian access. (0070 0138-2)

Public Comment: our review of the supplemental draft EIS states no rationale for locating a Kiss & Ride bus parking facility at the corner of Tyco Road and Route 7, as now proposed. We have found no rationale elsewhere at this point either. (0070 0138-3)

Public Comment: A bus transfer location as proposed on Parcel 55 in northeast quadrant, Route 7, affects the Porsche Audi dealership which is currently zone C-7 and is in a primary location for development or redevelopment as defined in the Fairfax County comprehensive plan in the highway overlay district along Route 7 frontage. (0053 0139-2)

Public Comment: Regarding the Tysons West station specifically, we remain concerned that the proposed pedestrian walkway over Leesburg Pike that begins at the corner of Tyco Road and Leesburg Pike is not accessible to the majority of pedestrians and residents in the area of the station. The more accessible point of access to that station would be the corner of Leesburg Pike and Spring Hill Road. Therefore, although we would advocate two loading points for the station, if only one is to be provided at the outset, the Spring Hill Road end of the station would be preferable.(0034 0126-1)

Public Comment: At the December 11, 2003, public hearing in Ashburn, we were provided copies of alternative schematics for the Tysons West station prepared by the engineering firm Patton, Harris, Rust & Associates (PHRA) for HBL of Tysons. PHRA has concluded that a pedestrian mezzanine and access point is achievable from a technical engineering perspective at the Spring Hill Road end of the station. PHRA's transportation engineer, Mr. Kennedy, also has concluded that locating a walkway over Leesburg Pike from the Spring Hill Road intersection will benefit area pedestrians, improve traffic congestion and enhance development opportunities.(0034 0126-2)

Public Comment: Further, we would suggest that the security, moving and storage facility is available for sale now. We would suggest that you contemplate purchasing that property and use it for your station access and bus access. All with no parking. Why pay $50.00 per square foot and more per land for parking. This makes no sense.(0004 0004-3)

> ***Response:*** *The Project Team recommended, and the decision-makers selected the Option E site plan for the Tysons West station facilities to replace that the Supplemental Draft EIS and revised General Plans. Option E has its station entrance at the inbound, east end of the station near Spring Hill Road. The bus bays and Kiss & Ride of Option E are located between Tyco Road and Spring Hill Road, set back from Route 7. In comparison to Options A, B, C and D, Option E was foremost in transit customer convenience and safety and best serves the goals of the Project. Option E will have its access point on Tyco Road at an adequate distance from the Route 7 signalized intersection.*

Public Comment: The development of the Kiss and Ride lot shows a driveway connection to future Colshire Meadows Drive. This [Tysons East] entrance location must be approved by Fairfax County and VDOT with no adverse impacts to the transportation network or stacking.(0123 0158-25)

Public Comment: The Kiss and Ride station at the corner of Colshire Drive/Rt. 123 (dedicated by WEST*GROUP) appears to show a connection to Colshire Meadow Drive and bridge currently under construction and to be completed by October 2004. No such connection is contemplated in our approved PI plan and the grades onsite appear to make such a connection impossible.(0113 0132-16) (0123 0158-18)

> ***Response:*** *The Project Team will continue to coordinate with WEST*GROUP. The Kiss & Ride facility was fully documented in the Draft EIS of June 2002, and no comments were received addressing this issue. If an approved site plan now provides for a grade separated road connection between Colshire Drive and Old Meadow, the access/egress to the Kiss & Ride area would have to be modified during preliminary engineering.*

Bus and Pedestrian Access to Stations

Public Comment: At several of the transit stations, especially the Reston Town Center and Route 772 stations, exclusive busways, light rail systems, or similar methods must eventually supplement a greatly improved pedestrian circulation system in order for these important activity centers to function effectively. (0041 0042-8)

> ***Response:*** *The pedestrian circulation system identified by commenter noted would be the responsibility of local jurisdictions and/or the Commonwealth of Virginia, and would not be part of the Dulles Corridor Rapid Transit Project.*

Public Comment: An essential element of the design of each rail station in the Dulles Corridor is effective access via a well-developed feeder bus system. Each station must be carefully designed to assure that future expansion of feeder bus access can be readily implemented. Kiss and ride drop-off points must fit effectively into this mix. (0041 0042-9)

> ***Response:*** *Bus and Kiss & Ride facilities at each station were designed based on the bus operating plans developed as part of the Draft EIS and mode of arrival data generated as part of*

the ridership forecasts. For Wiehle Avenue Station, the Project Team rearranged the express bus routes to reduce the number of buses turning left from the eastbound exit ramp of the interchange between the Dulles Toll Road and Wiehle Avenue.

Public Comment: The proposed mitigation measures should include parking areas for cabs and drop off and pickup areas for the passengers in the Tysons Corner stations where there are no provisions for kiss and ride lots. If the Project is relying substantially on foot access to the stations, this should be noted. (0091 0106-16)

Response: *The Project Team will continue to coordinate with Fairfax County and VDOT on issues of station access. Due to limitations of available right-of-way, and likely limitations on additional curb cuts at Route 7, the parallel service roads, and Route 123, the Project Team is not proposing any off-street facilities for taxicabs at the Tysons Central 7 and Tysons Central 123 Stations. The Tysons Central 123 Station is served by six bus bays directly adjacent to the station entrances and distributed to either side of Route 123.*

Public Comment: The Tysons East Station is slated to be an aerial facility located at intersection of Scotts Crossing Road/Colshire Drive and Rt. 123. It is imperative that this station be carefully integrated into WEST*GROUP's overall master plan for the area surrounding this station, including
· Addition of Rt. 123 aerial pedestrian crossings
· Elevated connections from the station platform to the Cleveland Building redevelopment site
· Sound mitigation and height "softening"
· Integrate future shuttle bus operations or potential future light rail alternatives (especially "Central Station") to serve areas of Tysons outside the 1600' radii
· Integrate drop-off lanes on the Capital One, southbound side of Rt. 123.(0113 0132-3) (0123 0158-5)

Response: *The Project Team looks forward to receiving WEST*GROUP's master plan. The conceptual layout for this station has not changed since the Draft EIS of June 2002. The project would include one pedestrian bridge crossing Route 123 to serve the south side of the street and the bus and Kiss & Ride facilities. Additional pedestrian bridge connections, provided by others as part of future development, could be accommodated provided that there are no detrimental impacts to the functioning of the station and its facilities, and no additional operational and maintenance costs for WMATA. Sound mitigation and visual impacts of the aerial structures will be addressed as part of the preliminary engineering and final design phase of the project. Issues related to light rail transit alternatives and feeder systems serving Tysons Corner were addressed in the Final Alternatives Analysis Report (May 2001) and the Draft EIS Public Hearing Report (October 2002). Drop off lanes for buses are provided on the north side of Route 123 and on Colshire Drive adjacent to the Kiss & Ride parking area. Kiss & Ride facilities on the Capital One side of Route 123 would need to be offstreet, and would require dedication of additional right-of-way by the property owner for this use.*

Public Comment: The platform for the Tysons East Station should extend northeast approximately 150 feet and cross Scotts Crossing Road allowing elevator/stair tower access at the southwest corner of the Cleveland Site.(0113 0132-13)

Public Comment: North Entrance Pavilion should be shifted to the north by spanning Scotts Crossing Road and building a stair, escalator with aerial walkway and ADA elevator tower to mezzanine level. (0123 0158-22)

Response: *Limitations of the track alignment and profile at this station preclude shifting the station further north; pedestrian access to the entry and the west side of Scotts Crossing would be immediately accessible using the crosswalk.*

Public Comment: The Johnson I and II Building site (Tax Map 30-3-28-6D) is currently under study for rezoning to "with rail" densities upon approval of the FFGA. Interconnections to the Kiss and Ride and perhaps the Tysons East platform itself are possible and should be incorporated into the final design. (0113 0132-15) (0123 0158-17)

Response: *Additional connections, provided by others as part of future development, could be accommodated provided that there are no detrimental impacts to the functioning of the station and its facilities, and no additional operating and maintenance costs for WMATA.*

Public Comment: [Reston Association] further recommends that this Planning Study address design concepts around the station area and recommend guidelines for future development on the Wiehle station site in terms of site design, building design, and landscape and design of public spaces. (0039 0040-9)

Public Comment: [Reston Citizen's Association] further recommends that this planning study address design concepts around the station area and recommend guidelines for future development on the Wiehle station site in terms of site design, building design, and landscape and design of public spaces. (0040 0041-6)

Response*: The final Team recommendations described the team's approach in response to comments on the Wiehle Avenue Station north side station facilities. With the exception of a new roadway connection to Sunset Hills Road, these station facilities would be situated upon the Reston East park-and-ride lot owned by Fairfax County.*

Fairfax County Supervisor Hudgins has appointed the Wiehle Avenue Steering Committee, which advise the County staff in the creation of a Request For Proposal (RFP) to solicit transit-oriented joint development proposals for the mixed-use development of the County-owned parcel adjacent to the station. Using the conclusions from the Supervisor's Reston Charrette as a starting point, the committee is establishing the process, scope and criteria for the RFP. The Supervisor and her committee will conduct special meetings for the community, property owners, and developers to discuss the RFP process, status, and developments to ensure all concerns and issues are identified and addressed accordingly.

Phasing Related to Funding

Public Comment: I strongly support the construction of the full 23-mile rail transit system from Falls Church to Dulles Airport and beyond, even if this requires a phased funding formula to implement. I, as a citizen and homeowner in Fairfax County, am willing to pay my fair share of the cost to complete the full extension of the transit system in the Dulles Corridor.(0041 0042-1)

Public Comment: - [The GRCC supports] A phased approach to construction of the Dulles Rail project, with Phase I ending at the proposed Herndon/Monroe station, where transportation infrastructure is far better able to accommodate the increased needs that will come with rail; ...(0023 0024-5)

Public Comment: I strongly support the construction of the full 23-mile rail-transit system from Falls Church to Dulles Airport and beyond even if this requires a phased-funding formula to implement.(0041 0066-1)

Public Comment: While it would be nice to have it completed in one step, I understand the fiscal constraints that require division and initial construction only out to Wiehle Avenue.(0001 0093-1)

Public Comment: DCRA supports the proposed phased approach for implementing the Dulles rail extension. We emphasize that the Dulles rail extension is a single, 23-mile construction project.(0060 0169-1)

Public Comment: WEST*GROUP endorses the LPA to be constructed in two phases and two separate tax districts. (0123 0158-4)

Response: *Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in revising the LPA.*

First Phase to Wiehle Avenue

Public Comment: - [The GRCC supports] A phased approach to construction of the Dulles Rail project, with Phase I ending at the proposed Herndon/Monroe station, where transportation infrastructure is far better able to accommodate the increased needs that will come with rail; ...(0023 0024-5)

Public Comment: While it would be nice to have it completed in one step, I understand the fiscal constraints that require division and initial construction only out to Wiehle Avenue. (0001 0093-1)

Public Comment: We support the plan phasing of the 23-mile expansion and the first phase ending at Wiehle Avenue. (0060 0134-1)

Public Comment: WEST*GROUP endorses the LPA to be constructed in two phases and two separate tax districts.(0123 0158-4)

Public Comment: We support the plan phasing of the 23-mile expansion and the first phase ending at Wiehle Avenue.(0060 0134-1)

Public Comment: We are pleased to see that the first phase does end at Wiehle, because it does bring it into the corridor, and it will provide a straight shot to Dulles Airport. (0060 0134-2)

Public Comment: We support and are pleased to see that the first phase of the project will end at Wiehle Avenue. This station is a good deal closer to Washington Dulles International Airport than Tysons Corner.(0060 0169-2)

Public Comment: [W]e support rail as the Locally Preferred Alternative but we are here today to support the Phase I plan out to Wiehle Avenue.(0060 0063-1)

Public Comment: I'm very strongly supportive of this application, including the terminus at Wiehle Avenue.(0065 0073-1)

Public Comment: The traffic would be unpleasant during the period that Wiehle is the terminus, but it will be unpleasant during construction and I'd rather endure a mile or two of traffic getting to the Metro than 28 miles of traffic getting into DC. Please don't let a small group of loud activists deter you. It is easier to rile people up to oppose something than it is to support something. Many of my neighbors and colleagues support the Wiehle terminus plan.(0057 0058-2)

> ***Response:*** *Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in revising the LPA.*

Wiehle Avenue is an Unsuitable Terminus

Public Comment: I join hands with the Reston Association and the Greater Reston Chamber of Commerce in rejecting a plan which temporarily makes Wiehle Avenue the terminal station for the first phase (0020 0021-1)

Public Comment: I agree with the Reston Association and the Greater Reston Chamber of Commerce in rejecting a plan which temporarily make Wiehle Avenue the terminal station for the first phase of Rail to [Dulles.](0021 0022-1)

Public Comment: I am absolutely opposed to the Phase I plan for Rail to Dulles that would make Wiehle Avenue the end of the line, "temporarily." (0035 0036-1)

Public Comment: I'm writing to oppose a temporary metro terminus at Wiehle Ave. This would create an absolutely untenable situation with respect to parking and traffic. (0043 0044-1)

Public Comment: The proposal to phase this project with a stop at Wiehle Avenue will compromise the Reston area and detract from the eventual benefit of the rail. (0042 0043-2)

Public Comment: I am AGAINST this proposed rail system modification. (0098 0114-1)

> ***Response:*** *It is proposed that the full Locally Preferred Alternative (LPA) for the Dulles Corridor Rapid Transit Project be constructed. However, federal funding constraints dictate that it be built in two phases. The first phase, Wiehle Avenue Extension, would extend Metrorail from the existing Orange Line, through Tysons Corner, to Wiehle Avenue. The Wiehle Avenue Station would function as an interim end-of-the-line station. The number of bus bays at the station would be increased, and Kiss & Ride parking may be increased over what was proposed in the Draft EIS. No additional long-term parking beyond that planned for the full LPA would be provided for the interim end-of-line station. The Wiehle Avenue Extension is expected to be complete by 2011. The Extension to Dulles Airport/Route 772 would complete construction of the LPA, extending the line from Wiehle Avenue, through Dulles Airport, to Route 772 in Loudoun County. This phase would include the construction of the new Service and Inspection (S&I) Yard on Dulles Airport property. It is anticipated that this second extension would be complete by 2015.*
>
> *An interim end-of-line station at Wiehle Avenue would allow the initial Dulles Corridor line to provide the maximum benefit possible with the available resources. When the Wiehle Avenue Extension is complete, the initial segment of the Dulles Corridor line would serve approximately 65 percent of the passengers attracted to the full LPA.*

Public Comment: The goal of the Metro is to reduce congestion. It is not to reach Reston. Terminating at Wiehle increases congestion beyond belief. (0074 0084-1)

Public Comment: It would be grossly unfair to that [Wiehle Avenue] community, given the current levels of service there, and, in particular, when you consider that, under the Supplement that we are discussing tonight, it is looking at under the numbers contained in here of 7,400 daily boardings at that location. Obviously, those people have to access that station somehow and we just don't believe that the area around that station is nearly developed to the point that it can accommodate it. (0062 0070-1)

Public Comment: However, I am opposed to a plan that will use Wiehle as its temporary terminus for both land use and traffic planning reasons. There is just not enough land at that spot to serve such a function. Further, the fact that the DAR and toll road is so close to both Sunset/Spring and Sunrise Valley roads already creates a traffic gridlock at Wiehle (and Reston Parkway) crossings of the DAR/toll road. (0120 0154-2)

Public Comment: The idea of stopping the system, even temporarily at Wiehle Avenue is totally absurd! (0094 0110-1)

Public Comment: Bringing rail to Wiehle Avenue and stopping even temporarily is a very bad idea. (0096 0112-1)

Public Comment: Simply put, making Wiehle the end of the line, even temporarily, could lead to major traffic and parking problems for Reston. Never in any of the planning done for rail in the Dulles Corridor was there consideration of ending the line at Wiehle. No land use plan for that scenario was ever developed. (0050 0095-1)

> ***Response:*** *With Wiehle Avenue Station as the interim end-of-line station of the Wiehle Avenue Extension, there will be more bus and Kiss & Ride activity in the morning and evening peak periods than with the Station as an intermediate station. The park-and-ride traffic for the 2,300 space structure would, however, be similar to that when Wiehle Avenue Station is an intermediate*

station along the 23-mile extension of Metrorail. Moreover, the park-and-ride structure will likely be full before the local peak hour of the Reston; in other words, the final park-and-ride customers of Metrorail would arrive before 7:30 a.m. while the local peak hour would be between 7:30 a.m. and 8:30 am. Traffic effects for both the LPA and Wiehle Avenue Extension were conducted in support of the Final EIS. Proposed mitigation measures for anticipated effects have been identified in the Final EIS.

Public Comment: I am raising my objection to using the Wiehle Ave, location for the terminus for the currently designed Dulles Rail project. Although a temporary phase, it will drastically change the status of the Wiehle location aesthetically, in the balance of community resources, and in the efficient flow of people and traffic. The current blend of the amount of parking places, people flow, commercial facilities, and local aesthetic feeling will drastically change for the worst. (0050 0050-1)

Public Comment: I must add my voice to those who object to Wiehle Avenue as the terminus, for Phase I of the Dulles Rail Extension.(0047 0048-1)

Public Comment: Wiehle Avenue is an unsuitable terminus for Phase I. In addition, going to Wiehle Avenue does not appear to be enough to entice the Herndon community to pay. (0044 0045-2)

Public Comment: We have grave concerns with the recommendation to end the first phase of construction at Wiehle Avenue and believe that even a temporary terminus at Wiehle will have a major negative impact on the quality of life of those who live and work in the planned community of Reston. (0039 0040-2)

Public Comment: The idea of a Wiehle terminus is a stop-gap measure, a supposed-better-than-nothing proposal that serves no purpose other than to destroy a viable area not designed for it. (0056 0057-3)

Public Comment: However, building a station and/or making a terminus at Wiehle Avenue is not a good solution. (0105 0123-1)

Public Comment: Phase 1 should terminate no closer in than Dulles Airport. (0046 0047-3)

Public Comment: If we are going to go forward with rail, then let's budget the whole deal. Both portions should be funded. Maybe we should start at both ends and meet at Wiehle-- then, of course, drive in the gold spike. (0045 0046-1)

Public Comment: To terminate this project at Wiehle Avenue will undermine land use policies, both in Loudoun and Fairfax Counties and would forever stunt the economic future of one of the premier development corridors in the United States, we believe that the most pressing issue is the completion of the locally-preferred alternative by 2015. (0114 0133-2)

Public Comment: Regarding point #1, Wiehle Avenue was never planned to be a terminus point. This project is supposed to be "Rail to Dulles" not "Rail to Wiehle". We understand the constraints of federal funding, but the decision to spend the money from West Falls Church to Wiehle with no guarantee that additional funding will materialize creates a host of problems. It creates funding inequities. It will create a parking and traffic nightmare in Reston. It flies in the face of the Comprehensive Plan. It does not achieve the Project objectives. This position has been strongly echoed by the Herndon Council, the Herndon/Dulles Chamber, the Reston Chamber, the Reston Association, major property owners in the corridor, and hundreds if not thousands of (0028 0029-1)

Public Comment: Give service now to all segments of the Corridor and to airport users, to boost ridership and to play fair with the tax district. Include in the contract for rail up the median the spurs that will be needed later. Allow for later express service to the airport. (0012 0012-2)

Public Comment: The Reston Citizens Association supports Rail to Dulles; not Rail to Wiehle; not rail to Herndon- Monroe, but Rail to Dulles and beyond! Given the time it has taken to bring rail to this point,

extension from Wiehle to the airport and Loudoun would be a distant dream. Elected officials who will make irreversible decisions about rail to Wiehle should keep in mind that all the decisions made heretofore, notably the tax district and the land use plans, were based on rail beyond Dulles Airport. (0050 0095-2)

> ***Response:*** *Based on agency coordination, DRPT and WMATA are proposing to construct the Project in two phases. Guidance on federal funding limitations and the timing of local funding availability were considered in determining the proposed phasing. An interim end-of-line station at Wiehle Avenue would allow the initial Dulles Corridor line to provide the maximum benefit possible with the available resources. When the Wiehle Avenue Extension is complete, the initial segment of the Dulles Corridor line would serve approximately 65 percent of the passengers attracted to the full LPA.*

Public Comment: What will be the impact of the station at this location? (0042 0043-3)

> ***Response*****:** *The estimated impacts of the Wiehle Avenue Extension are described in Chapters 3 to 9 of the Final EIS.*

Public Comment: What caused the project to be broken down into two phases? As far as I can tell from the Draft EIS, the decision to divert the metro rail THROUGH Tysons Corner is the primary factor which caused this change. No where in the EIS is the an explanation of why the rail track was diverted through Tysons Corner or a comparison of the cost of keeping the rail line in the Toll Road median strip versus diverting it through Tysons Corner. (0082 0097-1)

Public Comment: I believe that there could be some justification-- I stress "could"-- some justification for extending rail from West Falls Church to Tysons Corner with the terminus being at Spring Hill Road where there's already a Park & Ride lot, not at the Cadillac dealership on Leesburg Pike. (0016 0140-1)

Public Comment: Build rail now up the median to Route 772; Set aside the very expensive and disruptive construction through Tysons for now; and institute good RideOn/TIBS [Tysons Internal Bus System] to serve all of the Tysons area. (0012 0012-1)

Public Comment: The Phase I alternative should be revised with the last stop at Spring Hill Road, not at Wiehle Avenue. (0016 0122-1)

Public Comment: I urge you to reconsider the decision to divert the rail line through Tysons Corner and return it to the median strip straight down the Dulles Toll Road where it was always meant to be. Certainly, Tysons Corner should have a stop (possibly two) along the Dulles toll road just like every other community along that route. However, it should not command 4 stops, or a costly change to the rail route. (0082 0097-2)

> ***Response:*** *Appendix H of the Final EIS (Alternatives Previously Considered), and the Final Alternatives Analysis Report (May 2001), both discuss the Alternative T8 as a Metrorail bypass of Tysons Corner. This alternative, which was suggested during the Project's scoping process, was eliminated from further consideration during the screening of alternatives.*

Public Comment: If Phase I truly has "independent transportation utility," it should be analyzed without reference to Phase II. The fact that Phase II is needed to justify Phase I appears to indicate that, in fact, Phase I does not have independent transportation utility. (0063 0151-6)

> ***Response:*** *Throughout the Final EIS, both the Wiehle Avenue Extension and Full LPA were analyzed as independent projects in the forecast year (2025), compared to the No Build Alternative.*

Other Phase 1 Terminus Should Be Considered

Public Comment: Reston Association urges that every effort be made to expand the first phase to extend to Herndon-Monroe because major parking facilities presently exist at that site, the build of additional parking is more easily accommodated there, and because ramp access into the Herndon-Monroe Park and Ride from the Dulles Toll Road already exists. (0039 0040-4)

Public Comment: Commitments should be made by all decision-making bodies to extend the first phase of construction to Herndon-Monroe as soon as possible. Wiehle Avenue rail service should not be initiated until construction is underway to Herndon-Monroe. (0040 0041-2)

Public Comment: I am writing to register my opposition to the proposal to "temporarily" terminate Phase 1 of the Dulles Rail Project at Wiehle Avenue. I am opposed of several reasons: 1) Herndon-Monroe station has existing facilities that can "relatively" easily accommodate a rail station, while Wiehle Avenue does not. (0046 0047-1)

Public Comment: Also, the ending of Phase [O]ne in Reston Wiehle Avenue will dispute what the DEIS states will have a serious adverse impact on Reston's environment. It will create traffic congestion and a safety problem it will result in additional thousands of vehicles in Reston. They will not only increase pollution, but also they will impact the homes and businesses surrounding the station. At a min solution the station should be moved to Monroe Street. (0033 0034-2)

Public Comment: Phase I should terminate at the point where the line connects to the Dulles Toll Road area. (0044 0045-1)

Public Comment: A Metro line to Tysons certainly makes sense; stop the line there until the system can continue into Loudoun. (0056 0057-2)

Public Comment: I have seen the Herndon-Monroe terminal. That is a beautiful example of planning, ramps coming from the Dulles Toll Road, buses, bus lanes, parking. It is a beautiful place to terminate a line if you have to do it temporarily and that is where the line should terminate. (0074 0084-2)

Public Comment: I am very much in favor of the Dulles rail line, but strongly encourage you to reconsider having one terminus that would essentially serve all of the Reston/Herndon/Sterling area as the project progresses. (0043 0044-2)

Public Comment: It [Wiehle Avenue as a terminus station] creates funding inequities. It will create a parking and traffic nightmare in Reston. It flies in the face of the Comprehensive Plan. It does not achieve the project objectives. This position has been strongly echoed by the Herndon Council, the Herndon Dulles Chamber, the Reston Chamber, the Reston Association, major property owners in the Corridor and hundreds, if not thousands, of citizens. (0028 0064-1)

Public Comment: Why not build the other Reston station off the intersection of Hunter Mill Road and Sunset Hills Road? This area makes much more sense to rezone as a public transportation hub than Wiehle. The Hunter Mill Road/Sunset Hills Road area is: - Off the Toll Road, - There's no lake or other major terrain issues to consider, and - The majority of this large area is currently used as a private golf course, which is much less complex to rezone and build on than Wiehle Avenue. - Still serves the same populations that the Wiehle Avenue site would, plus considers more of the Eastern part of Reston. (0105 0123-5)

> ***Response:*** *Based on agency coordination, DRPT and WMATA are proposing to construct the project in two phases. Guidance on federal funding limitations and the timing of local funding availability were considered in determining the proposed phasing. An interim end-of-line station at Wiehle Avenue would allow the initial Dulles Corridor line to provide the maximum benefit possible with the available resources. When the Wiehle Avenue Extension is complete, the initial segment of the Dulles Corridor line would serve approximately 65 percent of the passengers*

attracted to the full LPA. An extension to Herndon-Monroe Station would add significant costs beyond available funding. A Hunter Mill Road Station was suggested during the Project's scoping process but eliminated from further consideration by the Project Team, as documented in Appendix H of the Final EIS (Alternatives Previously Considered), and the Final Alternatives Analysis Report (May 2001)

Public Comment: Furthermore, any consideration to put the terminus at Wiehle is preposterous. Reston is a major employment center and currently suffers traffic gridlock for most of the day. Creating a Metrorail terminus at Wiehle Avenue would bring all movement on Reston's already crowded roads to a standstill. To compound the insanity of this plan is a proposal to delete structured parking from the Wiehle Avenue terminus. That would just put hundreds of additional parked cars on our residential streets. The Wiehle Avenue park-andride has been Reston's public transit facility and has taken many cars off the roads, including mine. This proposal will put us back in our cars since we will be locked out of public transit in our own community. A Wiehle Avenue terminus cannot absorb outside commuters and still remain available for local use. (0027 0028-3)

***Response*:** *Structured parking is planned for the Wiehle Avenue Station (see Chapter 2 of the Final EIS). In addition, the Wiehle Avenue Extension would include interim express bus service for the western end of the corridor to provide enhanced transit service to travelers who would be served by the Full LPA. The operating plan would consist of service routes that provide connections between every station included in the Full LPA, except Reston Parkway and Route 28, with service frequencies comparable to proposed Metrorail headways. This service, in addition to the structured parking and proposed traffic mitigation measures (e.g., additional lanes) proposed around the station, should ensure roadway operations in the vicinity of the station. Another aspect is that the proposed park-and-ride structure would likely be full before the local peak hour of Reston; in other words, the final park-and-ride customers of Metrorail would arrive before 7:30 a.m. while the local peak hour would be between 7:30 a.m. and 8:30 a.m.*

Commitment to Phase 2 Funding should be Ensured

Public Comment: If the project has to be phased over two federal funding cycles, Virginia should ensure a serious commitment to Phase Two by federal and local authorities or by other means.(0108 0127-1)

Public Comment: Phase One consumes a portion of that right-of-way, and once consumed it will deny the region's future ability to provide that express link between the federal capital and its world gateway if Phase Two was not to be completed in a timely manner. Further, Phase One has been structured to offer maximum "new starts" appeal to the FDA. Such action may weaken the appeal of Phase Two in the federal process. (0108 0127-2)

Public Comment: Consequently, it is vital that: A binding federal or congressional commitment be obtained before the airport's right-of-way is committed to Phase One, or that; The airport be reimbursed for use of its right-of-way until Phase Two is operational. For example, a fee of 40 cents per passenger would provide an incentive for the completion of Phase Two, as well as potentially contributing to its construction cost. (0108 0127-3)

Response: *DRPT has developed the Wiehle Avenue Extension in coordination with WMATA, Fairfax County, Loudoun County, Town of Herndon, and MWAA in response to Federal guidance that the Full LPA was not fundable as single construction project and that a shorter, initial section of the LPA should be developed. Thus, DRPT has chosen to develop the Project in two phases with estimated opening year of the Full LPA in 2015.*

In November 2002, MWAA endorsed the Metrorail Alternative as the Locally Preferred Alternative. In its December 29, 2003 letter for the public hearing record, MWAA has stated that its continued support of the Project is subject to three conditions: 1) The FTA reauthorization process needs to recognize the ultimate goal to complete the rail line out to and beyond Dulles Airport; 2) Advanced additional engineering must proceed beyond the initial segment and include

the entire project; and 3) There needs to be a Memorandum of Understanding among the local partners that captures a joint commitment to see the entire project through to completion.

Public Comment: Revise the DEIS to analyze a first phase of the project that would only serve Tysons Corner. The plan would assume creation of a special tax district only in Tysons Corner to fund the local share of costs. The second phase would include the Dulles corridor and would extend the tax district to include all of the corridor.(0090 0105-1)

Response: *Based on agency coordination, DRPT and WMATA are proposing to construct the project in two phases. Guidance on federal funding limitations and the timing of local funding availability were considered in determining the proposed phasing. An interim end-of-line station at Wiehle Avenue would allow the initial Dulles Corridor line to provide the maximum benefit possible with the available resources. When the Wiehle Avenue Extension is complete, the initial segment of the Dulles Corridor line would serve approximately 65 percent of the passengers attracted to the full LPA. Section 8.1 of the Final EIS describes the creation of the Fairfax County Dulles Rail Transportation Improvement District as the County source of revenues for its capital funding share. The sales tax referendum of Fall 2002 did not pass; it would have allocated a minimum of $350 million for the Fairfax and Loudoun County shares of the Project capital funding.*

2.4 Suggestions for Other Alternatives

A. Draft EIS Comments

Public Comments

More Study of Dulles Plan B Alternative

Public Comment: In view of the dismal economics, Dulles Plan B advocates has come up with a range of alternatives that we ask be formally studied in the next revision of the study. (0162, 0162-T-10)

Public Comment: There is no reason we cannot get 120% of the benefits of what is listed in the draft EIS for 20% of the cost. The details are available at DullesPlanB.org. In the month that site has been up, I have had over 300 visitors, and no one has taken issue with either the facts or the conclusions. We are capable of offering more choices to the consumer: public transit, single passenger automobile traffic on the outer lanes, and three versions of private transit: High Occupancy Toll service, car pooling, and formalized just in time ridesharing in the public right of way, a proven concept which has worked so well on I-395. These alternatives can be put into place without invoking special tax districts, without huge annual operating subsidies, while at the same time eliminating full time tolls on the Access Lanes, rather than doubling them. (0162, 0162-T –24)

Response: *In response to the commenter's request, the Project Team had reviewed the range of alternatives proposed on the Dulles Plan B website during the public comment period of the Draft EIS.*

Many of the calculations presented on the Dulles Plan B website, regarding capacity and subsidies, were based on incorrect numbers. The Dulles Plan B proponents indicated several times that the incremental demand for Metrorail over BRT would be approximately 15,000 passengers per day. As was shown in Table 6.3-8 in the Draft EIS, Metrorail was expected to attract 34,000 to 40,000 more total riders per day than BRT (depending on alignment), and approximately 24,000 to 27,000 more new riders.

Dulles Plan B incorrectly stated that the vehicles used for the Transmilenio system in Bogotá, Colombia are 160-seat buses. These vehicles are 60-foot vehicles (like those proposed for the Dulles project) that accommodate approximately 160 passengers (approximately 43 seated and

114 standing). This standee load has been based on an area of 4 persons per square meter, or 2.7 square feet per person—a standard that most riders would find very uncomfortable (at this density contact with other persons is unavoidable). Moreover, the Transportation Research Board's Transit Capacity and Quality of Service Manual (1999) notes that, "High-speed bus service on busways and HOV lanes should not allow standees, so capacity calculations should assume that every passenger may be seated".

The Project Team's analysis relative to Dulles Plan B showed that, while increased use of the HOV lanes could have benefits, the other proposed "private" transit modes were either not feasible, or would not be as beneficial as suggested in Dulles Plan B.

As was shown in Table 6.2-1 of the Draft EIS, projected use of the HOV lanes on the Dulles Toll Road would not have been expected to change from current usage, either under the No-Build or the Build Alternatives, while traffic in the general purpose lanes would have increased, exceeding the capacity of these lanes. If travelers who currently drive alone could be encouraged to rideshare, then it is likely that traffic capacity in the HOV lanes could be increased.

However, there would have been numerous issues associated with incorporating just-in-time ridesharing zones near BRT stations. If the rideshare zones were located along the outer edges of the Dulles Toll Road, they would have likely obstructed interchange ramps, and after picking up passengers drivers would have had to weave across three lanes of traffic to access the HOV lanes because it is not feasible to locate the HOV lanes along the right-hand side of the travel way. In addition, it would have not been possible to add rideshare zones along the Toll Road without expanding the roadway, because the aggregate width of the BRT stations, the six-lane DIAAH, and the Toll Road, including shoulders, uses all of the available right-of-way along the Toll Road. This expansion would have had substantial costs and impacts.

Moreover, due to liability risks, neither the Project Team nor VDOT could have developed facilities with the express purpose of encouraging just-in-time ridesharing. While these agencies recognized the benefits that have been gained in the I-95/I-395 corridor through this informal ridesharing arrangement, the random pairing of drivers and passengers inherent in this form of commuting presents risks that most public agencies are not prepared to assume.

Numerous physical, technological, and social issues may have limited the ability to implement high-occupancy toll lanes in the Dulles Corridor. The analysis also showed that high-occupancy toll lanes might not have had substantial mobility benefits in the corridor. If solo drivers were allowed to use the HOV lane for a fee, then it would have been very likely that a large percentage of the HOV lane users in the Dulles Corridor would be single-occupant vehicles, reducing the average vehicle occupancy in the HOV lane. Therefore, increased use of the HOV lane under a high-occupancy toll system would have resulted in minimal increases in the lane's person-moving capacity, and could result in a reduction in the lane's person-moving capacity.

A detailed response for Dulles Plan B was attached in Appendix F of the Draft EIS Public Hearings Report (October 2002). The response addressed the range of alternatives proposed in Dulles Plan B, as well as several assertions made on the website regarding the costs, capacity, and abilities of bus rapid transit and Metrorail.

More Consideration of Toll Facilities is Needed

Public Comment: We request that the next round report on the effect of transit demand and Toll Road economics of High Occupancy Toll lanes for single-passenger drivers who wish to pay for the use of HOV lanes in peak hours. (0162, 0162-T –15)

Public Comment: We request a next-round report on the effect of transit demand and Toll Road economics of high occupancy toll for single passenger drivers. (0184, 0184-T –12)

Public Comment: At the same time we could also have something called congestion toll, which is happening out in California where people who want to use the express lanes but do not have high occupancy participation in their vehicles pay an additional toll to drive on the express areas. (0252, 0252-T –7)

Response: *The issues associated with implementing a high-occupancy toll system in the Dulles Corridor and the possible benefits of such a system had been explored as part of the Project Team's review of Dulles Plan B during the public comment period of the Draft EIS.*

As the owner and operator of the Dulles Toll Road (and other major HOV facilities in the region), it would be VDOT's responsibility to fully evaluate and implement any proposals that allow travelers driving alone to use the HOV lanes during peak hours for a fee ("value pricing"). Such value pricing systems would require in-depth study. Issues include the lack of space for barrier-separation, technological challenges associated with a non-barrier-separated system, and equity considerations.

The Project Team's analysis relative to Dulles Plan B also showed that high-occupancy toll lanes might not have substantial mobility benefits in the Dulles Corridor. To remain an attractive alternative to the general traffic lanes, the HOV lanes on the Dulles Toll Road should not operate at their maximum level of capacity. If operated at 80 percent of their hourly capacity (a level that provides for congested, but relatively free flowing traffic—see Table 6.1-1 in the Draft EIS), each lane could support 1,920 passenger cars in the peak hour—an increase of only 720 cars over the current and projected use of the HOV lanes in the peak hour (1,200 cars per hour in the peak). With average vehicle occupancy of 2.2 persons per vehicle, the HOV lanes currently support 2,640 persons per lane (2.2 X 1,200) during the peak hour. If realistic vehicle occupancy assumptions were applied for different high-occupancy toll scenarios (approximately 1.5 to 1.6 persons per vehicle if single-occupant vehicles are allowed to use the HOV lane), each lane would support approximately 2,880 persons per hour (1.5 X 1,920) to 3,072 persons per hour (1.6 X 1,920). This volume would only constitute an increase of 200 to 450 persons per hour over the current peak usage of the HOV lanes.

Moreover, it would have been very unlikely that incentives to increase HOV use would have only appealed to people who previously used the general traffic lanes. It would have been much more likely that some of the new HOV users would be persons that would have otherwise used the transit system, reducing the demand for transit in the corridor.

Public Comment: We request the issue of the maximum capacity of the HOV lanes be addressed because we think 4000 passengers per hour can be put on the toll roads, which is the projected transit demand for EIS in Dulles corridor. (0184, 0184-T –13)

Public Comment: We request that the issue of the maximum capacity of the HOV lanes be addressed based on experience with I-95 and I-395, where throughputs of 4,000 passengers per peak hour are being achieved even though half the vehicles are noncompliant. 4,000 passengers per peak hour is higher than the transit demand being projected by the EIS for the Dulles Corridor. (0162, 0162-T –16)

Response: *The maximum capacity of HOV lanes and the projected peak hour demand for Metrorail had been explored as part of the Project Team's review of Dulles Plan B during the public comment period of the Draft EIS.*

For freeway facilities with a free-flow speed of 70 to 75 miles per hour (posted speed 65 miles per hour), the Transportation Research Board's 2000 edition of the Highway Capacity Manual assumes a maximum capacity of 2,400 passenger cars per lane per hour. However, the manual notes that facilities are rarely designed to operate at their maximum capacity, because operations are generally poor at this level of service, and prone to highly variable speeds and backups. Therefore, in order for the HOV lanes to remain an attractive alternative to the general traffic lanes, they should not operate at their maximum level of capacity.

If operated at 80 percent of their hourly capacity (a level that provides for congested, but acceptable traffic flow—see Table 6.1-1 in the Draft EIS), each lane could support 1,920 passenger cars in the peak hour—an increase of only 720 cars over the current and projected use of the HOV lanes in the peak hour (1,200 cars per hour in the peak). With vehicle occupancy of 2.2 persons per vehicle, each HOV lane could support an additional 1,584 persons per hour over the current peak usage of the HOV lane (2,640 persons per lane per hour). Total passenger capacity of the HOV lane in the peak hour would be 4,224 persons (2.2 X 1,920).

Transportation systems must be designed to support the demand expected during the "peak of the peak," even though this may result in under-utilization of capacity for the rest of the peak period. For the LPA's Alignment T6, this "peak of the peak" demand requires that the system have enough capacity to support 7,540 passengers in the peak direction, in the peak hour for operations in the corridor; the Metrorail Alternative provides a capacity of 9,600 passengers per hour in the peak direction. The peak demand for Metrorail is much higher than the capacity provided by the HOV lane in the peak direction.

Consider "Just In Time" Carpooling

Public Comment: We request the study of Just in Time ridesharing zones to be placed near the pedestrian overpasses, and a forecast of the increase in passenger capacity from the HOV lanes from this step. Dulles Plan B projections are that the public/private transit mix on the Corridor can approach 50/50 and that rail will never be needed. (0162, 0162-T –17)

Public Comment: We request a study of just-in-time ridesharing zones be placed nearer the pedestrian overpasses because we think that a mix of public-private transit can approach 50-50 and that rail will never be needed. (0184, 0184-T –14)

Public Comment: One of the things we think would be a better idea is the BRT, along with some other plans that we might want to look at, and that is at the same time providing the BRT, a switch to subsidized transit, along with private unsubsidized transit. In other words, at BRT stations and other stations that link to the BRT, have what we call just-in-time ridership areas, where vehicles who only have one individual in them can pull up into the station area and take on additional riders. (0252, 0252-T –6)

Response: *BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

The issues associated with implementing just-in-time ridesharing zones in the Dulles Corridor and the possible benefits of increased HOV use in combination with BRT had been explored as part of the Project Team's review of Dulles Plan B during the comment period of the Draft EIS.

Neither the Project Team nor VDOT could develop facilities with the express purpose of encouraging just-in-time ridesharing (also known as "slugging" or casual carpooling) because of the tremendous liability risk associated with such activities. While these agencies recognize the benefits that have been gained in the I-95/I-395 corridor through this informal ridesharing arrangement, the random pairing of drivers and passengers inherent in this form of commuting presents risks that most public agencies are not prepared to assume.

Moreover, there would be numerous issues associated with incorporating just-in-time ridesharing zones near BRT stations. Zones could either be accessed from the DIAAH or from the Dulles Toll Road. It would not be practical to access rideshare zones from the DIAAH, because the roadway is currently restricted to airport-only traffic. If additional access points were provided for HOV drivers, it would be difficult to enforce use of the roadway. If the zones were located along the HOV lane at the inner edges of the Dulles Toll Road, they would require a left-hand merge and diverge maneuver. The American Association of State Highway and Transportation Officials (AASHTO) discourages designs that require left-hand merge and diverge maneuvers, and in this

case such maneuvers would need to be performed by private vehicles at frequent intervals. If the rideshare zones were located along the outer edges of the Dulles Toll Road, they would likely obstruct interchange ramps, and after picking up passengers drivers would have to weave across three lanes of traffic to access the HOV lanes because it is not feasible to locate the HOV lanes along the right-hand side of the travel way. In addition, it would have not been possible to add rideshare zones along the Toll Road without expanding the roadway, because the aggregate width of the BRT stations, the six-lane DIAAH, and the Toll Road, including shoulders, uses all of the available right-of-way along the Toll Road. This expansion would have had substantial costs and impacts.

The Project Team's analysis relative to Dulles Plan B also showed that increasing use of the HOV lanes would have not dramatically increase the person-moving capacity of the corridor. For freeway facilities with a free-flow speed of 70 to 75 miles per hour (posted speed 65 miles per hour), the Transportation Research Board's 2000 edition of the Highway Capacity Manual *assumes a maximum capacity of 2,400 passenger cars per lane per hour. However, the manual notes that facilities are rarely designed to operate at their maximum capacity, because operations are generally poor at this level of service, and prone to highly variable speeds and backups. Therefore, in order for the HOV lanes to remain an attractive alternative to the general traffic lanes, they should not operate at their maximum level of capacity.*

If operated at 80 percent of their hourly capacity (a level that provides for congested, but acceptable traffic flow—see Table 6.1-1 in the Draft EIS), each lane could support 1,920 passenger cars in the peak hour—an increase of only 720 cars over the current and projected use of the HOV lanes in the peak hour (1,200 cars in the peak hour for all alternatives—see Table 6.2-1). With vehicle occupancy of 2.2 persons per vehicle, each HOV lane could support an additional 1,584 persons per hour over the current peak usage of the HOV lane (2,640 persons per lane per hour). Total passenger capacity of the HOV lane in the peak hour would be 4,224 persons (2.2 X 1,920).

To determine whether the maximum person-moving capacity provided by the combination of BRT and increased HOV use would meet the demand projected for Metrorail, it is necessary to know the maximum passenger load forecast for the peak hour. Transportation systems must be designed to support the demand expected during the "peak of the peak," even though this may result in under-utilization of capacity for the rest of the peak period. For LPA Alignment T6, this "peak of the peak" demand requires that the system have enough capacity to support 7,540 passengers in the peak direction, in the peak hour for operations in the corridor; the Metrorail Alternative provides a capacity of 9,600 passengers per hour in the peak direction.

The Project Team's analysis relative to Dulles Plan B showed that the BRT Alternative with increased vehicle capacity, when combined with increased use of the high-occupancy lanes on the Dulles Toll Road, did have the physical capacity to support the peak demand projected for the Metrorail Alternative, though it was not a 50/50 split between capacity provided by BRT and increased capacity provided by the HOV lane.

However, capacity would not have been what truly limited the ability of BRT in the Dulles Corridor to serve the same level of demand as Metrorail. BRT would not have had the same "drawing power" as Metrorail because of a combination of other factors:

- *BRT forces travelers bound for Arlington and the Core to transfer at the Orange Line (or at Tysons West for BRT/Metrorail).*

- *BRT does not provide a direct connection to Tysons Corner. It requires travelers to transfer to another feeder system before reaching their final destination in Tysons Corner.*

However, the BRT operating plans did include capacity enhancements needed to meet the anticipated demand for BRT, such as bus platooning, and 'express' service patterns that do not stop at each station.

Dulles Airport Station Access

Public Comment: If you're on a rail and you're traveling to National Airport, check it out. The station is still quite distant from the airline that you want to get to. And you get off and you carry your heavy luggage on a hot day like this some distance to the airline. BRT, because it is a bus-based system, can deliver you, with customized routing, directly to the door of your airline. And, in fact, if you liberate yourself from the confines of the EIS, you can see that with BRT, you can customize routes so you don't have to go to West Falls Church, you can get on at Reston and go straight to 12th and Penn or straight to the Pentagon, and you start to create a regional rapid transit potential. Because this is so much cheaper, you can have many more miles of routes. You can reach out to many more places. (0138, 0169-T –6)

Response: *BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Issues relating to the stop location at Dulles Airport had been explored as part of the Project Team's review of Dulles Plan B during the comment period of the Draft EIS.

As had been proposed, neither BRT nor Metrorail provided direct access to the arrival and departure levels at Dulles Airport. Both would have connected to the terminal face along the existing Commercial Roadway. The BRT stop would have been immediately adjacent to the face of the terminal, while the center of the Metrorail platform is approximately 193 feet from the face of the terminal to preserve MWAA's ability to construct its automated people mover system.

Support Plan B

Public Comment: I find after listening to tonight's talk that I support plan B, the Dulles plan B, the bus rapid transit. I support paying for the toll road, paying it off, paying the debt and freeing it, as we promised we would. And I'm American and I support our process. (0191, 0191-T –7)

Response: *Your participation in the public meetings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in the selection of the Locally Preferred Alternative). BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Support Express Bus Services

Public Comment: As a Kings Park resident, I can extol the virtues of I-395 express buses that whisk me and my neighbors door to door non-stop to the Pentagon metrorail. In contrast to suburban metrorail parking garages, express buses make reduced car ownership possible, eliminate a time-consuming and disruptive mode transfer from car to rail, and reduce environmentally unfriendly impervious surface area. In short, I advocate for Herndon, Reston and Loudoun residents what Kings Park residents enjoy, which are express buses. And let me repeat, that's existing express buses, decidedly not BRT, which force time-consuming, disruptive mode transfers and park-and-rides. (0134, 0134-T –8)

Response: *Express bus service currently exists in the corridor and has been included as part of the No-Build Alternative. The Draft EIS and Final EIS compares the beneficial and adverse effects of providing a higher level of transit service in the corridor than the express service of the No-Build Alternative.*

Interface with Route 28 Light Rail

Public Comment: THE ISSUE OF INTERFACING DULLES RAIL WITH ROUTE 28 LIGHT RAIL SHOULD BE DEVELOPED. The DEIS discusses light rail on Route 28 (without mentioning the provision in the Fairfax County Plan), but does not attempt any accommodation between Dulles Rail and light rail since no state studies have been completed that identify station locations. That is a superficial response for such an important issue, and the FEIS should make key assumptions based on known facts that would result in a compatible interface with a future light rail system. VDRPT has published conceptual drawings and a brochure about light rail in the Route 28 corridor that the FEIS could consider. One basic issue is surface or elevated light rail system on Route 28 in the vicinity of the Route 28 Metro station. (0197, 0197-M –3)

> ***Response:*** *The potential for connections to a future Light Rail Transit system on Route 28 have been considered in the development of the Full LPA. The design of the Route 28 Station does not preclude future connectivity to a Light Rail Transit system on Route 28. However, under the requirements of NEPA, the evaluation of the Full LPA must consider the impact of other projects that are reasonably foreseeable. Since Light Rail on Route 28 is only in the very early planning stages and has not been studied in detail, nor is it on the regionally adopted Constrained Long Range Plan at this time, no definitive alignment has been established for the transit improvement.*

Further Extensions of Rapid Transit and Roadways

Public Comment: I urge the WMATA and VA Transportation boards to make provisions/allowances for an eventual extension of the rapid transit line from the West Falls Church Station down Route 7 to Seven Corners, Bailey's Crossroads, and Skyline (with a possible extension). This area cries for a rapid transit system, and it would make good sense to serve these high-density areas with their large shopping centers, as well as providing a connection with the Orange Line into the District. (0004, 0004-L –3)

Public Comment: I support BRT in the Dulles Corridor as well as along I-66 from the Vienna Metro out to Haymarket with corresponding BRT stations at Route 123, Fair Oaks, Fairfax Pkwy, Route 28, Compton Rd, Route 234 Business, Route 234, PW Pkwy, Route 29, and finally Route 15. Furthermore, this I-66 line and the Dulles line should intersect BRT lines that operate along the Beltway, Fairfax Parkway, Route 28 and the PW Parkway in dedicated HOV lanes. Where these concentric lines intersect VRE, there should be major stations to facilitate intermodal transfers. In time, select BRT lines could be upgraded to light rail as needed. (0408, 0408-E –1)

Public Comment: Regarding the transportation for Metro, I think the Metro should come all the way to Leesburg, and I think that consideration should be given for future extension of Metro Leesburg West, because you are growing, we're not shrinking, and there's a need even west of Leesburg at this time. Definitely, it should come to Leesburg. (0419, 0419-T – 1)

Public Comment: This county has the density of an urban area with the transportation infrastructure of lightly developed suburban area. We need an urban style transportation network with multiple modes of transportation, through and local routes, primary, secondary, and tertiary roads, and logical connecting nodes. (0007, 0007-E –3)

Public Comment: Virginia seems to be asleep at the wheel when it comes to mass transit of any kind. How can you explain to commuters why we are still paying tolls on the Dulles Toll Road? How come Virginia could not expand the Dulles Toll Road but a private partnership could? Why hasn't the Metrorail (Orange Line) on I-66 ever moved one inch since it was completed? Why do they continue to build additional parking garages at the Vienna stop instead of adding more rails? Don't you wonder where all these cars are coming from? (0123, 0123-L –2)

Public Comment: Instead of adding more HOV's and continue the bottomless pit at the Springfield interchange, why didn't Virginia take these funds and expand Metrorail from Vienna to at least Front Royal? Why isn't there a transit system down Dulles Toll Road? Why has nothing been developed down

Route 7 from Leesburg to the Tyson Corners area? Why is there no transit system down Route 28 from Route 7 to Manassas? Can you explain why the only ideas Virginia can seem to come up with for transportation is more HOV's, Toll lanes, and larger interchanges? These are all fruitless and way outdated even before they have been completed. Why is there not a partnership between Virginia and corporations to insure that the transit systems are in place and the commuters can reach their place of employment in a timely manner? The states need to provide some kind of incentive to the corporations in order to receive funds to assist in the building of mass transit. (0123, 0123-L –3)

Public Comment: And so I truly hope that, from my perspective, what would benefit this area would be, number one, extend Metrorail all the way fully to Dulles Airport, as part of a unified Metro system. Once that has fully occurred, then I believe we can look at extending, for example, the Route 28 roadway in Loudoun County, across the Potomac River, through Montgomery County. I realize there may be some opposition in Montgomery County, but that could be performed as a limited access highway, for example. That would, in turn, take, I believe, a great deal of pressure off of the Beltway for some time. (0036, 0275-T –2)

Public Comment: And I believe once we have extended Metrorail and the Leather Bridge crossing, that that would be the appropriate time, for example, to consider widening the Beltway. But I don't believe- I'm certainly all for planning, but I don't believe we should move forward with concepts of widening the Beltway and more highways at this time. (0036, 0275-T –3)

Public Comment: How, where and when various corridor and transit modes and strategies best fit into the region's transportation system in the next 25 years isn't clear. A full 24-mile extension, rail extension to eastern Loudoun, may be viable in 2025. Is it needed by 2010? Do better investments exist in the interim? The DEIS doesn't tell us. (0446, 0146-T –4)

Public Comment: Meanwhile the public money saved can go toward expanding the beltway, making Rt. 7 a freeway from Tyson's Corner to Leesburg, and finally turning Rt. 28 into a full freeway. (0299, 0299-E –4)

Public Comment: Many commuters are from MD. How long before rail is available along the beltway to service them & reduce such congestion. (0049, 0049-CC-3)

Public Comment: At such time as the technology and economic feasibility of internal, short haul people mover systems develops, there may be opportunities to implement such systems to serve the rail transit stations in the most intensely developed urban activity centers. (0088, 0211-M –13)

Public Comment: I would also like to voice my support of any future plans to build a Metro station at Centreville Road off I-66 (or, alternately, a station in Manassas), which will alleviate the congestion going into the Vienna Metro station. (0229, 0229-E –2)

Public Comment: Second, extend route 28 in Loudoun County over the Potomac to route 270. Only then, should serious consideration be given to widening the beltway (I495). (0036, 0036-CC-2)

Public Comment: If we had considered a right of way for rail on Route 28 15 years ago, and that was a potential possibility now, perhaps we'd be talking to Maryland about a rail alignment along a potential techway alignment that would link two entities, it would link by rail, and I think would be very favorable for many politicians in Maryland and Virginia as well. (0242, 0242-T –2)

Public Comment: In Mount Vernon, the Citizens Council voted unanimously last fall for an Elevated Monorail from the Beltway to Fort Belvoir. The cost will be much lower than for a Metro line, and it does not involve the loss of two highway lanes. Traffic congestion along Northern Virginia highways warrants prompt action with a program that will be effective. The VDOT plan to widen Richmond Highway to 8 lanes is not acceptable. It will cost billions, take several years to complete, and cause a loss of property for many businesses already suffering with shallow lots. An Elevated Monorail to connect from the Beltway to the new National Army Museum at Fort Belvoir will be good start on a transportation program

that will be paid for almost entirely by the commuters that use it, not by other taxpayers. (0271, 0271-L – 1)

> ***Response:*** *The Project Team considered rapid transit improvements within the Dulles Corridor as documented in Appendix H of the Final EIS and in the Final Alternatives Analysis Report (May 2001). Alignments outside the Dulles Corridor have been beyond the scope of the study. Other transportation improvements (both highway and transit) outside the Dulles Corridor are recommended in the Northern Virginia 2020 Plan, Statewide Transportation Plan, and local comprehensive plans and are being pursued by VDOT, DRPT, and others. This program of improvements has been intended to increase mobility and address the existing and potential future deficiencies in Northern Virginia.*

Purpose and Need for Transit Improvements

Public Comment: How, where and when various corridor transit modes and strategies best fit into the region's transportation system in the next 25 years isn't clear. A full 24-mile rail extension to eastern Loudoun County may be viable by 2025. Is it needed by 2010? Do better investments exist in the interim? The DEIS doesn't tell us. (0446, 0218-M –3)

> ***Response****: Chapter 1 of the Final EIS describes the purpose and need for the Full LPA and the Wiehle Avenue Extension in the Dulles Corridor. The data presented in Chapter 6 of the Final EIS documents that transit improvements are needed in the corridor.*

Need for an Integrated System

Public Comment: Our local governments have already taken many steps and all concerned need to work carefully to maximize the possibilities and encourage future growth in transit ridership beyond the projections outlined by using innovative development approaches in these areas and also by creating an integrated system that involves feeder bus lines, kiss-and-rides, pedestrians, bike paths, and some of the other things that are going on here and elsewhere in the country. (0244, 0244-T –5)

> ***Response:*** *The Project Team agrees. These measures are discussed throughout the Final EIS and are recognized by the two counties, VDOT and DRPT.*

Consider Innovative Technologies

Public Comment: Concerned that the build alternatives discount cutting edge technology (Maglev) as not practical. Proposes that there should be two systems in the corridor—an express MagLev system serving Tysons, Arlington, and Union Station and another system with a loop around Tysons and a station common with the East or West Falls Church. This system would provide express service to Dulles Airport and local service to the Reston, Herndon, and Tysons Corner areas. Using this technology would expand the area's reputation. Supports MagLev over heavy rail as the best option for rail in the so-called high-tech corridor. (0495 2-01)

> ***Response:*** *As a proven technology via the German Transrapid system, Maglev (or magnetic levitation) is an inappropriate technology given the short distances between the corridor activity centers. Maglev is operated by non-contact electromagnetic systems that actually lift, guide, and propel the vehicle forward at speeds up to 300 miles per hour. This technology is usually used for long distances and offers an alternative for travelers between large urban areas of up to 600 miles. It also serves as a substitute for short-haul air trips. In order to reach the maximum operating speeds, the Maglev technology requires large distances between stations and/or stops. Maglev is not considered a feasible technology for this project since there are short distances between stations, consequently the true benefits of Maglev would never be realized in the corridor. There is a Federal initiative for urban maglev technology, but the systems are in the research and development stage.*

Need for Other Regional Improvements

Public Comment: And I believe once we have extended Metrorail and the Leather Bridge crossing, that that would be the appropriate time, for example, to consider widening the Beltway. But I don't believe- I'm certainly all for planning, but I don't believe we should move forward with concepts of widening the Beltway and more highways at this time. (0036, 0275-T –3)

Public Comment: And so I truly hope that, from my perspective, what would benefit this area would be, number one, extend Metrorail all the way fully to Dulles Airport, as part of a unified Metro system. Once that has fully occurred, then I believe we can look at extending, for example, the Route 28 roadway in Loudoun County, across the Potomac River, through Montgomery County. I realize there may be some opposition in Montgomery County, but that could be performed as a limited access highway, for example. That would, in turn, take, I believe, a great deal of pressure off of the Beltway for some time. (0036, 0275-T –2)

Public Comment: Second, extend route 28 in Loudoun County over the Potomac to route 270. Only then, should serious consideration be given to widening the beltway (I495). (0036, 0036-CC-2)

> ***Response****: The Project Team considered rapid transit improvements within the Dulles Corridor as documented in Appendix H of the Final EIS and in the Final Alternatives Analysis Report (May 2001). Alignments outside the Dulles Corridor have been beyond the scope of the study. Other transportation improvements (both highway and transit) outside the Dulles Corridor are recommended in the Northern Virginia 2020 Plan, Statewide Transportation Plan, and local comprehensive plans and are being pursued by VDOT, DRPT, and others. This program of improvements has been intended to increase mobility and address the existing and potential future deficiencies in Northern Virginia.*

B. Supplemental Draft EIS Comments

State Agency Comments

Alternatives Should Not Preclude an Eventual Integrated System

State Comment: The document should ensure that any of the Dulles Corridor Rapid Transit stations proposed in Tyson's Corner or at Dunn Loring on the Orange Line will not preclude a future integration of the regional system. It would be desirable that the Supplemental Draft Environmental Impact Statement addresses how a future Beltway rapid transit system could connect to the Dulles system including passenger transfers, station platforms, and vehicle layover. Right-of-way should be preserved at the proposed Dulles Corridor Rapid Transit Stations to accommodate the future Beltway Corridor system. (0079 0092-1)

> ***Response:*** *Montgomery County has clarified its request that the Dulles Corridor Rapid Transit Project recognize to the extent possible the interface between the Project and a future Beltway rapid transit system. In response, the Project Team has inserted a figure in Chapter 1 of the Final EIS to serve as a reminder and starting point for future planning.*

General Bus Improvements

State Comment: "…the movement from the toll road ramp to Wiehle Ave approach is difficult." Please investigate bus routing plans that will reduce the impacts on the toll road ramps. An alternative to alleviate traffic congestion associated with the end of the line station for Phase 1 could be to build a direct access ramp to the station to route traffic from the eastbound toll road off-ramp to the station. (0091 0106-12)

> ***Response:*** *Based on the results of the Supplemental Draft EIS, the Project Team examined additional measures to limit the impact of the bus movement between the Dulles Toll Road and the Wiehle Avenue Station northside facilities.*

- *New left-turn lane northbound on Wiehle Avenue;*
- *New left-turn lane to the eastbound Dulles Toll Road exit ramp;*
- *New entry for bus ingress to the northside station facilities from the westbound DTR entry ramp;*
- *New acceleration lane for bus egress from the northside station facilities to the westbound DTR;*
- *Widening of Sunset Hills Road between Wiehle Avenue and Isaac Newton Square and provide new left-turn lane; and*
- *Improvements to private roadway south of Sunset Hills Road to VDOT standards;*
- *Addition of bus bays on eastbound DTR exit ramp; and*
- *Rearrangement of express bus routes to reduce the number of buses turning left from the eastbound DTR exit ramp.*
- *Incorporation of a bus-only exit and entry driveways on the westbound entry ramp to serve the northside facilities*

A direct access ramp into the station was not considered because it was not deemed cost-effective for a station that would be an interim terminus.

Regional Agency Comments

Consider Premium Bus Service

Regional Comment: The Airports Authority supports the concept of Premium Bus Service as an interim measure that would provide non-stop service on 15-minute headways between the Wiehle Avenue Station and the Main Terminal, Washington Dulles International Airport. (0131 0166-2)

Response: *The service structure noted in the comment reflects the proposed service structure identified in the Final EIS.*

Local Agency Comments

Feeder Bus Consideration

Local Comment: Table 6.1-4 FCDOT commented on the DEIS that during peak periods, Connector bus service would have no greater than 30 minute headways. (0093 0109-2)

Response: *A small number of Fairfax Connector services in the corridor will have service frequencies greater than 30 minutes, though the predominant majority of the services will have frequencies at 30 minutes or below.*

Public Comments

Suggested Alternative Tysons West Station Locations

Public Comment: One thing I do notice on a daily basis is the Security Storage building that sits between the Tysons' Toyota dealership and the new Porche / Audi dealership…It's been up for lease for months...Not sure if it fits into the plans, but it really wouldn't been affecting too many people now. (0159, 2-02)

Response: *A station facility at the site of the Security Storage building is distant from the station. The site had been proposed as the location for a major intermodal facility for the Metrorail/Bus Rapid Transit alternatives and a 2,000-space park-and-ride structure. When Metrorail was selected as the Locally Preferred Alternative, the need for the intermodal facility was eliminated. At that time, the Project Team also recommended a reduction in the amount of parking at this station to reduce anticipated traffic effects.*

Consider Premium Bus Service

Public Comment: The DEIS calls for "premium bus service" to minimize traffic and parking requirements at Wiehle. The primary parking area for this is to be Herndon/Monroe. Unlike current express bus services, these "premium buses" will not be able to use the un-congested middle lanes of the Dulles Airport Access Road, but must contend with inherent delays from peak hour traffic either on the Toll Lanes so they can exit at Wiehle or on local roads also filled with peak hour traffic. Do you really think people will drive to Herndon/Monroe only to board a bus so they can sit in rush hour traffic on the way to Wiehle? Won't it be faster to just take one of the existing express buses or avoid the bus altogether and drive straight to Wiehle? Under any circumstances, can being stuck in peak hour traffic be called "premium bus service"? (0038 0039-4)

Response: *The Corridor express bus service, formerly referred to as 'premium bus', would be designed to replicate service provided by the rail system west of Wiehle Avenue to the greatest degree possible. Given this, passengers would board the express bus service at each of the express bus stops in the corridor, including Route 772, Route 606 (Dulles North Transit Center), Dulles Airport, and Herndon-Monroe. Wiehle Avenue would be a major parking facility but there is space and planning constraints that limit the amount of parking that can occur there. The express bus service from Herndon-Monroe is envisioned as having a very high frequency shuttle to Wiehle Avenue for those drivers who would not be able to find a parking space at Wiehle Avenue. The intent is to make Herndon-Monroe a viable satellite facility through the provision of a very convenient shuttle service providing direct service into Wiehle Avenue. To support express bus, including this shuttle service, the following improvements at Wiehle Avenue Station and environs would be incorporated:*

- *New left-turn lane northbound on Wiehle Avenue;*
- *New left-turn lane to the eastbound Dulles Toll Road exit ramp;*
- *New entry for bus ingress to the northside station facilities from the westbound DTR entry ramp;*
- *New acceleration lane for bus egress from the northside station facilities to the westbound DTR;*
- *Widening of Sunset Hills Road between Wiehle Avenue and Isaac Newton Square and provide new left-turn lane; and*
- *Improvements to private roadway south of Sunset Hills Road to VDOT standards;*
- *Addition of bus bays on eastbound DTR exit ramp; and*
- *Rearrangement of express bus routes to reduce the number of buses turning left from the eastbound DTR exit ramp.*

Public Comment: Unlike the current express-bus service, these premium buses would not be able to use the uncongested middle lanes on the Dulles Airport Access Road but must contend with the inherent delays from peak-hour traffic either on the toll lanes so that they can exit at Wiehle Avenue or on local roads that would also be filled with peak-hour traffic. I don't think we can really expect people to drive to Herndon-Monroe, then board a bus only so they can sit in some traffic during rush hour on the way to Wiehle. I suspect that it will be a lot faster for them to take existing express buses directly to their destination or avoid buses altogether and drive straight to Wiehle. (0038 0088-1)

Response: *Corridor express bus service, formerly referred to as 'premium bus', will use the right lane of the Dulles Toll Road in order to access the Wiehle Avenue Station from the Herndon-Monroe stop. To support express bus, including this shuttle service, the following improvements at Wiehle Avenue Station and environs would be incorporated:*

- *New left-turn lane northbound on Wiehle Avenue;*
- *New left-turn lane to the eastbound Dulles Toll Road exit ramp;*
- *New entry for bus ingress to the northside station facilities from the westbound DTR entry ramp;*
- *New acceleration lane for bus egress from the northside station facilities to the westbound DTR;*
- *Widening of Sunset Hills Road between Wiehle Avenue and Isaac Newton Square and provide new left-turn lane; and*
- *Improvements to private roadway south of Sunset Hills Road to VDOT standards;*

- *Addition of bus bays on eastbound DTR exit ramp; and*
- *Rearrangement of express bus routes to reduce the number of buses turning left from the eastbound DTR exit ramp.*

With regard to Herndon-Monroe, Wiehle Avenue will be a major parking facility but there are space constraints that limit the amount of parking that can occur there. The express bus service from Herndon- Monroe to Wiehle has been designed to be a very high frequency shuttle to Wiehle Avenue for those drivers who will not be able to find a parking space at Wiehle Avenue. The intent is to make Herndon-Monroe a viable satellite facility through the provision of a very convenient shuttle service providing direct service into Wiehle Avenue.

Public Comment: Where is the funding for this so called premium bus service coming from? Who will pay for this? (0038 0039-5)

Public Comment: I think there is also some question about where the funding for premium bus service would come from. (0038 0088-2)

Public Comment: This document is based on the ridership estimates. These ridership estimates come from the fact that there will be a premium shuttlebus service, yet nobody knows where the funding for that will come. (0062 0070-2)

Public Comment: The ridership projections appear to be pegged to the provision of a "premium bus" service. Who will provide that service, and how will it be paid for? (0063 0151-14)

Public Comment: What is the funding source for the premium bus service? (0107 0125-7)

Response: *The Corridor express bus service, formerly referred to as 'premium bus', would be the continuation of the existing bus services in the corridor operated by Loudoun and Fairfax counties. Capital costs for the express bus service are not included in the Project's capital cost estimate. Operating funding would rely on existing sources.*

Public Comment: The SDEIS invokes the concept of a premium bus service from the west to Wiehle Avenue. Detail what this service is—where it starts, how it avoids congestion, and what routes it is designed to replace. Will this premium service be in addition to, or in place of, current service? (0061 0117-19)

Response: *The Corridor express bus service, formerly referred to as 'premium bus', is a high quality service meant to replicate rail service to the greatest degree possible until rail is extended to Loudoun County in the second phase of the project. The service would mimic rail in terms of service to station areas served by rail (Route 772, Route 606, Dulles Airport, Herndon-Monroe, Reston Town Center, and Wiehle Avenue) service frequency, hours of service, and the fact that there would be high quality service in the reverse peak direction. The Corridor express bus service will not replace express service currently run by Loudoun County into Rosslyn and downtown Washington. No other service would be replaced.*

Public Comment: What is premium bus service? How many buses will be part of the premium bus service package? When will it be in full operation? (0107 0125-4)

Response: *Corridor express bus service, formerly referred to as 'premium bus', is a high quality bus service that is meant to replicate rail to the greatest degree possible until rail is extended to Loudoun County in the second phase of the project. The service would replicate rail in terms of service of areas served by rail, service frequency, hours of service, and the fact that there would be high quality service in the reverse peak direction. Service would run from existing Park-and-Ride lots. All service would run to Wiehle Avenue, with the exception of Loudoun County express bus service into Rosslyn and downtown Washington. The opening year of the service would be 2011 when the Wiehle Avenue Extension opens. The express bus service would require 22 buses to operate all proposed routes.*

Public Comment: What routes will be premium bus service take? The corridor? The minor arterials such as neighborhood streets? (0107 0125-5)

> ***Response:*** *Corridor express bus service, formerly referred to as 'premium bus', would run predominantly in the Dulles Greenway and the Dulles Toll Road. The services would run briefly on local streets to access the Greenway and the Dulles Toll Road from Park-and-Ride lots located near the Greenway or the Toll Road, and would also use local streets to access the Wiehle Avenue Station.*

Public Comment: What are the capital and operating cost of the premium bus service? (0107 0125-6)

> ***Response:*** *The incremental annual operating costs of corridor bus service in 2025 for the Wiehle Avenue Extension can be calculated from Table 6.1-13 of the Final EIS. For Fairfax County, the annual operating costs increase by $4.2 million in current 2004 dollars. For Loudoun County, the costs increase by $2 million in current 2004 dollars. Capital costs for express bus are associated predominantly with the purchase of new vehicles for the service and are approximately $43 million in year of expenditure dollars.*

Public Comment: How is the premium bus service different from the BRT alternative? How does it differ from a feeder bus system? (0107 0125-8)

> ***Response:*** *Corridor express bus service, formerly referred to as 'premium bus', would be similar to the BRT Alternative evaluated in the Draft EIS in that it would run at high frequency, use high capacity buses, would provide service not only in the peak direction but also in the off-peak direction, and would run during the same hours as Metrorail. The primary difference is that the BRT Alternative assumed rail-like stations in the median of the Dulles International Airport Access Highway. The Corridor express bus service would run in the Greenway and the right-lane of the Dulles Toll Road in order to be able to exit at Wiehle Avenue. In addition, the express bus stops would be 'off-line' meaning they would be located at existing or new park-and-ride facilities, with service accessing the Greenway and the Dulles Toll Road from these stops via local streets. Feeder buses are local services that pick up at multiple stops and then feed into a rail station. The express bus routes will feed into the Wiehle Avenue Station, but they are express services making a very limited number of stops before running to Wiehle Avenue.*

Public Comment: Is this the Premium Bus Service that is identified in the SDEIS for which no funding has been allocated? As the SDEIS has numerous references to Premium Bus Service and as the SDEIS was completely silent as to describing this service, its impact, and its cost, the funding source, please describe. A failure to include this information in the SDEIS and to have it available for the public hearing and for comment is a major defect in carrying out the NEPA requirement for rigorous review. Please explain why this important information was omitted. (0109 0128-16)

> ***Response:*** *The Corridor express bus service, formerly referred to as 'premium bus', was described in detail in Chapter 6 the Supplemental Draft ES. This description describes the express bus routes, stops, and service frequencies. Express bus annual operations and maintenance costs were described in Table 6.1-5 of the Supplemental Draft EIS and are described in Table 6.1-13 of the Final EIS. For Loudoun County, the express bus service running into Wiehle Avenue would replace existing express service that currently runs into West Falls Church but not that to downtown Washington. The funding for the express bus service from Loudoun would rely on the funds saved by partially replacing the current Loudoun County express service. The Fairfax County express bus would be comprised of the existing 920 services and 980 services, which currently run to West Falls Church and would terminate at Wiehle Avenue under the Wiehle Avenue Extension. The funding for these services would continue to be based on existing funding sources.*

Public Comment: Based on the project residential and commercial bonuses around the rail stations in Tysons Corner and at the Wiehle station, what is the number of bus riders who will use the Premium Bus Service? (0109 0128-7)

> ***Response:*** *The Project's ridership forecasts are based on regionally adopted population and employment forecasts for the opening and horizon years. The density bonuses associated with rail are not part of these regionally adopted forecasts and therefore were not calculated as part of the demand forecasting process for the Supplemental Draft EIS and Final EIS.*

Feeder Bus Consideration

Public Comment: An essential element of the design of each rail station in the Dulles Corridor is effective access via a well-developed feeder bus system. Each station must be carefully designed to assure that future expansion of feeder bus access can be readily implemented. Kiss and ride drop-off points must fit effectively into this mix. (0041 0042-9)

Public Comment: To the extent possible, exclusive feeder bus access lanes should be developed within at least a half-mile of station sites. Transit ridership will be severely reduced if traffic congestion makes the use of the feeder bus no more effective than the use of the private car. (0041 0042-10)

> ***Response****: The preliminary design of the station areas has incorporated these access and expansion principles into the General Plans to the extent possible. Facility improvements identified in the comment that are outside the immediate station areas of the project have become the responsibility of the Project.*

Public Comment: I urge that careful consideration be given to bus access between the Wiehle (initial end) station on this route and the Smithsonian Air and Space Dulles Center complex over and above usual feeder bus access. (0041 0042-11)

Public Comment: The Committee for Dulles also urges that consideration be given to bus access between the end of the rail system and the Steven Udvar-Hazy Center at the Dulles Airport, the new space museum (0067 0075-6)

> ***Response:*** *The Commonwealth of Virginia and the Smithsonian have developed a shuttle service that runs between the Air and Space Museum on Independence Avenue and the Udvar-Hazy Center. Additional services to the Center from Wiehle Avenue may be considered by Fairfax County.*

Public Comment: expansion and enhancement of feeder buses and shuttle systems between major employment centers and the Wiehle Avenue station; (0040 0078-2)

> ***Response:*** *Expansion of the feeder bus and shuttle systems to provide access between major employment centers and the Wiehle Avenue Station would be the responsibility of public transit providers, Fairfax and Loudoun counties, or the companies or institutions themselves.*

General Bus Improvements

Public Comment: I would also suggest that we need more buses. We need more comfortable buses, perhaps bigger buses. We need real-time information as to when the buses are coming. I understand that that is in the words. And we need signal prioritization to allow buses to get through traffic signals more quickly. (0076 0087-2)

> ***Response:*** *The Project Team has recommended that the existing transit service provided by Fairfax and Loudoun Counties be further enhanced beyond the bus rapid transit elements that have already been added. Prior to the opening of LPA Phase 1, additional bus rapid transit elements—including the expansion of the Herndon-Monroe park-and-ride lot (site of the future*

Herndon-Monroe Metrorail Station), ITS enhancements, and facility improvements—should be advanced.

Public Comment: With the concept of a transfer station at Wiehle Avenue in the SDEIS, specify what current bus routes—express routes that now go from Wiehle Avenue and points west directly to West Falls Church metro—will require a transfer to Wiehle Avenue and a forced trip through Tysons Corner. Specify what portion of the boardings or traffic in Tysons consists of passengers who would prefer to bypass Tysons to access the urban core directly. Revise the patronage figures for service thru Tysons to reflect the continuation of current direct express bus service to West Falls Church bypassing Tysons (no forced diversion to rail). Specify the travel time, presumably increased, for those users west of Wiehle who now use express bus service and would be forced to wait for a transfer at Wiehle and would be forced to travel thru Tysons even tho that is not their destination. The table of travel times in the DEIS needs to be completely revised. (0061 0117-20)

Response: *All services run by the Fairfax Connector that currently run into West Falls Church would be turned around at Wiehle Avenue after the implementation of the Wiehle Avenue Extension. There is no way to identify the preference of passengers regarding whether they would like to ride rail through Tysons versus taking a bus into West Falls Church without doing a rider survey. Because the bus portion of the project was defined such that all service would stop at Wiehle Avenue, that is how the ridership forecasting was conducted. The run time for rail from Wiehle Avenue to East Falls Church (the first rail station served by the Dulles service) would be approximately 15 minutes (with a transfer time of 2 minutes, the total trip would be about 17 minutes). Travel time from Wiehle to West Falls Church via the existing Fairfax Connector 980 service is about 15 minutes. However, people are still forced to transfer to rail at West Falls Church, thus also adding a 2-minute transfer time to this trip time.*

Public Comment: The projection of 20- and 30-minute frequencies for any commuter bus service is unrealistic and inadequate for attracting and maintaining most riders in this region (see description of bus routes at 2-10). (0068 0173-11)

Response: *The core Corridor express bus service, formerly referred to as 'premium bus', would run every six minutes in the peak direction, the same as Metrorail service. This service would be supplemented by two 30-minute services running to Dulles Airport (for a combined frequency of 15 minutes). The 20 minutes noted by the commenter are in the reverse peak direction, which is a much higher level of service than exists today.*

Public Comment: Will funding for Phase 1, if it occurs, be used to finance bus service that meets LOS needs and short-time demands of commuters by access to the Dulles Toll Road Access Road ("Access Road) in order to avoid massive gridlock that is prevalent, both during and not during rush hours? (0068 0173-5)

Response: *The Corridor express bus service, formerly referred to as 'premium bus', in the Supplemental Draft EIS would be a high quality service meant to replicate rail service to the greatest degree possible until rail is extended to Loudoun County in the second phase of the project. The service would replicate rail in terms of service to station areas served by rail, service frequency, hours of service, and the fact that there would be high quality service in the reverse peak direction. The service has been designed to be as attractive as possible to auto drivers, and therefore it is the intent that the service will relieve some congestion by attracting auto drivers to transit.*

Public Comment: Will the cost of bus service be cumulative with rail service, or will those bus users be penalized by having to pay an additional fee? What is the fee? (0068 0173-6)

Response: *Corridor express bus service, formerly referred to as 'premium bus', would not be considered an extension of the Metrorail system, as BRT had been in the Draft EIS. Therefore, passengers will pay a bus fare and pay a Metrorail fare. In other words, the extension of rail into*

the Dulles Corridor would not change the relationship between local bus fares and Metrorail that exists today.

Multi-Modal Alternatives

Public Comment: What this region needs is not more rail, which only accommodates ONE mode and 2 percent of all trips, but more highways. A multi-modal network of express highways, bypasses and parkways can accommodate cars, trucks, buses, van pools, car pools and even bicycles. Stop trying to snow job us on all the wonderful thing Dulles Rail is going to do for us, because it's a big lie. (0016 0122-4)

Response: *Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in revising the LPA.*

Tysons Corner Issues

Public Comment: Digging a tunnel through Tysons Corner is wasteful as is placing four Metro stations there and it swallows precious prospective funding. (0068 0076-4)

Public Comment: If you really think rail is best alternative which, by the way, I don't agree with, but if you were to believe that, why would you not say, let's spend that $1.5 billion, why not start at West Falls Church, drop one station at Springhill Road, one station in Reston at Wiehle, on station at Herndon-Monroe, one station at Dulles Airport, get it to Route 772 and, according to the cost estimates that some people with whom I talk, the cost estimates that they come up with, you could do that, if you don't go through Tysons initially, if you just stub out and come back later and do those in-fill stations later on. (0072 0082-4)

Response: *The purpose of the Supplemental Draft EIS was to provide additional opportunities for the public and agencies to comment on refinements that have been made to the LPA since the publication of the Draft EIS. A number of alternatives and Tysons Corner alignments were evaluated in detail in the June 2002 Draft EIS and Section 4(f) Evaluation. Based on the analysis contained in the Draft EIS, public hearings held in July 2002, and comments received on the Draft EIS, the Metrorail Alternative (T6/Y15) was selected as the preferred alternative for the project by the Commonwealth Transportation Board and by the WMATA Board of Directors in late 2002. See Chapter 2 of the Draft EIS and Appendix H of the Final EIS for a discussion of previously considered alternatives.*

Public Comment: The option should be maintained to create an express track in the median of the airport's access road, which would enable airport and corridor travelers to save 17 minutes per trip by bypassing Tysons Corner. The key action at this point in the project's development is to sustain the option for future consideration once Phases One and Two are complete. (0108 0127-8)

Response: *During the public comment period of the Draft EIS,, the Project Team evaluated the suggested alternative using the same social, environmental, economic, and transportation factors used for the evaluation documented in the Final Alternatives Analysis Report (May 2001). This new alternative, called Alignment T12, was not recommended for further consideration in the Dulles Corridor Rapid Transit Project. The reasons for this recommendation are summarized below.*

Alignment T12 would have numerous deficiencies relative to the alternatives previously considered. These deficiencies include increased costs, substantial impacts associated with shifting roadways to accommodate the alignment, reduced ridership, and operational complications.

Overall, because it would have greater costs and fewer benefits than alternatives previously

considered in the Draft EIS, Alignment T12 was not recommended for further evaluation. The full evaluation for Alignment T12 is documented in a technical memorandum.

Vienna and Falls Church Options

Public Comment: Construct middle express track for reversible AM/PM flow. (0064 0152-1)

Response: *The different travel times between the express and local trains would have other operational complications, including possible train "bunching" where the Dulles Corridor line meets the Orange Line, or decreased service frequency through the western end of the corridor.*

Public Comment: We ought to create the Wye to Vienna so that people from the Vienna area or Fairfax or when and if they extend the Metro further west on 66 that those folks can get the vehicle without having to make the interchange and cross a platform at East Falls Church. (0064 0072-6)

Public Comment: Create wye to Vienna so that Orange line riders west of East Falls Church don't have to change trains and double back. (0064 0152-7)

Response: *The proposed LPA alignment does not preclude the eventual construction of two sets of tracks, inbound and outbound, that would provide a seamless connection to the Orange Line outbound of West Falls Church Station.*

Public Comment: We should construct a middle express track for reversible a.m/p.m. traffic from West Falls Church -- or from East Falls Church out to the airport or further. That will increase the capacity and make this trip much shorter. (0064 0072-1)

Response: *The limited amount of space in the existing median of the DIAAH would make the addition of a third "express" track cost prohibitive and have substantially more impact to the DIAAH, the Dulles Toll Road, the Dulles Connector Road and the adjacent communities. A third track would require realignment of practically the entire DIAAH, and a large portion of the DTR in each direction. There would also be substantial additional impacts in Tysons Corner to adjacent properties and roadways. Having a continuous third track would also significantly increase the cost of station facilities, as it would cause wider, split center platforms that would require additional vertical circulation facilities. The different travel times between the express and local trains would have other operational complications, including possible train "bunching" where the Dulles Corridor line meets the Orange Line, or decreased service frequency through the western end of the corridor.*

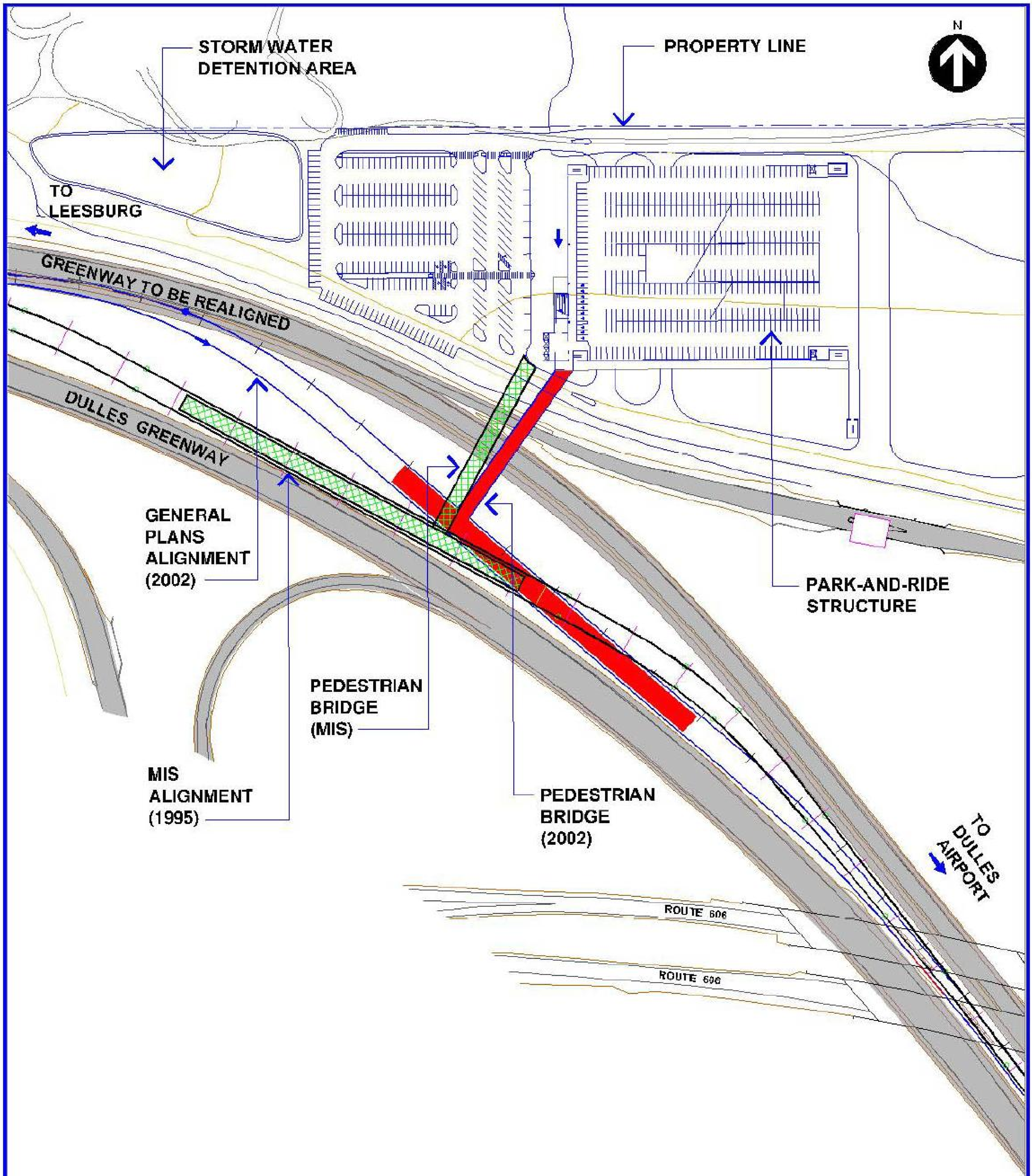


Figure J.2-1

Page J-2-263

Route 606 Station
Comparison of MIS Alignment and LPA Alignment

Dulles Corridor
Rapid Transit Project

3.0 SOCIAL EFFECTS

3.1 Land Use and Socio-Economics

A. Draft EIS Comments

Federal Agency Comments

Changes in Land Use and Zoning

Federal Comment: The project must include changes to land use policies and zoning that will support Transit Oriented Development in the project station areas. This should include higher allowable densities, a mix of uses, and compact walkable development patterns within a ½ mile radius of the stations. (049204)

> ***Response:*** *The change in development character in the corridor is discussed in Chapter 5 of the Final EIS. The analysis in the Final EIS addresses potential development at the proposed transit station areas. As stated in f the Final EIS, the land use plans adopted by local government within the Dulles corridor all contain guidelines to support transit, higher densities, mixed-use development, and walkable, bike-friendly development patterns in close proximity to the transit stations. The Project Team will work with the local government to support access to transit stations for pedestrians and cyclists and to implement transit-oriented development initiatives, although implementation of this form of development, including the provision of bike lanes, parking regulations, and demand management measures is under the jurisdiction of the local government. The proposed stations are designed to provide access to pedestrians, cyclists, and feeder bus services, as well as transit-oriented development that might be implemented in proximity to the stations.*

State Agency Comments

Potential for Future Air Rights Development at Stations

State Comment: The engineering for rail should allow for future air rights development. (0131, 0131-T-10)

> ***Response:*** *Proposed parking facilities will be the subject of continuing coordination with Fairfax and Loudoun counties during preliminary engineering. Station designs do not preclude construction of additional parking by others beyond the station facilities. With respect to air rights development above Metrorail stations in freeway medians, the Project Team acknowledges that the two Counties govern land use and that FAA, MWAA, VDOT and TRIP II, as the owners and/or operators of the DIAAH, Dulles Toll Road and Dulles Greenway, must be involved. Therefore, the Project Team will await any initiative of the two Counties with the involvement of the highway owners and operators.*

Local Agency Comments

Ability of Rail to Encourage Clustered Development

Local Comment: The Draft Environmental Impact Statement has laid out several viable alternatives. Close attention must be paid to the potential impacts of each to surrounding developments, especially residential. The road network in Tyson's Corner is at its limit. Important improvements can and will be made; however, the solution to Tyson's Corner's transportation problems is not in road expansion. And while there are some favorable characteristics of Bus Rapid Transit (BRT), there are clear advantages to rail: The capacity of rail is nearly four times that of buses and, under current proposals, no BRT stations would be located in the heart of Tysons Corner. Moreover, BRT has significant up-front costs and will not encourage the concentration of density at transit hubs, the way rail, with its built-in density triggers, will.

Rail will contain sprawl by creating a magnet for clustered development around stations and will maximize convenience to those living, working, and shopping in Tyson's. And, at a time when our region is struggling to meet EPA's ground-level ozone attainment requirements, rail transportation will improve air quality by removing the most drivers from the road. (0130, 0289-L –4)

> ***Response:*** *Comment noted. The Locally Preferred Alternative (LPA) is a Metrorail Extension. BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS. The LPA is described in more detail in Chapter 2.*

Public Comments

Land Use and Development at Station Areas

Public Comment: We think the photos are of concern in terms of the attitude of the EIS towards land use. In fact, all the photos have large parking areas and parking structures in them, none illustrating sort of a new urbanist fabric of community that we can have. (0149, 0180-T –12)

> ***Response:*** *It is assumed that this comment refers to the illustrations of station designs in Volume I of the Draft EIS. Stations need to accommodate multiple arrival modes, including pedestrian, feeder bus, and private autos. Each is important in building and maintaining ridership, and availability of daily parking is particularly influential in attracting riders that have a car available for a trip but choose to use transit. Providing such parking does not preclude transit-oriented development adjacent to stations; mixed-use, pedestrian-oriented, compact development can take place around and/or above parking areas. The Project Team will continue to coordinate station plans with adjacent development, in conjunction with VDOT, local governments, and adjacent property owners and developers throughout the Project's implementation.*

Public Comment: The Moorefield Station development to the south and the Loudoun Station to the north are currently being designed with the planned transit station as a focal point. The Loudoun Station plan directs major pedestrian and vehicular activity (via a "Kiss & Ride" and bus stops) toward a plaza opposite the platform, while Moorefield station is proposing an internal bus loop to connect the non-core areas with the station platform. (0014, 0014-L –10)

Public Comment: Reservation Area: The layout of the reservation area has changed as part of the charrette process and the property owners are dedicating 12 acres as shown for the transit station. Subject to the board of supervisor's land use approval of Moorefield Station, the final EIS should incorporate the revised land reservation, with the exact configuration subject to future design. The ultimate access should consider the provision of the separation of the local bus traffic from the public street system. Based on our engineer's review, the footprint shown in the DEIS station plans can be accommodated in the proposed reservation. (0451, 0451-L –6)

> ***Response*****:** *The design team has incorporated these comments into the final General Plans (Final EIS Volume V), based on a site plan provided by the owner/developer that includes a bus-only roadway adjacent to the Dulles Greenway. During preliminary engineering, the Project Team will continue to refine proposed station facilities at the Route 772 Station in coordination with Loudoun County and adjacent landowners and developers.*

Public Comment: We need to be much more proactive in dealing with the interrelationship in three dimensions of land use, the types of land use, the circulation patterns, pedestrian patterns, bicycle patterns, the vehicular patterns of all sorts, internal transportation. I would urge the local officials to put more emphasis on that. (088, 0172-T –10)

> ***Response:*** *Regulations concerning land use, including its relationship to circulation patterns, pedestrian patterns, bicycle patterns, vehicular patterns, and internal transportation are under the control of the local governments in the corridor. The Project Team will work with local*

jurisdictions to support them in implementing land use regulations and access patterns that are developed in proximity to the transit station platforms.

Public Comment: TMS is concerned that the construction of the BRT facilities, particularly the proposed parking structure and aerial bus bridge, bifurcates the substantial land area available for transit-oriented redevelopment, which has a domino effect on accessibility, ridership, and future operating subsidies of the transit system. In particular, creating an origination station in Tysons Corner through construction of a parking facility, particularly in that area, that currently has sprawling vehicle-oriented development, coupled with a permanent bus bridge, represents a substantial physical and psychological barrier to transit-oriented redevelopment within walking distance of the rail station and is inconsistent with the county's comprehensive plans. (0135, 0135-T –5)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS. Therefore, the Project no longer has effects on the TMS Property or Tysons Self-Storage.*

Public Comment: Reston East/ Wiehle Avenue Station - Whether by bus, metro or whatever, the Station and surrounding area destined for residential?, commercial?, parking? or all of these, must be a visual as well as functional planned architectural solution with the pedestrian in addition to the motorist in mind. As a twenty year resident of the adjacent South Lakes community, I feel fortunate Sunrise Valley Drive from Hunter Mill west to the Reston Parkway has remained so attractive with ample green space still surviving. Only the behemoth Siemens parking affair and associated building has spoiled the landscape. (0072, 0072-CC-1)

Public Comment: And if there are plans for major new facilities like terminals and parking on the sides of the roadway, is there a master plan that integrates that construction with commercial and residential construction? (0181, 0181-T –8)

Response: *As described in Section 3.1 of the Final EIS, the land use plans adopted by local government within the Dulles corridor all contain guidelines to support higher densities, mixed-use development, and walkable, bike-friendly development patterns in close proximity to the transit stations. These plans are under the jurisdiction of local government, including the initiation of transit-oriented development around stations. The project will work with local government and developers that might be interested in developing transit-oriented development around stations. As described in Chapter 9 of the Final EIS, this transit-related development would have an induced effect on the level of density expected to occur in the corridor.*

Public Comment: The Draft EIS ignores the impact of growth associated with the alternatives studied. The population growth in station areas will lead to dramatic increases in vehicular use in other areas besides near the stations. A projected substantial increase in population for the Mid-Corridor, represents a tremendous increase in car traffic due to density increases. The Draft EIS does not address this impact and must do so quantitatively. (0510 03-04)

Response: *The Project's ridership forecasts are based on regionally adopted population and employment forecasts for the opening and horizon years. The density bonuses associated with the Metrorail Extension are not part of these regionally adopted forecasts and therefore were not calculated as part of the demand forecasting process for the Supplemental Draft EIS and Final EIS.*

The impacts of congestion due to density bonuses was included in Chapter 9 of the Draft EIS and the Travel Demand Forecasting Methodology and Results Technical Report (June 2002). The overall level of development expected to occur as a result of the density bonuses in the transit station areas has been discussed in Chapter 5 of the Draft EIS. The projected level of growth and related traffic and other effects were assessed. All neighborhoods within a half-mile of the

transit stations were analyzed to see if they would experience an increase in cut-through traffic or other traffic impacts due not only to the construction of the transit alternatives, but also due, in part, to the increase in traffic associated with the development.

No Build Growth Implications

Public Comment: How does your plan compare to doing nothing if you include changes in behavior? In a sense what I have heard here tonight is that you assume that you need to increase the throughput, okay. On page S-23 of the EIS, it dismisses the possibility of doing nothing because it does not include changes in behavior, whereas doing nothing may encourage businesses to decentralize and move out to where the people are, or people to move in to where the businesses are and end up with a more cost-effective and environmentally beneficial system. (0166, 0166-T –6)

Response: *Population and employment projections, as well as, the regional trends in land use, as presented in Section 3.1 and Chapter 5 of the Final EIS, and the historical trends in development in the region do not support this comment's assertion.*

Need for Coordination with VDRPT

Public Comment: Our overall concern is coordination. The County and VDRPT must actively coordinate land use and road planning with the planning and construction of rail. RA will be happy to assist in that continuing coordination. The recommendations of Supervisor Hudgins' 3-day charette are important to good development and to mitigating the effects on our community. (0233, 0426-M –3)

Public Comment: Now there has been much progress in addressing the land use issue, both in the Fairfax and Loudoun comp plans, and most significantly in the Reston charette recently, but we also think much work remains to be done. (0149, 0180-T –5)

Response: *The Project Team has been actively coordinating with VDOT, Fairfax County, Loudoun County, and other state and local agencies since the project's initiation. Please see Chapter 11 of the Final EIS for a summary of the Project Team's coordination activities since the EIS process was initiated in June 2000.*

Fairfax County Supervisor Hudgins has appointed the Wiehle Avenue Steering Committee, which advise the County staff in the creation of a Request For Proposal (RFP) to solicit transit-oriented joint development proposals for a mixed use development of the County-owned parcel adjacent to the station. Using the conclusions from the Supervisor's Reston Charrette as a starting point, the committee is establishing the process, scope and criteria for the RFP.

Physical Impacts of Tysons Parking Structure

Public Comment: However, the Owners do have concerns over the specific facility designs for the Tysons [West] rail station. All Metrorail alternatives and the BRT alternative in the Draft Environmental Impact Statement propose that a 2,000-car commuter-parking garage be located on the Security Storage and Templeton Oldsmobile sites. This large structure would occupy one of the key redevelopment sites at the Tysons West Station and is a major concern to the Owners. We suggest that a commuter parking garage of this magnitude is not appropriate for this area. Tysons Corner is viewed as the "downtown" of Fairfax County and, as such, rail service should be planned to implement that vision. Attracting commuters into Tysons Corner so that they may park and use Metrorail to reach other destinations such as Washington, DC, Arlington or Dulles Airport seems contrary to the Tysons Corner Comprehensive Plan. This station area should be planned so as to maximize the number of residents and workers within walking distance of the station. Not only will this garage occupy one of the "100% corners" at the Tysons West station, it will also impede pedestrian flow from adjacent property north and west of the station area. We suggest that this commuter garage be relocated to another station outside of the Tysons Corner area and allow the Tysons Corner stations to function in a more urban not suburban design. (0400, 0400- L-2)

Public Comment: However, if it is concluded that a commuter-parking garage is a necessary component to the Tysons West station, we suggest that there are other design alternatives that would make this commuter facility blend in better with other transit related mixed-use development. For example, if the 2,000-car requirement were spread out over several sites as opposed to being massed on one site, it would allow for better distribution of commuter parking spaces and an ability of the property owners to absorb this commuter-parking requirement as part of their private development. This essentially would result in a joint development effort of public parking and private parking to support a private transit related mixed-use development. We have commissioned studies of how the commuter parking could be integrated into proposed development plans for the 22 acres and find that it could be accommodated without requiring WMATA's acquisition of the Security Storage and Templeton Oldsmobile sites. (0400, 0400- L-3)

> ***Response:*** *For Tysons West Station entrance and facilities, the Project Team recommended, and the decision-makers selected Option E site plan to replace the plan presented in the Supplemental Draft EIS and revised General Plans. Option E has its station entrance at the inbound, east end of the station near Spring Hill Road. The bus bays and Kiss & Ride of Option E are located between Tyco Road and Spring Hill Road, set back from Route 7.*
>
> *The park-and-ride facility at Tysons West has been reduced from 2,000 to 500 spaces specifically in response to concerns regarding traffic impacts. The 500-space park-and-ride would be part of a joint development project, so the private sector would be involved in the design and development. However, the specific location and design is not yet known. The park-and-ride would be accessed from local roads, and its cost is part of Wiehle Avenue Extension.*

B. Supplemental Draft EIS Comments

Local Agency Comments

Issues Related to Comprehensive Plans and Zoning

Local Comment: Section 3.1.1.2. The second bullet under "B. proposed LPA Phase I", is not true since the Comprehensive Plan envisions higher intensity at future stations west of Wiehle Avenue. This bullet should be reworded to indicate that the LPA Phase I is not consistent with the Comprehensive Plan; the wording could be similar to the 3rd bullet which addresses Loudoun County. (0093 0109-12)

> ***Response:*** *The commenter is correct that Wiehle Avenue Extension (formerly LPA Phase 1) is partially consistent with the Fairfax County Comprehensive Plan's goal for high-capacity transit throughout the western part of the Dulles Corridor. This was the intended meaning of the second bullet under Section 3.1.1.2 (B) of the Draft EIS.*

Local Comment: Section 3.1. In the 2nd and 3rd sentence of the 2nd paragraph, the information about the Tysons II rezoning is not correct. The zoning case increased the PDC's potential from about 4,655,000 sq.ft. to 6,821,000 sq. ft. (or an increase of almost 2.2 million square feet). The maximum building height is 30 stories, not 25 stories. The development has 12 high-rise buildings of which four are built (or eight new buildings). The two sentences need to be corrected based on the information provided. (0093 0109-11)

> ***Response:*** *Comment noted. Information regarding the amount of development allowed under the Tysons II rezoning is clarified in Chapter 3 the Final EIS.*

Issues Related to Adjacent Development

Local Comment: Another issue concerns joint development on the north side of the [Wiehle Avenue] station; the final EIS should demonstrate how transit improvements do not conflict with the County's joint development objective for this property. (0093 0109-17)

Response: *In accord with the final Team recommendations for Wiehle Avenue Station, the final General Plans include a site plan that accommodates future joint development at the station. The site of the joint development would be on the current Reston East park-and-ride facility along Wiehle Avenue.*

Fairfax County Supervisor Hudgins has appointed the Wiehle Avenue Steering Committee, which advise the County staff in the creation of a Request For Proposal (RFP) to solicit transit-oriented joint development proposals for a mixed use development of the County-owned parcel adjacent to the station. Using the conclusions from the Supervisor's Reston Charrette as a starting point, the committee is establishing the process, scope and criteria for the RFP.

Public Comments

Issues Related to Comprehensive Plans and Zoning

Public Comment: The following claims need to be further evaluated in light of realities instead of simply presented by fiat: a. That Phase 1 is consistent with comprehensive plans, planned development and local zoning requirements (e.g., at TABLE 2-2). These claims are particularly questionable since the rail project would drive a wedge between a 640-acre swath of the Upper Potomac Planning District residential properties that serve under the Fairfax County Comprehensive Plan as a low-density buffer between higher densities of Reston and Tysons Corner. (0068 0173-17)

Response: *The Wiehle Avenue Extension (formerly LPA Phase I) is considered compatible with the Fairfax County Comprehensive Plan, which includes high-capacity rapid transit improvements in the Dulles Corridor as part of its long-term plan for the county. Similarly, the Wiehle Avenue Extension would be partially compatible with planned development, as a number of development projects that are currently in various stages of implementation have been planned and designed with the expectation of high-capacity transit in the corridor. Therefore, the Wiehle Avenue Extension would be consistent with the planned development in the eastern part of the corridor, but not in areas west of Wiehle Avenue. The Wiehle Avenue Extension would also be consistent with existing zoning at station areas because the current zoning of property within the proposed station areas permits the construction of transportation facilities as compatible uses. Additional detail about the land use effects of the Full LPA and the Wiehle Avenue Extension is included in Section 3.1 of the Final EIS.*

Public Comment: We also suggest that Fairfax County re-evaluate its mode split data in all future traffic analysis associated with rezoning applications requested for increase in density at rail stops. (0123 0158-12)

Response: *Comment noted. This analysis has been revised in the Final EIS. Population, households, and employment forecasts, which are the basis for the ridership and modal evaluations, were recalculated in the Final EIS using the updated Metropolitan Washington Council of Governments (MWCOG) Round 6.3 Cooperative Forecasts. This information is discussed in Chapters 3 (Social Effects), 5 (Economic Effects), and 6 (Transportation Effects).*

Public Comment: Table 3.1.1 Summary of Land Use Effects. While we generally agree with the macro assumptions in the table, the Tysons Plan, APR nominations and very specific land use applications must further define and quantify the intent of the Tysons Plan. For instance, the Tysons Plan calls for intensifying development up to 1.0 and 1.5 FAR with a 30% increase in height within 1000 and 1600 foot circles around the Tyson's East platform. The text in the current Tysons Plan for Sub-Unit R-2 states certain area plans are limited to a 0.65 FAR, yet land is zoned at 1.0 FAR, C-3. Is the 1.5 FAR based on underlying C-3 zoning, 0.65 limitation in plan or if rezoned to a 3.0 PRM would an increase from 3.0 PRM to 4.5 FAR and limitless height be allowed? The Tysons Plan needs to be modified to be consistent with Rail LPA. (0113 0132-6)

Response: *Comment noted. By federal regulation, regionally approved forecasts must be used in the analysis of the Build Alternatives. Population, households, and employment forecasts, which are the basis for the ridership and modal evaluations, were recalculated in the Final EIS using the updated Metropolitan Washington Council of Governments (MWCOG) Round 6.3 Cooperative Forecasts. This accepted land use data is based on regionally agreed to development parameters such as FAR.*

Public Comment: WEST*GROUP endorses the EIS recommendations of the stated purpose and need with the following provisions: The Fairfax County Comprehensive Plan and specifically the Tysons Corner Urban Center Plan (the "Tysons Plan") must be reviewed, modified and tailored to meet the "higher-density, mixed use development" that is appropriately called for around the proposed rail stations. No action has been taken by the County to accept Annual Plan Review applications, revise the Tysons Plan, create a task force or even discuss required modifications to the Tysons Plan to accommodate increased densities at rail stations. It appears Fairfax County may be waiting for developers to provide "visions plans" at rail stations and concurrently modify Policy and Tysons Plans to accommodate visions, but nothing has been articulated to this date. The Board of Supervisors must articulate the means and methods of accepting, reviewing and vetting "Smart Growth" rail station plans as soon as the Full Funding Grant Agreement (FFGA) is in place, if not sooner. (0123 0158-2)

Public Comment: Clearly, there is a need to revisit the Tysons Corner Urban Center plan now that the site locations have been finalized and a fourth station added to the previously proposed three. This is another station area planning effort that would have to be lead by Fairfax County. (0060 0169-10)

Public Comment: While we generally agree with the macro assumptions in the table, the Tysons Plan, APR nominations and very specific land use applications must further define and quantify the intent of the Tysons Plan. (0123 0158-8)

Response: *Comment noted. The development and revision of the Tysons Corner Urban Center Plan are the responsibility of Fairfax County through its comprehensive planning process.*

Public Comment: While stating one of the purposes of rail is to support the new Loudoun County comprehensive plan and its 1995 plan to “land uses in the vicinity of future transit centers in specific corridors, including centers at the western end of the Dulles Corridor,” the project team did not use the County’s new land use plan in its travel demand projections. While the project team had no choice but to use Round 6.2 of the Metropolitan Washington Council of Governments’ (COG) Cooperative Forecasts for the DEIS -- which relies on the pre-2001 Loudoun plan -- Version 6.3 was available in draft as early as February 2003. This plan calls for high density development near transit stations, but has about 80,000 fewer households than the pre-2001 plan, part of Round 6.2. This means the projections for ridership in this SDEIS could be too low or too high. (0016 0122-17)

Response: *By federal regulation, regionally approved forecasts must be used in the analysis of the Build Alternatives. The Project Team used the demographic and land use projections prepared by the MWCOG (Round 6.2 Cooperative Forecasts) for the Draft EIS and Supplemental Draft EIS, which were the regionally-approved forecasts in place at the time the analysis was conducted. For the Final EIS, the Project Team used the updated Round 6.3 demographic and land use data, which were adopted as the regionally approved forecasts on October 8, 2003.*

Issues Related to Adjacent Development

Public Comment: Since the properties are already improved, how will the reuse plan be prepared and implemented? (0042 0043-5)

Response*: Both Fairfax and Loudoun counties have adopted policies to implement transit-oriented development at the new stations of the Metrorail Extension. The land use plans adopted by local jurisdictions within the Dulles Corridor all contain guidelines to support transit, higher densities, mixed-use development, and pedestrian and bicycle-friendly development patterns*

near the transit stations. These recommendations have been adopted in the comprehensive plans of Fairfax and Loudoun counties, and would be implemented by the counties through application of their respective zoning ordinances. The Project Team will work with the local jurisdictions to support implementation of comprehensive plan goals.

Public Comment: It is imperative that the final Tysons East Station plan and its appurtenances be carefully coordinated and integrated with WEST*GROUP's master plan. As a dedicator of right of way, rail facilities and a 25% economic stakeholder in the funding of rail, we feel our input demands recognition and we are willing to work with the designers and constructors of rail to come up with the best possible public private plan of the Tysons East Station as well as the balance of the project and look forward to more dialogue as the rail project goes forward. (0113 0132-23)

Public Comment: In addition to CapOne's 1.2 million square feet of development adjacent to the platform, under the existing Tysons Plan, 3.7 million square feet of new density can be achieved on WEST*GROUP's properties within the 1000 and 1600 foot boundaries of the station that must be coordinated and integrated to maximize ridership at the Tysons East Station. We look forward to showing you the WEST*GROUP master plan within the next 30 - 45 days which will impact WMATA's current design. (0123 0158-6)

Public Comment: While it appears WMATA has spent a considerable amount of time coordinating the Tysons East Station with CapOne, WEST*GROUP has been virtually ignored. In addition to CapOne's 1.2 million square feet of development adjacent to the platform, under the existing Tysons Plan, 3.7 million square feet of new density can be achieved on WEST*GROUP's properties within the 1000 and 1600 foot boundaries of the station that must be coordinated and integrated to maximize ridership at the Tysons East Station. We look forward to showing you the WEST*GROUP master plan within the next 30 – 45 days which will impact WMATA's current design. (0113 0132-4)

Response: *Coordination between DRPT, WMATA, and adjacent property owners, including WEST*GROUP, would continue throughout preliminary engineering and final design.*

Land-Use and Development at Station Area

Public Comment: While local land use policy is not within the direct purview of the Supplemental Draft EIS, local government emphasis upon effective land use at each station should considerably expand potential transit ridership well beyond the estimates used by the consultants to evaluate the economic feasibility of the system in the Draft EIS report. (0041 0042-6)

Response*: Regionally adopted Cooperative Population and Employment forecasts developed by the Metropolitan Washington Council of Governments (MWCOG) were used in the development of its ridership forecasts. These forecasts also reflect the inputs of the local jurisdictions in the region, including Fairfax and Loudoun counties. Some station areas would have "density bonuses" related to the presence of rail included in the respective County comprehensive plans. However, these bonuses are not included in the regional forecasts noted above because rail does not yet funded or in operation. A separate analysis showing the impacts of the density bonuses was included in Chapter 9 of the Draft EIS to provide an understanding of their effects.*

Public Comment: Supervisor Hudgins had another public meeting where she committed to appoint a citizens advisory committee to work on land use issues around the Wiehle Avenue Station. I think it is really important to involve the community in the planning for this station, particularly when you take a look at the proposals for parking at the Wiehle Avenue Station. (0060 0063-3)

Public Comment: DCRA believes that the areas around the station should be left to local land use decisions. Likewise, any designs around the station should involve a broad complement of the community actively involved in the design process. (0037 0060-4)

Response*: All local land use decisions, including development around transit stations, are*

controlled by local jurisdictions. In accord with the final Team recommendations for Wiehle Avenue Station, the final General Plans include a site plan that accommodates future joint development at the station. The site of the joint development would be on the current Reston East park-and-ride facility along Wiehle Avenue.

Fairfax County Supervisor Hudgins has appointed the Wiehle Avenue Steering Committee, which advise the County staff in the creation of a Request For Proposal (RFP) to solicit transit-oriented joint development proposals for a mixed use development of the County-owned parcel adjacent to the station. Using the conclusions from the Supervisor's Reston Charrette as a starting point, the committee is establishing the process, scope and criteria for the RFP.

Public Comment: [W]e would urge that this community become very much involved in providing the design guidelines for future development around the station. This could include providing the parking and air rights over the Dulles Access Road, even building over the potential bus turnarounds that were illustrated here tonight. (0060 0063-5)

Response: *Proposed parking facilities will be the subject of continuing coordination with Loudoun and Fairfax counties during preliminary engineering. Station designs do not preclude construction of additional parking by others beyond the station facilities. With respect to air rights development above Metrorail stations in freeway medians, the Project Team acknowledges that the two Counties govern land use and that FAA, MWAA, VDOT and TRIP II, as the owners and/or operators of the DIAAH, Dulles Toll Road and Dulles Greenway, must be involved. Therefore, the Project Team will await any initiative of the two Counties with the involvement of the highway owners and operators.*

Public Comment: As designs for the station at Route 772 are finalized, we encourage the county, the project planners, and staff at the Washington Metropolitan Area Transit Authority (WMATA) to work together to develop station facilities that also include a mix of shops and services that support nearby residents and workers and create lively and safe station areas. (0060 0169-4)

Response: *Comment noted. Local development plans are under the jurisdiction of the local governments. However, the Project Team will continue to work with local officials throughout the implementation process to support joint development around stations. See Section 3.1 and Chapter 5 of the Final EIS for more information on land use regulations and potential joint development effects of the proposed project. See the final General Plans (Final EIS Volume V) to review current station site plans.*

3.2 Neighborhood, Community Services and Community Cohesion Impacts

A. Draft EIS Comments

State Agency Comments

Potential Effects on Adjacent Communities

State Comment: Will there be any change in lighting in the [WFC S&I] yard or on the mainline? If so, will light trespass and pollution be curbed and contained as it is now? (0424, 0424-E –2)

Response: *There are currently no proposed changes to the current lighting levels and lighting configuration of the West Falls Church Yard in conjunction with this Project. Rail vehicle headlights directed toward the tracks will be the only lighting associated with the mainline. Lighting of stations and facilities will be planned to minimize spillover into residential areas.*

State Comment: With regard to the traction/transformer building [WFC S&I Yard]: will there be any electrical noise (humming)? If so, will it be muffled? Will lights be controlled as above? (0424, 0424-E – 3)

> ***Response:*** *Traction Power Substations (TPSS) do not emit a significant amount of noise or humming and should not be noticeable outside of the building. Lighting at the TPSS will be minimal and provided only at the entranceway to allow for safe entrance by workers, when needed.*

Community Access and Potential Community Effects

State Comment: Toward that end, I comment and support the work of the Dulles Rail Now!, the McLean Citizens' Association and Hallcrest Heights. I agree with their positions. I particularly call your attention to the MCA statement for its thoroughness in highlighting the importance of pedestrian and bus access to the Tysons' stations, as well as the need to mitigate the impact of construction and system noise on nearby communities and businesses. (0012, 0468-L –2)

> ***Response:*** *DRPT is the Project's sponsor and initial owner. However, the responsibility for modifications of sidewalks and trails as part of station access is with Fairfax County, Loudoun County, Town of Herndon, City of Falls Church and VDOT. DRPT will continue to coordinate with these jurisdictions and agencies during preliminary engineering and final design to determine the improvements for station access beyond the station site plans, as well as their ownership and maintenance. Impacts due to construction and noise on communities and businesses are included in the Final EIS and, if appropriate, proposed mitigation measures are identified. A summary of these mitigation measures is provided in Chapter 2 of the Final EIS.*

State Comment: Page 188 (of the Land Use Technical Report) Table 4-8 - SUMMARY OF COMMUNITY IMPACTS OF METRORAIL ALTERNATIVE "Access Changes - T1, T6, T9, and T4. Congestion affects two neighborhoods…". This statement would be true if the construction of rail transit in the corridor did not also allow for increased densities. However, the comprehensive plans within the local jurisdictions provide for higher densities with the introduction of rail transit. Therefore, any reduction in auto travel due to the availability of rail transit is exceeded by the increase in demand resulting from the increased densities, and congestion will increase throughout the corridor and beyond.

"Property Values - T1, T6, T9, and T4 Increase at station areas "The comprehensive plans within the local jurisdictions provide for higher densities with the introduction of rail transit. Therefore, any reduction in auto travel due to the availability of rail transit is exceeded by the increase in demand resulting from the increased densities. While this may still result in increased property values at station areas, the increase in congestion throughout the corridor may result in a decrease in property values in other areas. (0421, 0421-A –5)

> ***Response:*** *The Project's ridership forecasts are based on regionally adopted population and employment forecasts for the opening and horizon years. The density bonuses associated with the Metrorail Extension are not part of these regionally adopted forecasts and therefore were not calculated as part of the demand forecasting process for the Supplemental Draft EIS and Final EIS. Chapter 5 of the Final EIS does present an analysis of the potential effects of increasing densities on the level of development as a result of the two Build Alternatives. The effects of implementing density bonuses in the corridor at Metrorail station areas is also quantified and presented in Table 5.3-1. In addition, density bonuses were included in the analysis of secondary development effects that is presented in Chapter 9 of the Final EIS in relation to traffic. This analysis was included in the Final EIS in order to address comments about the need to quantify the potential effects of increased density on traffic at Metrorail station areas.*
>
> *The counties' development permitting process would mitigate the impacts due to increased densities within the corridor. Fairfax County has adopted non-degradation policies that will limit development that would result in traffic congestion, thus reducing the level of development and*

limiting any negative impacts on property values due to congestion. In addition, an evaluation of property values along other transit corridors in the Washington metropolitan area does not indicate any decrease in property values, even in areas experiencing congested conditions. Actual implementation of transit-oriented development and the timing and increase in densities is under the jurisdiction of the local government, so any mitigation needed to support the increase in densities is also under the jurisdiction of the local government, and they have included measures in their land use regulations.

State Comment: Although viewed mainly as a business center, Tysons Corner is also a major residential area. The preferences of the residents of the Rotunda and other established residential communities deserve special consideration. The goal is to improve the quality of life for residents in the corridor; no one's quality of life should suffer as a result. (0298, 0298-L –5)

Response: *Metrorail Alignment T4, which affected the Rotonda condominium, was eliminated from further consideration after the public and interagency review and comment on the Draft EIS. Neighborhood impacts are identified in Section 3.2 of the Final EIS, including those within Tysons Corner. Neighborhood impacts are considered as part of the evaluation process.*

Local Agency Comments

Effects on Community Facilities

Local Comment: The issue of "glare" including guideway, station lighting, and vehicle headlights should be examined. (0479, 0479-L –9)

Response: *There are currently no proposed changes to the current lighting levels and lighting configuration of the West Falls Church Yard in conjunction with this Project. Rail vehicle headlights directed toward the tracks will be the only lighting associated with the mainline. Lighting of stations and facilities will be planned to minimize spillover into residential areas.*

Local Comment: We recognize as well that there are significant pedestrian and school traffic throughout this area. (0165, 0165-T –7)

Response: *Impacts to community facilities are discussed in Section 3.2 of the Final EIS.*

Local Comment: The Draft EIS at Section 3.0 addresses social effects of the proposed Project. It attempts to analyze and identify potential effects on each of the affected communities and their services and facilities. The document, at Section 3.2, states that the section includes consideration of schools. However, the potential impact upon the Falls Church City Public School system, due to the close proximity of the Project and the attendant traffic and safety concerns, is completely omitted. This is another significant oversight that must be addressed. (0122, 0122-A –27)

Local Comment: Overall, we strongly believe the Draft EIS' lack of full analysis could prove disastrous for the City (of Falls Church), the surrounding neighborhoods and our educational structures. Moreover, we suspect there may be a tremendous safety concern if proper evaluations are not conducted. We believe our neighborhood streets will be inundated with motor vehicles and the project will be considered a failure. Existing infrastructures will be adversely affected and must be effectively remedied by operational plans and new facilities. (0122, 0122-A –28)

Response: *Potential impacts to community facilities, such as schools, are summarized in Section 3.2 of the Final EIS. Community facilities located within 300 feet of the centerline of the Build Alternatives and within one half-mile of the proposed station areas were identified for evaluation. Community facilities were evaluated for changes to community cohesion, isolation effects, noise and vibration, access changes, and safety. No effects on the school system of the City of Falls Church are anticipated due to the two Build Alternatives. The athletic fields at George Mason High School, a Falls Church public school, were considered in Section 3.6 of the*

Final EIS. No effects on this recreational resource are anticipated as a result of implementing the Build Alternatives.

Based on the analysis of the forecast traffic volumes for the East and West Falls Church Metrorail Stations, the Project Team does not anticipate that overflow parking onto residential streets will be a problem. Moreover, since completion of the Draft EIS analysis, WMATA has programmed a 960-space parking facility at West Falls Church to be completed in early 2005. The Project Team also initiated meetings with the City of Falls Church to discuss the issues of overflow parking and cut-through traffic.

Large increases in the number of vehicle trips are also not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church Station will return to its former level. Nevertheless, the Project Team does not anticipate any increases in Project-related cut-through traffic in the City of Falls Church.

Public Comments

Traction Power Substation Locations and Potential Effects

Public Comment: The proposed location of the [Traction Power] Substation severely impacts 2 residences in the [Chathams Ford] neighborhood, which will suffer aesthetic impairment and undue loss of property value. The neighborhood as a whole will also be negatively impacted. (0174, 0300-L –15)

Public Comment: Construct the Traction Power Substation in the cul-de-sac at the end of Chathams Ford Drive where there would be minimal impact to the neighborhood. It's important to demonstrate what these buildings look like. First, they are not like the power utility boxes which many of us have in our front yards. These utility boxes are 4 feet high and 3 feet wide and 3 feet deep. The Traction Power Substations are substantial buildings as much as 90 feet long, 90 feet deep and one story tall. On Chathams Ford Drive, they will be located about 20 feet from the property line and will extend from the driveway of 9613 to the driveway of 9611. There will also be another building called a Remote Train Control Room constructed next to the Substation. These are substantial structures that do not belong in residential neighborhoods. (0174, 0300-L –16)

Public Comment: We recommend that the Traction Power Substation and its companion building be constructed further down Chathams Ford Drive in a vacant cul-de-sac. This location minimizes any reduction in housing values and the aesthetic impairment to the neighborhood. (0174, 0300-L –17)

Public Comment: Next, the proposed Traction Power Substation to be built across from 9613 and 9611 Chathams Ford will create additional noise pollution because of the electrical apparatus inside the building. (0174, 0300-L –9)

Public Comment: The final issue is the traction power stations which will have an impact on several homes. These are very large buildings, up to 90 feet long and 90 feet in depth. We recommend they be moved to the cul-de-sac. (0174, 0174-T –7)

Response: *The location of traction power substations and tie-breaker stations are preliminary. As described in the Final EIS, these ancillary facilities were sited based on systems engineering requirements, environmental, and right-of-way constraints. A power analysis was conducted to determine the number and size of substations required and the optimal spacing for these stations. The locations and enclosure designs of these facilities will be evaluated further during the preliminary engineering and final design phases of the project. See the final General Plans (Final EIS Volume IV) for the current locations of these facilities.*

Community Connectivity

Public Comment: The other thing that I'm noticing is not only for the bus rapid transit, but for metro, is a lack of connection to the surface. (0255, 0255-T –3)

> ***Response:*** *Comprehensive feeder bus plans have been developed for the LPA. These plans identify service frequencies throughout the day, number of trips, routings, and station/stops served. These plans were developed based on consultation with technical staff from Fairfax and Loudoun counties. These plans also reflect county technical staff's estimates of demand for the feeder service as well as additional demand estimates developed by the Project Team. Ultimate responsibility for running these feeder networks will rest with Fairfax and Loudoun counties, who are responsible for the current operations of the systems in each county. See Chapter 6 of the Final EIS for more information.*

Public Comment: One of the things I'm noticing from the statistics here is that for the same operating cost for the bus rapid transit system, you could get triple the penetration of the local neighborhoods. This is particularly important to me because under the current plan, Sterling Park gets apparently nothing. It's a four-mile car trip or, if you're lucky, by bicycle just to get to a station. And likewise, a heavy rail system also needs connectivity to the neighborhoods to work. (0255, 0255-T –5)

> ***Response:*** *The feeder bus plans developed as part of the LPA were completed in consultation with technical staff from Fairfax and Loudoun counties. These plans also reflect county technical staff's estimates of demand for the feeder service. See Chapter 6 of the Final EIS for more information.*

Community Effects of Nighttime Construction

Public Comment: Another frightening aspect of your study is the statement that heavy rail construction at the Orange Line/Dulles connection would take place at night! The only impact I could find was the suggestion that fewer travelers would be inconvenienced. What about those of us who must sleep at night in the surrounding neighborhoods? (0145, 0452-E –6)

> ***Response:*** *The short-term construction effects and noise generated by construction were included in the noise analysis and any adverse effects on neighborhoods identified. Certain construction work at junction of the Metrorail Extension and the existing Orange Line and in the West Falls Church Yard must be completed during Metrorail non-revenue hours.*

Public Comment: What is the perceived impact on the quality of life for all communities and/or neighborhoods near the corridor and proposed transit stations? (0147, 0459-L –10)

> ***Response:*** *A variety of factors were evaluated as part of the community impact assessment included in Section 3.2 of the Final EIS, all of which could affect quality of life. Adverse noise, traffic, and physical intrusion impacts are limited due to the location of the two Build Alternatives within existing rights-of-way. Positive impacts such as increased property values and mobility benefits due to the introduction of transit are also identified in the Final EIS.*

Community Impact Assessment

Public Comment: My neighborhood's concerns revolve around noise, vibration, and traffic. My community [Ellison Heights-Mt. Daniel] borders I-66, rail, and the West Falls Church transit station. Ironically, my community was not listed as an impacted neighborhood. Nor was the Villages condominium complex right next to the Pavilion. Nor were the three neighborhoods bordered by I-66, Haycock Road, and Great Falls Street, a triangle of land where residents already suffer significant noise impacts from I-66 and the connector split. You didn't include the Lemon Road community, one that already suffers from the noise from your maintenance yard. (0145, 0452-E –1)

Response: *Neighborhood impacts are assessed in Section 3.2 of the Final EIS. A community impact assessment for each neighborhood within 300 feet of the centerline of the two Build Alternatives and within a half-mile of new stations were included for evaluations with regards to changes to community cohesion, isolation effects, displacements, noise and vibration, access changes, and safety. Neighborhoods located between the East Falls Church and West Falls Church stations and already in close proximity to rail were not included in the analysis because there are no projected changes in service due to the project in this section of the corridor. However, the 300-foot boundary was used only for the direct community impact assessment and neighborhoods that had projected visual or noise impacts beyond the 300-foot boundary were also assessed in the Final EIS, which is why the Pavilion was included in the neighborhood assessment. Noise impacts for residents in proximity to West Falls Church Station and I-66 were included and have been identified for the Idylwood and Westhampton communities. The Villages Condominium complex was not included because no effects --either community, noise, visual, or traffic-- are projected in relation to the two Build Alternatives. The same is true for the Ellison Heights-McDaniels neighborhood, which is located south of I-66 and just east of the West Falls Church Station, for which no increase in traffic is projected. The same is true for the neighborhoods located in the triangle of land identified in the comment; no through traffic is projected to West Falls Church Station and no community impacts have been identified.*

Public Comment: Your report says that neighborhoods within 300 feet of the centerline of the build alternatives and within one-half mile of the station areas were identified for evaluation. You missed some of us even using those criteria! In addition, we believe your criteria for selecting neighborhood impacts were flawed. Noise and traffic carry much further than 300 feet. We would like to see the impacts identified for a broader area. (0145, 0452-E –2)

Public Comment: So, within the EIS analysis, the listing of neighborhoods that will be impacted by noise and/or vibration for various alternatives is incomplete, thereby making all conclusions incorrect. Please go back, do a thorough analysis of the neighborhoods that may be impacted, and revise your report. (0145, 0452-E –3)

Public Comment: The study area was too restrictive. Neighborhoods within 300 feet of the centerline of the Build Alternative alignments and within one half-mile of the proposed station areas were identified for evaluation. (3-2) (0147, 0459-L –8)

Public Comment: So within the EIS analysis, the listing of neighborhoods that will be impacted by noise and/or vibration for various alternatives is incomplete, thereby making all the conclusions incorrect. Please go back, do a thorough analysis of the neighborhoods that may be impacted, and rewrite the report. (0145, 0145-T –6)

Public Comment: As residents of the Westhampton neighborhood which is next to the West Falls Church Metro station, we also wish to express our wish that the problems of increased noise and traffic, especially cut-through traffic in our neighborhood will receive careful consideration and planning. We hope the Project will include necessary and adequate road and noise mitigation improvements. (0483, 0483-E-2)

Response: *The methodology used for identifying impacts to neighborhoods is based on the techniques described in the Federal Highway Administration's Community Impact Assessment: A Quick Reference for Transportation. Neighborhoods and community facilities were identified within 300 feet of each proposed alignment. Noise impacts were further analyzed within 1,000 feet of the proposed alignment. Generally, noise impacts from the types of facilities proposed are not expected to exceed 200 to 400 feet, depending on the topography. Traffic analyses were also conducted for areas outside of the 300-foot boundary including intersections and routes that provide access to the stations, and all neighborhoods within a half-mile of any new stations were also evaluated.*

The boundary for the noise assessment is not dependent on the listing of neighborhoods. All neighborhoods within 300 feet of the centerline of the two Build Alternatives and within a half-mile of new stations were included as a starting point for the analysis of direct community impacts such as community cohesion, the creation of barrier effects, displacements within neighborhoods, changes in access, or effects on community facilities. Any other neighborhoods outside of this boundary that were projected to experience noise and/or vibration or traffic impacts were then added to this boundary. Noise impacts were further analyzed within 1,000 feet of the proposed alignment. Neighborhoods that are not included in the Final EIS are not projected to experience any effects due to the two Build Alternatives.

The analysis of neighborhoods was based on the best available data and consisted of information obtained from local jurisdictions, field visits, and ADC maps. Neighborhoods that are located between the East Falls Church and West Falls Church stations and that are already near rail were not included in the analysis, since there are no projected changes in service due to the project in this section of the corridor and no potential for neighborhood impacts.

Public Comment: The DEIS reports that the social and environmental effects from the project are anticipated to be minor, especially given the length and complexity of the project, because most of the proposed improvements would occur within the medians of the Dulles Connector Road, DAAR and the Dulles Greenway. (S-27) This conclusion establishes a bias and restricts the community impact assessment. (0147, 0459-L –17)

Response: *This conclusion was reached after an objective analysis of the community impacts associated with the two Build Alternatives. The use of the 300-foot buffer on either side of the alignment and half-mile radii at the transit station areas resulted in the inclusion of numerous neighborhoods in the corridor that were evaluated for impacts as discussed in Section 3.2 of the Final EIS. Few impacts have been identified other than noise and traffic impacts for the vast majority of neighborhoods assessed. Since the two Build Alternatives are located primarily within existing transportation rights-of-way there are few neighborhood and community impacts, in comparison to other alignments on new locations that could include numerous residential displacements.*

Public Comment: There was a lack of public involvement in defining the project's study area. The project team conducted 55 meetings with communities, associations, and other organized groups. Out of the 55 meetings, only 7 were held with community associations. An examination of the listing of meetings, the project team conducted more meetings for business groups or associations that have gone on record supporting the Rail alternative. To gather this information, the study area should be expanded to include all neighborhoods that border or have a link to the geographical area. For example, neighborhoods such as Equestrian Park, Hunter Mill Estates, and Victoria Farms should have been included in community impact analysis. This information should be included in the DEIS for public review. (0147, 0459-L –18)

Public Comment: The DEIS failed to meet the standard described in the Federal Highway Administration's Community Impact Assessment: A Quick Reference for Transportation. (3-33) This resource states that analysts should recognize that the project may have social consequences to communities well beyond the immediate geographic area (p. 12). Analysts for this project failed to fully analyze the community impact beyond the immediate geographic area. (0147, 0459-L –9)

Response: *The methodology used for identifying impacts to neighborhoods is based on the techniques described in the Federal Highway Administration's Community Impact Assessment: A Quick Reference for Transportation. The Project Team did consider consequences to communities beyond the immediate geographic area. Neighborhoods and community facilities were identified within 300 feet each of proposed alignment. Noise impacts were further analyzed within 1,000 feet of the proposed alignment. Generally, noise impacts from the types of facilities proposed are not expected to exceed 200 to 400 feet, depending on the topography. Traffic analyses were also conducted for areas outside of the 300-foot boundary including intersections*

and routes that provide access to the stations, and all neighborhoods within a half-mile of any new stations were also evaluated. The 300-foot buffer and half-mile radii were the starting point and focus for the direct community impact assessment included in Section 3.2 of the Final EIS. Any other neighborhoods that were projected to have dispersed effects, such as noise or traffic effects, outside of this boundary were added to the neighborhood analysis.

Public Comment: The Draft Environmental Impact Statement (DEIS) failed to analyze the community impact resulting from placing an industrial level rail facilities at the Golf Park on Hunter Mill Road. The Golf Park is bounded on the west by Hunter Mill Rd, on the north by Crowell Road, on the south by the Dulles Toll Road and on the east by Victoria Farms, a community of single family homes on Rural Estate (RE) planned and zoned land. It should be noted this property has been the subject of much community activity to include a law suit that went to the Virginia Supreme Court where it was reaffirmed the underlying planning for this property remains RE, even with the Golf Park use. (0148, 0463-L –1)

Response: *This property is identified as residential on the land use map as described in Chapter 3 of the Final EIS. Federal regulations require that analysis of parkland effects, as included in Section 3.6 of the Final EIS, include publicly owned and operated areas protected under Section 4(f) regulations. Thus, the privately owned Golf Park, also known as the Thoburn property, was not included in the analysis. It should be noted that the Golf Park is already buffered from the Dulles Toll Road and surrounding developments by existing berms, and that the property owner has submitted redevelopment plans for the Golf Park, although those have not been approved by Fairfax County.*

Public Comment: More importantly, the proposed system would create much new activity in our neighborhood, including years of construction and increased traffic and then probably an elevated track with associated noise. There also is proposed a "driver comfort station" immediately adjacent to our neighborhood, which is sure to be a nuisance. The elevated track would parallel my street, Greenwich, and would be a major disturbance. (0307, 0307-E –2)

Response: *The BRT with its bus layover facility in the median of the Dulles Connector was eliminated from further consideration after the public and interagency review and comment on the Draft EIS. See Chapter 2 of the Final EIS for a summary of impacts and mitigation associated with the Locally Preferred Alternative.*

Public Comment: If the project does go through, I urge consideration of noise/traffic abatement measures and construction of appropriate barriers. Possibly such construction could include development of a long-needed pedestrian walkway parallel to the barriers and the Dulles access right-of-way, which could allow persons to finally walk safely and efficiently from our neighborhood and adjacent areas to the West Falls Church station. (0307, 0307-E –4)

Response: *Noise abatement and traffic mitigation measures will be incorporated into the design of the Locally Preferred Alternative (LPA) as specified in Chapters 4 and 6 of the Final EIS. Noise abatement measures would be located within the median of the Dulles Connector Road adjacent to the alignment of the Wiehle Avenue Extension and would not include the construction of a parallel pedestrian walkway as requested in the comment.*

Public Comment: WMATA and VDRPT need to provide more detail on social and community impacts. The documents provide scant review of the impacts of increased traffic on residential streets leading to rail stations. (0112, 0462-L –49)

Public Comment: In addition, we believe your criteria for selecting neighborhood impacts were flawed. Noise and traffic carry much further than 300 feet. (0145, 0145-T –5)

Public Comment: Your report says that neighborhoods within 300 feet of the centerline of the build alternatives and within one-half mile of the station areas were identified for evaluation. You missed some of us even using those criteria. (0145, 0145-T –4)

Public Comment: Not only is this present evaluation incomplete and inadequate for the area selected (1/2 mile of a rail station), limiting the study to that area failed to reflect the true impact throughout the community. I don't know what organization selected that 1/2 mile radius, but is resulted in a study that is flawed by any objective standard. Nobody desiring a complete objective study of the environmental impact of the project would accept such a limited view of such a massive project. Reston is a planned community and it's neighborhoods are interdependent and not islands separated by artificial boundaries (i.e., the 1/2 mile circle) such as the ones selected for examination by the draft EIS. The failure to fully evaluate these impacts show a failure of the draft Environment Impact Statement to fulfill the requirements of such an endeavor. I am in favor of rail to Dulles and have been for years; however, the incomplete evaluation presented by the EIS is not acceptable and fails to inform the public adequately. (0454, 0454-E –3)

Public Comment: Though Sections 3 and 9 of the DEIS may meet some threshold technical compliance with NEPA, they do not answer the affected residential community's most obvious and fundamental questions about impact on school boundaries, traffic volumes for local roads, and the natural environment. With the enormous public resources and expertise assembled for this project, a reasonable person expects that impact on communities served by local roads between Reston and Tysons Corner and Reston and Oakton would be a focus of the study. (0460, 0460-L –2)

> ***Response:*** *The analysis of neighborhoods was based on the best available data and consisted of information obtained from local jurisdictions, field visits, and ADC maps. Neighborhoods that are located between the East Falls Church and West Falls Church stations and that are already near rail were not included in the analysis, since there are no projected changes in service due to the project in this section of the corridor and no potential for neighborhood impacts.*
>
> *The methodology used for identifying impacts to neighborhoods is based on the techniques described in the Federal Highway Administration's Community Impact Assessment: A Quick Reference for Transportation. Neighborhoods and community facilities were identified within 300 feet of each proposed alignment and within a half mile of new stations in order to assess traffic on roads that provide access to the stations. The detailed evaluations are included in the Land Use and Socioeconomics Technical Report (June 2002) and summarized in the Final EIS. In evaluating the potential for an increase in cut-through traffic in residential areas, all access points to neighborhoods were evaluated. In most cases, the primary access routes to the stations are not through residential areas, but along major arterials such as Route 123, Route 7, Wiehle Avenue, and Reston Parkway that border neighborhoods. See Chapter 2 of the Final EIS for a summary of potential impacts and mitigation associated with the Project.*

Public Comment: On the pages 333 of the EIS, in reference to impacts to neighborhoods, communities and community services, it is noted that the topic areas described in the Federal Highway Administration's Community Impact Assessment, A Quick Reference for Transportation, certain topics were used. I have a copy of that book because I have used it in other things looking at community impact. There are many other areas in here talking about community impact that I would like for you to analyze. Specifically it notes that you should look at the impact of traffic shifts in the community. You have to look at the impact of communities when there's not sufficient parking. You were supposed to look at -- or you could look at land uses when these findings could make an impact on schools. (0147, 0249-T –3)

> ***Response***: *The analysis of traffic shifts and parking spillover in neighborhoods were included in the Final EIS. These impacts are summarized in Section 3.2 of the Final EIS. Potential impacts to community facilities, such as schools, were also considered in the analysis. Community facilities located within 300 feet of the centerline of the LPA and within one half-mile of the proposed station areas were identified for evaluation. Community facilities were evaluated for changes to community cohesion, isolation effects, noise and vibration, access changes, and safety. In addition, after the noise and visual impact analysis became available, it was reviewed to ensure that all neighborhoods affected were included in the analysis.*

Public Comment: As you and other leaders consider the selection of an alignment, please remember that the area of the Tysons Central B station is where the greatest density of residents in Tysons live today. It is also the location of the greatest planned residential growth in Tysons for the future, with or without the transit station. These residents will want and deserve the convenient access to transit that alignment T4 provides. You have the ability to plan for that now. (0084, 0084-L –8) (0084, 0458-E –7)

> ***Response:*** *The Alignment T4 was eliminated from further consideration after the public and interagency review and comment on the Draft EIS, due to its visual effects. However, the Locally Preferred Alternative evaluated in the Final EIS includes four Tysons stations along Alignment T6.*

Public Comment: Citizens deserve unbiased and adequate community impact assessment. Draft EIS failed to follow Federal Highway Administration's (FHWA) Community Impact Assessment methodology. The Draft EIS fails to supply a meaningful level of detail of impacts to communities. (0148 03-01)

> ***Response:*** *The analysis of neighborhoods was based on the best available data and consisted of information obtained from local jurisdictions, field visits, and ADC maps. The methodology used for identifying impacts to neighborhoods was based on the Federal Highway Administration's Community Impact Assessment: A Quick Reference for Transportation*.

Public Comment: The Project Team failed to consider important factor in FHWA's Community Impact Assessment and failed to consider a larger study area for communities to be affected by the project. Also a failure of the Project Team to analyze and report interconnections between community impacts. The Project Team should have assessed and reported how differing impacts relate to each other, noting direct and indirect impacts as well as cumulative and counter-balancing impacts. (0148 03-02)

Public Comment: Project Team failed to meet FHWA standards and Draft EIS fails to account for impacts by limiting study area to 300 feet. The Project Team should be required to follow the FHWA methodology and expand the geographic area. (0148 03-03)

> ***Response:*** *The FHWA methodology was used as a guide since FTA does not have a comparable methodology for assessing community impacts. Neighborhoods and community facilities were identified within 300 feet of each proposed alignment and within a half-mile of new stations to assess traffic on roads that provide access to the stations. Noise impacts were further analyzed within 1,000 feet of the proposed alignment. Section 3.2 of the Final EIS discusses neighborhood and community impacts, and the Land-Use and Socioeconomic Technical Report (June 2002) provides a detailed discussion of impacts and a complete listing of all communities that would be affected by this project. Where applicable, interconnections between neighborhoods and impacts are discussed together, particularly in Tysons Corner and the Mid-Corridor. Chapter 9 of the Draft EIS and the Final EIS discuss direct and indirect, or secondary and cumulative effects of the project on the surrounding neighborhoods.*

Public Comment: The Project Team failed to assess impacts of higher densities due to bonuses, especially with regard to increased travel demand on Hunter Mill Road, Sunset Hills Road, and Sunrise Valley Drive at the intersection of Hunter Mill Road. The Draft EIS failed to complete a community impact assessment that evaluated the impacts on identified nearby roadways. (0148 03-04)

> ***Response:*** *Based on a decision by the Fairfax County Land-Use Task Force, no land use changes are slated for the Hunter Mill Road area; therefore, the projected increase in densities does not apply to Hunter Mill Road.*

Concerns Over in Change in Development Character Near Stations

Public Comment: The draft EIS does not show the impacts to neighbors that can result from increases in density that can be granted in the vicinity of rail stations. The EIS should be revised to show the zoning categories and density that can be granted under both existing and proposed density bonuses in the vicinity of the proposed rail stations. This information should be shown on maps, and the change this

represents in density and zoning categories over current conditions should be described. (0392, 0392-L –16)

> ***Response:*** *The change in development character around potential station area locations in the corridor is discussed in Chapter 5 of the Final EIS. The analysis presents the potential effects of increasing densities as part of the discussion of secondary development. This analysis was included in the Final EIS to address comments received during the public scoping process about the need to quantify the potential effects of increased density at transit station areas.*

Need for Appropriate Mitigation of Neighborhood Impacts

Public Comment: While recognizing the need for a new transportation infrastructure, appropriate measures must be planned to mitigate increased noise, pollution, and traffic that will affect the quality of life and reduce property values for the surrounding communities, including the Westhampton neighborhood near the West Falls Church Metro Station. (0414, 0414-L –2)

> ***Response:*** *The Final EIS does identify noise impacts to residences within the Westhampton neighborhood. Mitigation is summarized in Chapter 2 of the Final EIS for all impact areas evaluated for the proposed project. No increase in traffic is projected through the neighborhood itself and there is no projection of a loss of property values in the Westhampton neighborhood, since the only impact identified --noise-- will be mitigated.*

Public Comment: Community impacts are relatively minimal. The fact that there will be no residences and less than 10 business properties directly taken for this 24-mile project needs to be stressed. Just compare this minimal impact to what the Beltway expansion would do as presented recently. There will be noise impacts, but generally not severe except where trains must turn or switch tracks. Mitigation for nearby residences at such locations is available. In the worst cases, though the DEIS does not seem to indicate the need, mitigation may require enhancing the soundproofing of affected residences near rail yards or tail tracks. The elevated portions and above ground stations create the most visual impacts. Attractive designs and co-location of existing above ground utilities, particularly along Route 7 and elsewhere at Tysons, with the rail elevated structures would be a benefit to the community. (0208, 0208-M –4)

Public Comment: Aesthetics - The heavy substructure of the proposed aerial heavy rail in Tysons Corners is visually intrusive. It resembles elevated trains from the past rather than 21st century technology. (0402, 0402-L –13)

> ***Response***: *The Project Team recognizes that the aerial guideway and stations are important visual elements that merit careful study and sensitive treatment; these elements would be refined during preliminary engineering and final design. The final Team recommendations state: "With respect to Metrorail aerial structures, the Project Team should consider aesthetic designs that are compatible with the surrounding environment."*

Public Comment: Concerned about overflow parking from transit stations. There is no information about alternative mitigation measures due to increased densities. (0148 03-05)

> ***Response:*** *The Project Team is not anticipating overflow parking at transit stations as a result of the project. Fairfax and Loudoun counties and their residential communities might implement 'parking by permit only'. The level of development projected in the Final EIS represents a worst-case analysis and local government may limit growth if their mitigation measures designed to limit the effects of increased density are not being achieved. Actual implementation of transit-oriented development and the timing and increase in densities is under the jurisdiction of Fairfax and Loudoun counties, so any mitigation needed to support the increase in densities is also under the jurisdiction of the counties, and they have included measures in their land use regulations.*

Public Comment: Requests continued dialogue between design team and communities on project impacts and mitigation throughout the design process. (0430 03-04)

> ***Response:*** *The Project Team will coordinate with the Westhampton neighborhood and Fairfax County through the preliminary engineering and final design phases of this project.*

Concern for Impacts to Neighborhoods and Community Facilities

Local Comment: Commenter does not have any comments on the *Public Hearings Report*, however, he would like to receive conceptual and final design plans, as the project may affect the City's water system. (0497 3-01)

> ***Response:*** *The City of Falls Church Public Utilities Department has been added to the mailing list and will receive the Final EIS and final General Plans.*

Public Comment: What is the anticipated noise, vibration, and visual impact for the Hunter Mill Estates and Victoria Farms communities, which are adjacent to the Dulles Corridor? (0460, 0460-L –10)

> ***Response:*** *There are no noise, vibration, or visual impacts identified in Hunter Mill Estates or Victoria Farms neighborhoods.*

Public Comment: Now with metrorail all residents of 8340 Greensboro will never have a peaceful life after a hard day of work. Please think of another alternative and develop the project closer to the larger corporation i.e., Gannett office. They need it more. (0055, 0055-CC-1)

Public Comment: I really believe that if they put in an elevated railway through Tyson's Corner, they're going to make a slum area out of it. They're going to turn it into a slum area. There's no two ways about it, because there's nobody in their right mind. Let's say for argument's sake I have an apartment right on West Park Drive. There's going to be a station there, according to that T-4 plan. Who could I sell that apartment to when I want to retire? (0085, 0281-T –2)

Public Comment: I'm fully in agreement, we do need the transportation to relieve the traffic congestion. But everybody seems to be talking about either buses or trains, that are Metrorail's. But when they speak of the Metrorail, nobody seems to be particularly concerned about whether it's above-ground or underground. And I feel certain, after all my years living in various cities throughout the United States and other places, that wherever they put a Metrorail or a railroad through a residential area, or any sort of congested area, you create a slum. (0085, 0281-T –1)

Public Comment: The anticipated noise, vibration and view stand to reduce the desirability of the affected [Rotunda] units and thus reduce their resale value. This comment is based on the post-construction value. The value of these units during construction would be even worse. (0156, 0156-T –3)

Public Comment: My condo, bldg. 2-222 second floor unit, backs to Westpark Drive. The existing traffic & noise is awful. Can't imagine how horrible additional people, traffic and noise would be if this loop or spur were run on Westpark behind our 2 bldgs. (0020, 0020-L –2)

Public Comment: I am very concerned about the impact it is going to have on the value of the properties in the Rotunda Condominiums. Also the noise, dirt and new traffic problems.
(0053, 0053-CC-1)

> ***Response:*** *Alignment T4 was eliminated from further consideration after the public and interagency review and comment on the Draft EIS, in part due to its visual effects.*

Public Comment: We do have serious issues, however. These would be about noise and traffic - both during and after construction! For our purposes, neither of these issues is sufficiently addressed, if at all, in the EIS. I and others have personally attended all the public meetings on this issue over the last two

years, and in speaking with the project representatives at such meetings, we were assured that our concerns would be addressed in detail. Sadly, this has not happened. (0126, 0126-E –2)

> ***Response:*** *Noise impacts are assessed in Section 4.7 of the Final EIS. Specific impacts of operation and construction are also discussed. Traffic impacts are discussed in Chapter 6. In these sections, the impacts are identified, and proposed mitigation measures available to reduce unavoidable impacts are discussed.*

Public Comment: It is our impression that The Project has bigger fish to fry, and cannot take the time to address localized issues, although this in fact is a legal requirement. Our property is not even listed in the EIS as an impacted neighborhood, although we are located virtually next to the West Falls station and the turnout and curve for the new Dulles extension. (0126, 0126-E –3)

Public Comment: It is our impression that The Project has bigger fish to fry, and cannot take the time to address localized issues, although this is in fact a legal requirement. Our property is not even listed in the EIS as an impacted neighborhood, even though we are located virtually next to the West Falls station and the turnout and curve for the new Dulles extension!! (0126, 0199-M –3)

> ***Response:*** *With the Supplemental Draft EIS and revised General Plans (October 2003) the Project Team lowered the Metrorail profile such that the top-of-rail is, on average, 25 feet above the median of the Dulles Connector Road. Localized issues, including a community impact assessment, have been considered in the Draft and Final EIS. Neighborhoods within the vicinity of the West Falls Church Station include residences in close proximity to the station, and are most likely located in either the Idylwood or Westhampton neighborhoods, which were included in the analysis.*

Public Comment: Chathams Ford Drive is a half-mile-long street which runs adjacent to the eastbound lanes of the Dulles Toll Road between Beulah and Trapp Roads. There are approximately 17 residences in the neighborhood. We believe that the residences will experience a series of numerous disruptions from whatever transit proposals are selected. The adverse impacts fall into three categories: Excessive noise, water hazards, and intrusive buildings. (0174, 0174-T –1)

> ***Response:*** *Effects to the Chathams Ford neighborhood were evaluated as part of the Final EIS. Such effects are summarized in Section 3.2 of the Final EIS. Mitigation measures proposed to address noise effects are described in Chapter 4 of the Final EIS.*
>
> *A stormwater best management pond and traction power substation are proposed to be constructed north of Chathams Ford Drive in an undeveloped strip of land between Chathams Ford Drive and the Dulles Toll Road. These facilities are located primarily within the right-of-way for the Dulles Toll Road and no water impacts or intrusion in the neighborhood due to these facilities are projected. The locations shown in the General Plans of these ponds throughout the corridor are approximate and were included to illustrate that a potential need for one of these facilities exists in the vicinity of the location shown. During preliminary engineering, a comprehensive drainage study will be undertaken for the entire corridor to address final locations of all Best Management Practices (BMP) and Stormwater Management (SWM) ponds. This effort should result in some facilities being eliminated, consolidated, or relocated to further minimize impacts to the adjacent areas.*
>
> *The location of traction power substations and tie-breaker stations are preliminary. As stated in Section 2.4 of the Final EIS, these ancillary facilities were sited based on systems engineering requirements and environmental and right-of-way constraints. In addition, a power analysis was conducted to determine the number and size of substations required and the optimal spacing for these stations.*

Public Comment: I worry when I read that rail transit systems do not reduce traffic congestion. I worry about the impacts on our neighborhoods, the traffic, the schools, road widenings. (0147, 0177-T –3)

Response: *Discussion of impacts to neighborhoods, community facilities such as schools, and the transportation system are included in Section 3.2 of the Final EIS.*

Public Comment: Please tell us what redeeming social features are provided by an elevated train operating adjacent to our home. (0021, 0021-L –3)

Response: *Alignment T4 in Tysons Corner was eliminated from further consideration after the public and interagency review and comment on the Draft EIS, in part due to its visual effects. At junction of the Metrorail Extension and the existing Orange Line, the Project Team lowered the Metrorail profile such that the top-of-rail is, on average, 25 feet above the median of the Dulles Connector Road.*

Community impacts to neighborhoods are discussed in Section 3.2 of the Final EIS. Potential impacts include noise, vibration, visual, and traffic impacts within specific neighborhoods. Positive impacts associated with the project include improved mobility and access to transit services, and for neighborhoods located within proximity to a transit station, a projected increase in property values.

Public Comment: Believes that the Westhampton neighborhood is subject to disproportionate share of impacts of noise, traffic, air, and visual pollution. States that nowhere else on the Metrorail system are a park-and-ride facility, freeway (Dulles Connector Road), rail yard, and an aerial track simultaneously located near residences. (0430 03-01)

Response: *The Project Team is aware of Westhampton's concerns. With the Supplemental Draft EIS and revised General Plans (October 2003) the Project Team lowered the Metrorail profile such that the top-of-rail is, on average, 25 feet above the median of the Dulles Connector Road. The Project Team will coordinate with the Westhampton neighborhood and Fairfax County through the preliminary engineering and final design phases of this project.*

Public Comment: The Draft EIS lacks an analysis of how increased residential development would affect educational infrastructure and school districting, particularly when facing a substantial increase in population. (0510 03-01)

Response: *Chapter 9 of the Final EIS analyzes secondary and cumulative effects.*

Public Comment: The Project Team did not use a 'systems approach' to address community concerns and should implement a systems approach to impacted communities or explain why such an approach was not used. Had a systems approach been used, the core principles of TEA-21 and the planning goals of FTA would be incorporated and the report would address the problems of total noise mitigation, pedestrian access, and the provision of adequate feeder bus service. (0392 03-01)

Response: *The Draft EIS, the Supplemental Draft EIS and the Final EIS document the systematic approach that was undertaken to assess the potential effects of the proposed alternatives. Each document references the relevant laws and regulations considered, describes the methodologies used, define the study areas assessed, documents the existing conditions in the study areas, predicts the direct and construction related effects, and identifies proposed mitigation measures available to for any unavoidable substantial impacts.*

Public Comment: Increased concerns regarding crime, particularly auto thefts near the Rotonda. It is widely known that there is a higher crime rate at parking garages and locations where commuters leave their cars all day. (0496 3-01)

Response: *Metrorail Alignment T4, which affected the Rotonda condominium, was eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

The Project Team agrees that safety is a serious concern and, as standard practice, WMATA employs many measures to ensure patron safety at each of the stations and on the trains. Section 3.7 of the Final EIS addresses safety and security issues related to existing and proposed Metro stations, parking areas, and vehicles.

Public Comment: Although a transit station in the area will make commuting between Dulles and D.C. easier, it would turn a residential area like the Rotonda into an area that resembles a busy section of D.C., which will drive down the value of our homes. Also concerned about the views from the apartments causing a decrease in property values. (0496 3-02)

Response: *Alignment T4, which was aerial at the Rotonda condominium, was eliminated from further consideration after the public and interagency review and comment on the Draft EIS, due to its visual effects, in part due to its visual effects.*

Potential Effects on Adjacent Communities

Public Comment: Light Flashes at Tie Breaker Locations: A brilliant flash of light because of electrical arching can occur when a train third-rail shoe crosses a tie-breaker in the third rail. This is a potential nighttime nuisance to adjacent residential neighborhoods. The EIS should be revised to discuss this situation and describe how adjacent residential areas would be protected from this potential nighttime nuisance where it would occur. (0392, 0392-L –21)

Public Comment: Light flashes - The light flashes created when trains pass over tie breakers is a potential nighttime nuisance for nearby residents and others. (0402, 0402-L –14)

Response: *The design for the contact rail system provides for bridgeable and non-bridgeable gaps, and complies with WMATA design criteria. It is the non-bridgeable gaps (greater than about 45 feet) that cause the arcing/bright lights. This is due to the fact that a shoe actually departs from an electrical circuit, such as the third rail. Bridgeable gaps require an additional rail section and a direct current feeder breaker at the associated tie-breaker station or substation. The proposed sectionalizing scheme, while costing more, eliminates current interruption to the traction motor on the vehicle, reduces wear and tear on motors, and eliminates the arcing.*

Most of the WMATA gaps are bridgeable and, therefore, will not produce any flashing. The exceptions are:

1. *At mainline turnouts to yard(s). Note that this traffic would probably be low speed, and arcing would, therefore, be considerably reduced compared to what would be produced by an accelerating or high-speed train.*
2. *At some of the storage/pocket track turnouts (but only in the direction of the storage track; the mainline gap is bridgeable). As with the mainline turnouts, these gaps are probably associated only with low-speed train operation.*
3. *At the junction of the Metrorail Extension and the Orange Line outbound from East Falls Church Station.*

During preliminary engineering, these locations can be evaluated further to determine if it is possible (and desirable) to provide non-bridgeable gaps

Need to Service Dense Residential Areas

Public Comment: As you and other leaders consider the selection of an alignment, please remember that the area of the Tysons Central B station is where the greatest density of residents in Tysons live today. It is also the location of the greatest planned residential growth in Tysons for the future, with or without the transit station. These residents will want and deserve the convenient access to transit that alignment T4 provides. You have the ability to plan for that now. (0084, 0084-L –8) (0084, 0458-E –7)

Response: *Alignment T4 was eliminated from further consideration after the public and interagency review and comment on the Draft EIS, in part due to its visual effects. However, the Locally Preferred Alternative evaluated in the Final EIS includes four Tysons stations along Alignment T6. The mobility benefits cited have been identified in the assessment of community impacts in Section 3.2 of the Final EIS.*

Compliance with NEPA

Public Comment: The Draft EIS and the *Public Hearings Report* do not meet the requirements of NEPA and related law, regulations, and guidelines. (0148 03-06)

Response: *The Draft EIS fully complies with the regulations cited. The Draft EIS included a detailed analysis and objective evaluation of a No-Build Alternative as well as four Build Alternatives. All alternatives carried forward for detailed study in the Draft EIS were those deemed to be reasonable from a common sense, technical, and economic standpoint, as documented in the Final Alternatives Analysis Report (May 2001).*

The Project Team is confident in the comprehensiveness of the Draft EIS, having received a positive statement from the U.S. Environmental Protection Agency (EPA). EPA has granted the Draft EIS its highest rating for environmental documentation, and remarked that it has not identified any potential impacts that would require substantive changes to any alternative.

B. Supplemental Draft EIS Comments

State Agency Comments

Need to Mitigate Community Impacts

State Comment: This table (Table 3.1-1) indicates that there is "no change" in effects of T6/Y15 vs. the Full LPA. This section of the report needs to address how increased traffic volume, traffic congestion, and spillover parking will be handled by the Project. (0091 0106-4)

Response: *The "No Change" in Table 3.1-1 of the Supplemental Draft EIS refers to the difference in impacts estimated for the Metrorail Alternative that was evaluated in the Draft EIS compared to those estimated for the LPA that was evaluated in the Supplemental Draft EIS. The impacts to community resources are listed in the columns with the heading "Locally Preferred Alternative."*

Public Comments

Concern for Impacts to Neighborhoods and Community Facilities

Public Comment: As residents in the West Lewinsville Heights neighborhood of McLean, Virginia, we are submitting this letter to the officials of the Dulles Corridor Rapid Transit Project, Washington Metropolitan Area Transit Authority, and to our local representatives. We are one of many households that border the Dulles Connector Road and as such, the proposed Dulles Corridor Rapid Transit Project will directly impact us. Our concerns are that the Project will impose additional adverse impacts on our property and our quality of life in the following categories:

- Increased noise pollution
- Increased light pollution
- Adverse visual aesthetics
- Increased drainage problems

We feel that if the Rapid Transit rail line is built in the median strip as proposed, the noise pollution, added lighting, and the visual aesthetics to our home and to others in similar circumstances will be profoundly impacted in a negative way.

We do not oppose the construction of the Rapid Transit Project, but we do feel that due to the increased burden it's construction will place on those of us who are directly adjacent to the project, that the WMATA should place a high priority on protecting homeowners from adverse environmental impacts both during the construction of the Rapid Transit Project and after the construction has been completed and the trains are running. In our opinion an environmental wall would be the major solution to our concerns. Such a wall would alleviate three of our major concerns, noise, light, and visual impact. (0147 03-01)

Public Comment: We are one of many households that border the Dulles Connector Road and as such, the proposed Dulles Corridor Rapid Transit Project will directly impact us. Our concerns are that the Project will impose additional adverse impacts on our property and our quality of life in the following categories:
- Increased noise pollution
- Increased light pollution
- Adverse visual aesthetics
- Increased drainage problems

We feel that if the Rapid Transit rail line is built in the median strip as proposed, the noise pollution, added lighting, and the visual aesthetics to our home and to others in similar circumstances will be profoundly impacted in a negative way. (0081 0107-1) (0124 0159-1) (0125 0160-1) (0126 0161-1) (0127 0162-1) (0128 0163-1) (0129 0164-1) (0133 0172-1) (0100 0116-1) (0101 0118-1)

> ***Response:*** *The estimated effects of the Full LPA (formerly, the LPA) and the Wiehle Avenue Extension (formerly LPA Phase 1) on visual conditions, noise, and water resources are presented in Sections 3.4, 4.2, and 4.7 of the Final EIS, respectively. The specific neighborhoods that have been identified that could experience effects due to the LPA are listed in Table 4-9 of the Land Use and Socioeconomics Technical Report (June 2002). There are no noise, vibration, or visual impacts identified in the West Lewinsville Heights and Great Falls Manor neighborhoods. The Final EIS further refined the assessment of impacts and identified potential commitments to mitigate those impacts.*

Issues Related to Impacts on Neighborhoods

Public Comment: As a resident of the Pimmit Hills neighborhood, located near the proposed Tysons East station, I am interested in trying to build momentum and support for DCRTP in my neighborhood by showing residents that their home will increase in value significantly when the extension is built. (0031 0032-1)

> ***Response:*** *While the Draft EIS and Supplemental Draft EIS do not quantitatively estimate any changes in the relative socio-economic characteristics of the neighborhoods that would benefit from proximity to the project, increased transportation access in the Dulles Corridor is expected to have a corresponding increase in property values near the stations.*

Public Comment: Proposed financing mechanisms and historic transit construction costs do compound my concern that irrevocable damage will be done to the Reston Community if Wiehle is utilized as a terminus/collector station. (0047 0048-2)

Public Comment: I live off Soapstone near Sunrise Valley Drive, and strongly oppose any Dulles Rail stop at Wiehle Avenue. Reston Town Center would be a fine location for a stop because there are restaurants, shops and the beautiful Hyatt Regency. Wiehle is a residential area that would be compromised by the addition of Dulles Rail. Dulles Rail would add NOTHING to this area except more traffic and countless other problems that accompany a rail stop. Reston does not need two stops -- the Town Center stop will be sufficient. (0051 0052-1)

Response: *The Project Team will continue to coordinate with local residents, stakeholders, and local jurisdictions to preserve to the extent possible the integrity of each community along the Dulles Corridor. See Chapter 11 for a summary of the extensive public participation process that has occurred to date.*

Public Comment: c. That Phase 1 will have no effect on community cohesion (e.g., at TABLE 2-2). This claim is particularly suspect, given the fact that a protracted construction project would ensue, with congestion before the buildout is completed as well as increased tolls on Route 267 then and thereafter forcing many cars to take alternative cut-through routes to and beyond Tysons Corner and Falls Church that inevitably will result in congestion on small, community-access routes as well as more traffic accidents on the hilly terrain where such roads are located. (0068 0173-19)

Public Comment: The new rail line will provide many more places to go by Metrorail, like Dulles airport and the many businesses at Tysons Corner, for area residents who will access the Metrorail system at the WFC station. Also, a primary route for residents of Falls Church and McLean to access the new rail line at the East Falls Church and new Tysons stations is via the intersection at Haycock Road and Great Falls Street. This intersection is already a bottleneck during rush hours, which creates a back up that encourages people to cut through our neighborhood streets. (0026 0027-11)

Response: *In the analysis conducted for the Final EIS, all neighborhoods within a half-mile of transit stations were analyzed to see if they would experience an increase in "cut-through" traffic or other traffic impacts due not only to construction of the LPA, but also due to the increase in traffic associated with continued growth and development. These traffic effects are not projected to impact community cohesion and social interaction, nor are other neighborhoods in the corridor projected to experience reduced community cohesion.*

Public Comment: Our community should get priority for mitigation because we will be subject to an unprecedented level of noise and visual pollution from two freeways, a Metrorail station, two intersecting rail lines, a large rail yard and a steeply curved aerial rail track with a steel and concrete bed all near homes. No other community in the entire metropolitan area is subject to this many sources of noise all together. (0087 0102-2) (0104 0121-2) (0099 0115-2) (0089 0104-2) (0026 0027-2)

Response: *The Draft EIS and Supplemental Draft EIS evaluated the potential for noise and vibration impacts and provided recommendations on potential mitigation strategies to avoid significant impacts. The Final EIS further refined the assessment of impacts and identified potential commitments to mitigate those impacts. See Chapter 4.7 of the Final EIS for the results of the noise and vibration analysis and the end of Chapter 4 for a summary of proposed mitigation measures.*

Issues Related to Impacts on Individual Properties

Public Comment: I would like to know exactly how the LPA will affect my residence. Will it change my street or nearby streets? The map does not go into detail as to where my house is in relation to the LPA. I want to know exactly how close the metrorail and metrorail station will [be] to my house. Please send detailed pictures or whatever you have by email. Thank you. (0002 0002-1)

Response: *The Project would be built in the median of the Dulles Connector Road, some distance from your house on Pimmit Drive. The first station in Tysons Corner, which would be near the Capitol One building, appears to be the station closest to your house. Fairfax County zoning map 40-1 would give you an idea of the distance between the Dulles Connector Road and your residence; this can be accessed on the Fairfax County web site, www.fairfaxcounty.gov.*

Tie-Breaker Station #2

Public Comment: We received the Draft EIS and we are apparently going to be one of the properties that will be adversely impacted by this project. We live at 1838 Baldwin Drive on the cul de sac where this Tie Breaker Station defined as B-2 TBS is to be constructed. What we want to know is what it is, how big a structure and will it extend beyond the present barrier wall. It would have been better if your document had contained some explanations of the components that appeared on the maps. People whose property will be impacted by these things have no idea what they are or what they look like. Looking at the red lines for B-2 on the map it appears that some components of the TBS will extend to the cul de sac. (0003 0003-1)

My wife and I will be attending the briefing on November 25th at the Mclean Community Center. We live at 1838 Baldwin Drive, where we and our neighborhood will be severely impacted by the present proposed plan. Hopefully at this meeting there will be better and more detailed information on what this "Tie Breaker Station (B2) is, what it will look like and why our entire neighborhood has to be disrupted by the proposed access from our now private Cul de Sac. (0003 0013-1)

The tie-breaker station which will be 25 by 50 feet, one story, will be placed effectively in our backyard since the sound wall put up by the FAA in 1980 was really put - - it was a setback from the property line, so we have a sense of where that is going to go. So we are going to have a station and a roadway. (0025 0065-2)

The aerial photo indicates that the roadway would bisect my backyard and it really should be put along the property line, parallel to and adjacent to, the property line and not straddling the property line which does greater damage to my neighbor. (0025 0065-1)

Everyone is very familiar with people who complain about "Not In My Back Yard," i.e., the "NIMBY" syndrome. However, for me this is a literal reality. I am a true NIMBY. As depicted in the aerial photo, the proposed roadway will bisect my yard, leaving my property on either side of the roadway. I ask that the roadway be moved so that it runs adjacent to and parallel to my property line. The roadway should NOT straddle the property line, since this is even more harmful to the neighborhood. Project officials should replace what is removed for construction, e.g., as trees, structures, etc. In other words, make the land "whole." (0025 0026-1)

Public Comment: The Station, as depicted, will be situated between the wooden fence and the Dulles Connector Road, directly behind my house. The Station will be a one-story, brick structure that will be visible from the back of my house. Currently, our view is of trees and of the wooden sound wall that separates the neighborhood from the Connector Road. The visual impact of the Station will adversely affect the unobstructed view that we have enjoyed for many years. (0025 0026-2)

> ***Response:*** *A typical tie-breaker station is approximately 45 feet by 20 feet and about 13 feet high. Tiebreaker stations are usually located at crossovers in the rail tracks, and sometimes require an adjacent remote train control room that is approximately 20' by 20'. They break the rail line into sections, allowing power in one or more sections to be shut down for maintenance without affecting the power supply to the rest of the system.*
>
> *The Project Team has recommended Option A as the location of TBS-2. The implementation of the Project Team's detailed recommendations should mitigate any effect of TBS-2 on residential property values. DRPT will compensate the owner of 1836 Baldwin Drive for the permanent easement for the access driveway and apron at fair market value. TBS-2 itself will be located within the existing public right-of-way for the Dulles Connector Road.*
>
> *The Team recommends that that a new wooden noise wall surround the TBS-2 for its security, for enhanced community safety and for the aesthetics of the neighborhood. Since TBS-2 would not be visible from the Baldwin Drive neighborhood, it would not receive any architectural treatment. The new wooden noise wall would have doors at the location of the doors of the TBS-2 and the remote train control room. The height of the new wooden noise wall would be sufficient to screen the TBS-2, which has a height of 13 feet.*

The roadway in question is a narrow access driveway used to bring maintenance workers and equipment up to the adjacent tie-breaker station. It was located to minimize impacts to the two adjacent properties. As currently planned, the location of the access driveway and any temporary construction easement will be fully within the property of 1836 Baldwin Drive. The centerline of the access driveway will be parallel with the property line between 1836 and 1838 Baldwin Drive. The driveway and apron of TBS-2 might be of alternate materials, such as geo-grid or open concrete block with grass turf in their cells; the type of materials will be determined during preliminary engineering and final design. During the same phases, the drainage of the TBS-2 site, including its driveway and apron, will be addressed. Specific arrangements regarding landscaping and mitigation of construction impacts will be addressed with affected property owners.

Protecting Quality of Life

Public Comment: I recognize the Project as a potential asset to the greater community and appropriate to and reflective of the growth experienced in the immediate and surrounding regions. However, I do not want to see an end result that is corrosive to the quality of life that has become emblematic of our community.

My challenge to the Dulles Corridor Rapid Transit Project is that you be sensitive to the anticipated impact of the project on my community as well as the surrounding residential communities that share our concerns. Moreover, I challenge the Project and DRPT specifically, to champion our noise/visual concerns as you deliberate these and other matters with the many authorities that you interact with as you progress your agenda rather than simply direct us to some other agency. As the single entity closest to the proposed rail link development, the Dulles Corridor Transit Project has a singular opportunity to step up as an ally and champion of impacted residents. I see this as a course far preferable to the alternative of failing to act proactively to protect the quality of life enjoyed in the community you have pledged to serve. (0014 0015-4)

Public Comment: Again, we support the potential benefits of this project, given the over-development of this region, but we urge you to simultaneously protect the property values and quality of life of we longtime and preexisting area residents. (0017 0018-2)

Response: *The Project Team will continue to coordinate with local residents, stakeholders, and local jurisdictions to preserve to the greatest extent possible, the integrity of each community along the Dulles Corridor.*

Need to Mitigate Community Impacts

Public Comment: We support the underground construction option mentioned on p. 6-25 for the track leading from the WFC rail yard to the Dulles Connector Road median.

Mitigation such as sound walls and traffic calming falls under the jurisdiction of state and local transportation agencies, although transit agencies are causing the impact. Each is only responsible for either road or train noise, but to our community, it is just noise. We expect someone to fix it, and we expect someone to find the budget to pay for it. (0026 00)

Response: *The estimated noise effects of the project are described in Section 4.7 of the Final EIS. Currently, conventional highway noise walls barriers are not proposed along the Dulles Connector Road or the Dulles Toll Road as part of the project. Three-foot parapets or track edge barriers are the standard used for aerial Metrorail guideway sections, although four- and six-foot parapet barriers are proposed, as mitigation is some areas where exceedances of FTA noise criteria are expected. The types and location of the recommended mitigation measures are described in Section 4.7 of the Final EIS. Figures 4.7-5a and 4.7-5b in the Final EIS are included*

to help identify the location of the proposed four- and six-foot parapet barriers closest to your street.

Public Comment: We ask that the Final EIS add mitigation for any construction impacts for Westhampton. (0026 0027-9)

Response: *The Final EIS specifies mitigation measures that could be used throughout the corridor. Along all sections of the Dulles Corridor, every effort would be made to mitigate construction impacts to businesses and residences during construction periods. DRPT will maintain ongoing communication among all public and private stakeholders throughout the implementation of the project in order to minimize construction effects. Prior to any construction activities taking place, specifications regarding the practices to be undertaken to mitigate potential impacts will be developed. These practices will also be monitored during construction as well to assure compliance.*

Public Comment: Post-construction study of noise, visual and traffic impacts on neighborhoods and contingency funds to pay for additional mitigation if impact is greater than anticipated. (0087 0102-10) (0089 0104-10) (0099 0115-10) (0104 0121-8)

Response: *Visual, noise, and traffic impacts of the LPA are assessed in Sections 3.4, 4.7, and 6.2 of the Final EIS. In these sections, the impacts are identified and proposed mitigation measures available to reduce unavoidable impacts are discussed.*

3.3 Property Acquisition and Displacement

A. Draft EIS Comments

Federal Agency Comments

Residential Displacement

Federal Comment: The environmental impacts are less than the typically more environmentally damaging highway improvements. For example this project is projected to move up to 87,000 riders a day by 2025 with no residential displacements. (0303, 0303-A –3)

Response: *Comment noted. Due largely to the use of existing transportation rights-of-way, minimal impacts are projected.*

Compensation for Acquired Properties

Federal Comment: According to FAA policy, FAA would be required to obtain fair market value in compensation for any airport property used for this project. This policy applies to the DAAR and any stations or other facilities that would be located on airport land. (0485 03-01)

Response: *DRPT will continue to coordinate with MWAA and FAA to determine an appropriate methodology for valuation of property required for the Project and the most appropriate legal mechanism for property conveyance. According to FAA policy, "Airport property can be made available at less than fair-market value for public transit terminals, rights-of-way, and related facilities without being considered a violation of federal statutes governing airport finances if (a) the transit system is publicly owned and operated and (b) the facilities are directly and substantially related to the air transportation of passengers or property. A lease of nominal value would be consistent with the requirements for airports to be self-sustaining."*

Public Comments

Compensation for Acquired Properties

Public Comment: Commenter just learned that his property would be taken as part of the north entrance pavilion for the Tysons Central C Station for the Locally Preferred Alternative. Believes that the company would receive little, if any, compensation and that he would not be able to find affordable property, or property that is zoned for a tire and auto store. (0498 3-01)

> **Response:** *As discussed in Section 3.3 of the Final EIS, all federally funded actions are required to meet certain standards for the fair and equitable treatment of persons displaced by those actions. Relocation assistance will follow the guidelines set forth in Title 49, Part 24 of the Code of Federal Regulations (49 CFR Part 24).*

Property Acquisition Concerns

Public Comment: Requesting that the location of the north entrance pavilion for the Tysons Central C station be moved from the Merchant's property. (0498 3-02)

> ***Response:*** *The proposed location of the north entrance pavilion for the Tysons 123 Station (formerly Tysons Central C Station) was developed to be consistent with the transit-oriented development goals of Fairfax County and trackwork alignment geometry for the Metrorail Extension. However, potential adjustments could occur during preliminary engineering and final design. The proposed Metrorail Extension alignment and facilities can be viewed in the final General Plans (Final EIS Volumes IV and V).*

Public Comment: One acre of their land will be acquired for a storm water retention pond. The commenters feel that their comments were merely acknowledged and not completely addressed because they feel that their lives will be changed in a drastic manner. (0383 03-01)

Public Comment: Oppose the proposed acquisition of one acre of their land for the construction of a stormwater retention pond. They suggest that a present noise problem would be exacerbated with the proposed construction of the retention pond, which would cause the destruction of at least 100 mature hardwood trees that provide auditory and visual buffers to the Dulles Toll Road. (0383 03-02)

> ***Response:*** *The locations shown in the final General Plans for Best Management Practice (BMP) and Stormwater Management (SWM) ponds throughout the corridor are approximate and were included to illustrate that a potential need for one of these facilities exists in the vicinity of the location shown. During preliminary engineering, a comprehensive drainage study will be undertaken for the entire corridor to address final locations of all BMP and SWM ponds. This effort should result in some facilities being eliminated, consolidated or relocated to further minimize impacts to the adjacent areas. Any acquisition required will be consistent with the Real Property and Relocation Assistance Act: Title 49, Part 24 of the Code of Federal Regulations (49 CFR Part 24).*
>
> *The proposed pond location in question currently is a natural depression with a culvert outfall. If a pond were constructed in this location, little or no grading would be required to convert existing depression into a stormwater management facility. It is unlikely that many of the trees would need to be removed.*

B. Supplemental Draft EIS Comments

<u>Local Agency Comments</u>

Magnitude of Impacts

Local Comment: Table 3.3-1 seems to have an error in the LPA Phase I (2025) and LPA Phase 1 (Opening Year) columns; Since Phase I will impact fewer properties than the Full LPA, the acreage impacted should be notably less than 139.3 acres. (0093 0109-13)

> ***Response:*** *This table has been corrected in the Final EIS. The Full LPA) would require approximately 32 acres of private property and 166 acres of government-owned or proffered property. The Wiehle Avenue Extension (formerly LPA Phase 1) would result in approximately 18 acres of private property and 15 government-owned or proffered properties. Additional information on property acquisition and displacements is provided in Section 3.3 of the Final EIS*

Public Comments

Property Acquisition Concerns

Public Comment: By this letter, I would ask that you confirm your intention (the authority's intention) to take the building at the corner of Gosnell and Leesburg Pike which The Business Bank currently occupies. We would not object to the placement of a transit system that would not result in a taking of the building. We strongly object to the proposed taking of our building. The taking of our headquarters building would result in a profound diminishment of our business and severely restrict our ability to serve our customers.

For these reasons, I formally ask that you revisit your plans such that they do not necessitate the taking of the building located at 8399 Leesburg Pike, Vienna, Virginia. On behalf of Building owners, The Board of Directors of United Financial Banking Companies, Inc. and The Business Bank, I thank you in advance for favorable consideration of our request to construct the underground rail by some other means than "cut and cover".(0148 03-01s)

> ***Response:*** *The Acquisition List of the Project does not include this property as a relocation. The Property Identification Plans do not show the bank building within a permanent easement. However, the construction of the underground Metrorail line will place its shoring of line of influence alongside the building; therefore, there will be construction effects upon the bank. The construction effects and the concerns of the property owner will be addressed during preliminary engineering, when construction methods, limits of construction, lines of influence, and a right-of-way acquisition plan are developed.*

Magnitude of Impacts

Public Comment: The SDEIS seems to indicate that 11 additional commercial properties need to be acquired in a phased project, vs. a non-phased project. This increment needs to be explained and assessed. (0068 0173-26)

> ***Response:*** *The change in effects identified in the Supplemental Draft EIS of 11 additional commercial properties refers to the difference in effects estimated for the Metrorail Alternative (T6/Y15) that was evaluated in the Draft EIS, as compared to the effects estimated for the Full LPA evaluated in the Supplemental Draft EIS. These changes are primarily due to changes in the design of proposed station facilities. See Section 3.3 of the Final EIS for a discussion of anticipated acquisitions.*

Impacts on Businesses

Public Comment: I don't believe this plan could have affected one business better in a more disastrous way than if it had tried. Not only will it eliminate an entire business, but it will disrupt all three locations. There will be impairment and blockage of ingress and egress of the two businesses on the south side of Route 7. It will take a significant portion of the Aston Martin lot and there is potential encumbrance of ingress and egress on the Mercedes lot. Now, all of this impact in this area for this West Tysons Station is focused one business, HBL. (0070 0079-1)

Public Comment: 3. A Bus transfer location at the Route 7 frontage removes prime commercial property. In the case of the Parcel 55 in the northeast quadrant of Route 7, the existing C-7 zoning allows commercial uses and is the location of the new Porsche-Audi, just opened last month and the site is completely within the County Highway Overlay District. (0053 0054-2)

Public Comment: Taking the entire Porsche-Audi lot on the northwest corner will eliminate between 100 and 150 jobs. It will eliminate nearly $4 million in tax revenues for the Commonwealth of Virginia and Fairfax County. It will eliminate approximately $100 million in business activity in the Tysons area. (0070 0079-2)

Public Comment: HBL operates three automobile dealerships at the corner of Tyco Road and Route 7, and under an L-shaped walkway plan proposed under the supplemental draft EIS, one HBL business would be completely closed. Portions of the other two may be taken, and both of those businesses would face serious impacts or disruptions at a significant loss of between 100 and 150 jobs over $100 million in business activity, and approximately $3-to-$4 million in lost state and local tax revenues. (0070 0138-1)

> ***Response:*** *For Tysons West Station entrance and facilities, the Project Team recommended, and the decision-makers selected Option E site plan to replace the plan presented in the Supplemental Draft EIS and revised General Plans. Option E has its station entrance at the inbound, east end of the station near Spring Hill Road. The bus bays and Kiss & Ride of Option E are located between Tyco Road and Spring Hill Road, set back from Route 7.*
>
> *Displacement impacts of the Full LPA are discussed in Section 3.3 of the Final EIS. The Project Team will work with the property owners to minimize impacts to the extent possible, while providing the necessary space required for station facilities. Upon completion of a more detailed design for the project, a comprehensive relocation plan would be developed to ensure that the orderly relocation of all displaced businesses would be accomplished. Relocation assistance would be available to all residential, business, and nonprofit entities and individuals that would be displaced, without discrimination.*

Public Comment: As owners of the above-referenced property, along with the tenant on the site, TBC Corporation, trading as Merchant's Tire, we wanted to express our opposition to the proposed plan for the total taking of the property before the following options are carefully considered: 1. The entrance pavilion shown on our site comprises a foot print of 75' x 90' or 6,650 square feet being approximately 25% of our total lot. There is a grassy area to the west of our lot that is a set back or green area for the neighboring property (SAIC). This grassy area measures approximately 50' x 60' or 3,000 square feet. By shifting the entrance pavilion into this unimproved grassy area, it would reduce the area required on our lot by 10% allowing our lot to still be functional. It could possibly be expanded further if the taking went into a row of parking that abuts this area. Utilizing this undeveloped area makes sense economically and logistically. (0092 0108-1)

Public Comment: 2. There is a 20' outlet road on the east side of our site, one half of which is on our property. This road gives access to the property behind ours. We could possibly utilize this as a new access into our property should we need to give up our existing entrance. As per discussions with the tenant, they would like to continue operating there and they feel the loss of a portion of the front area and existing access would not greatly impact their ability to continue to conduct business. They are willing to discuss limiting any claim for damage from any partial taking once the exact amount of the taking is determined. (0092 0108-2)

Public Comment: 3. There needs to be a thorough exploration of the possibility of switching the entrance to the west side of the platform which I understand has been requested by the owner of that property. (0092 0108-3)

> ***Response:*** *The proposed location of the north entrance pavilion for the Tysons 123 Station (formerly Tysons Central C Station) was developed to be consistent with the transit-oriented*

development goals of Fairfax County and trackwork alignment geometry for the Metrorail Extension. However, potential adjustments could occur during preliminary engineering and final design.

DRPT will work with the property owners and tenants to minimize impacts to the extent possible, while working to provide the necessary space required for the station entrance, associated circulation, and maintenance access. The proposed Metrorail Extension alignment and facilities can be viewed in the final General Plans (Final EIS Volumes IV and V).

Public Comment: As the owner of the Property [Tysons Corner Embassy Suites Hotel], and having reviewed the SDEIS, attended the hearings, and otherwise kept abreast of developments, CGLIC has very serious and sincere concerns as to the Project, as presently proposed. Please note that a proposed portal is to be located immediately in front of/adjacent to the Property, and it is planned that the service road fronting the Property, and portions of the Property itself, are to be used/condemned for, among other things, construction easements. Accordingly, CGLIC expects the Project in its present form could have a very detrimental impact on the Property, its operations and its value both long term and short term, including without limitation negative impacts as to noise, access and diminished alternative access, ingress and egress, parking, appearance, business interruption, and reduced utility of the Property. (0106 0124-1)

***Response**: As currently shown in the General Plans, there would be access and visual effects to this property from the selected LPA. The analysis of visual and aesthetic conditions in support of the EIS considered the relationship of the Project to Tysons Corner as whole and Route 7 for its entirety. The analysis considered the types of viewers and their sensitivity to visual changes and also the degree of visual impact to these viewers. DRPT will work with the property owners to minimize impacts to the greatest extent possible, while providing the necessary space required for station facilities.*

Public Comment: Let me first state for the record that at no time before the issuance of the supplemental draft, which I believe was in October of 2003, did anyone approach me from Fairfax County, The Commonwealth of Virginia or WMATA to discuss the proposed taking of my property, the 4.59 acres on Sunset Hills Road that is currently Reston Business Park and Mini Storage. It came as a complete shock to me in late October when someone who had seen the draft EIS called to tell me that the Reston Business Park was scheduled for demolition. (0130 0165-1)

Public Comment: As we ultimately discussed when we me[t] on December 17, 2003, this is by far the most valuable property in the entire Wiehle area for several reasons:

1. The existing office warehouse and storage business that has been built up over the last twenty-eight years generates very high net operating income making it more profitable than other commercial uses along the corridor.

2. The comprehensive plan for area G-4 (see attached Exhibit A) allows for up to a 2.5 FAR for rail oriented mixed use development. As we have discussed, mine is the only property that can be zoned at these densities because it is not restricted by the existing covenants for the area along the corridor that is the Reston Center For Industry And Government (RCIG) (see attached Exhibit B). There must be a residential component of no less than forty percent (40%) to get to these higher densities and the RCIG covenants do not allow residential development of any kind.

3. The comprehensive plan calls for consolidation of parcels and we also own the adjoining property to the south known as 11417 Sunset Hills Road with land area of 72,986 square feet (see attached Exhibit C). This parcel fronts directly on The Dulles Access Road and the proposed ramp to the Wiehle Station. By combining these sites, a probable 2.5 FAR could be achieved on the over 273,000 square feet of land. This could translate to a high-density mixed-use project of almost 700,000 square feet- supporting the tax district, WMATA operations and fulfilling the vision of the community.

4. We currently have fourteen (14) businesses that operate from Reston Business Park and 600 self-storage units. This property has always been a significant asset to the community.

5. We have worked in a cooperative effort with the community and the Fairfax County Government for a substantial number of years to achieve the planning and development of this property as envisioned by the County's Comprehensive Plan. Our ongoing planning process will soon result in a rezoning application consistent the Comprehensive Plan, which we expect to be approved in the near future, consistent with the highest and best use of this very valuable property. We would hope that the specter of rail would not interfere with our plans that we have been developing for so many years.

In the final analysis this parcel is far too valuable to be used as a parking lot, temporarily or permanently. I look forward to working with you on the future of Wiehle Station. (0130 0165-2)

> ***Response:*** *With the exception of a new roadway connection to Sunset Hills Road, the Wiehle Avenue station facilities would be situated upon the Reston East park-and-ride lot owned by Fairfax County. The final General Plans do not depict use of the Reston Business Park for temporary park-and-ride facility during the construction of the Wiehle Avenue Station facilities. During the construction of those facilities, DRPT would, if necessary, locate temporary bus facilities and parking on an alternative, but economical, site. The Reston Business Park owner may elect to participate in a joint development proposal to include the station facilities.*

3.4 Visual and Aesthetic Conditions

A. Draft EIS Comments

State Agency Comments

Concern for Visual and Aesthetic Impacts

State Comment: Visual pollution and loss of privacy. Many houses along the rail line will be in sight of the elevated tracks and areas for bus parking and the train yard [Westhampton neighborhood]. (0386, 0386-E –4) (0398, 0398-L –4) (0399, 0399-L –4) (0403, 0403-L –3) (0412, 0412-L –4) (0415, 0415-L –4) (0416, 0416-L –4) (0430, 0430-E –4) (0431, 0431-E –4) (0438, 0438-E –4) (0442, 0442-L –4) (0465, 0465-L –4) (0466, 0466-L –4) (0467, 0467-L –4) (0469, 0469-L –4) (0422, 0422-E –2) (0421, 0421-A –13) (0470, 0470-L –4)(0471, 0471-L –4) (0473, 0473-L –4) (0474, 0474-L –4)

> ***Response:*** *With the Supplemental Draft EIS and revised General Plans (October 2003), the Project Team lowered the Metrorail profile such that the top-of-rail is, on average, 25 feet above the median of the Dulles Connector Road. Visual impacts in the Westhampton neighborhood associated with construction of the Metrorail Extension were considered and evaluated in the Final EIS. The Project Team will work with surrounding landowners and local government to integrate Project elements into the surrounding development.*

Regional Agency Comment

Visual Effects of Ancillary Facilities

Regional Comment: DEIS Section 3.4.3 on visual and aesthetic effects indicates that views of the IAD tower and Main Terminal from the Dulles International Airport Access Highway (DIAAH) would not be blocked by the east rail portal or by traction power substations; however, the DEIS does not discuss whether views would be affected by fencing or other barriers in the DIAAH median, particularly near Sully Road. (0440, 0440-A –5)

Response: *The Section 106 Memorandum of Agreement in Appendix F of the Final EIS describes the Project's adverse effect on the remaining historic "peekaboo" views of the main terminal control tower for approaching travelers from the Dulles International Airport Access Highway (DIAAH) and the mitigation measures. One measure is that the vertical profile of the Metrorail tracks and the concrete safety barrier will be constructed as low as practicable given site conditions to minimize any obstruction of these views of the main terminal control tower. Fencing and other facilities in the median at this location will be minimal and the fencing itself would be transparent to the viewer and should not affect the peekaboo view. Any further design refinements of the approach to the airport will be coordinated with VDHR and MWAA.*

Local Agency Comments

Mitigation of Visual Impacts

Local Comment: Mitigate visual impact of the construction of Dulles Corridor Rapid Transit Project by incorporating innovative design features, enhanced lighting, public art and green space. (0437, 0437-E – 10)

Response: *Proposed mitigation measures for visual effects are summarized in Section 3.4 of the Final EIS.*

Public Comments

Potential Visual Pollution

Public Comment: Apparently there has been little effort to deal with the visual pollution that will be caused by elevated tracks, bus parking areas, and train storage and inspection yards. (0432, 0432-E –1)

Response: *The Final EIS describes proposed measures to mitigate unavoidable adverse effects. Some of the mitigation techniques include working with property owners to re-establish landscaping removed for facilities and making alignment adjustments. Elements of the land use in the corridor allow for public art and green space and FTA requires 0.5 percent of the Project's capital cost to go towards public art. The final Team recommendations state: "With respect to Metrorail aerial structures, the Project Team should consider aesthetic designs that are compatible with the surrounding environment."*

In the final General Plans, the station architecture of the Dulles Corridor Metrorail Project incorporates WMATA's "New Look" design that is now being completed for New York Avenue Station, and the two stations of the Largo Extension. This concept retains key principles of Harry Weese's original design, with more inviting and better-defined entrances, an emphasis on customer information, and an open, graceful, and light feel through the use materials such as steel and glass for enclosures. These are systemwide "signature" elements that support a unified system identity as well as economical design and construction. The project is expected to maintain a high level of design quality through the use of a special architectural consultant during preliminary engineering and final design.

Concern for Impacts to Neighborhoods and Community Facilities

Public Comment: Requests that the Project Team project the visual impact and loss of privacy for the homes in the Westhampton neighborhood and implement solutions so that the trains are not visible from the homes. (0117 03-01)

Response: *With the Supplemental Draft EIS and revised General Plans (October 2003) the Project Team lowered the Metrorail profile such that the top-of-rail is, on average, 25 feet above the median of the Dulles Connector Road. Visual impacts in the Westhampton neighborhood associated with construction of the LPA are evaluated in the Final EIS. The Project Team will*

work with surrounding landowners and local governments to integrate Project elements into the surrounding environment.

Concern for Visual and Aesthetic Impacts

Public Comment: The Rotonda has over 1000 units and slightly less than 5% of the units back up to Westpark Drive. There is sufficient permanent vegetation in the form of mature White Pines to block the view of Westpark Drive for those on the first three floors of building 2 and the majority of the remaining units would have sufficient elevation to see over the proposed line. (0120, 0120-L –3)

Response: *It is assumed that the comment refers to Alignment T4 of the Metrorail Alternative. Alignment T4 was eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Public Comment: In addition, the rail solutions create a number of design and aesthetic issues of concern, particularly in Tysons Corner. (0139, 0139-T –2) (0139, 0280-T-2)

Response: *The Final EIS describes in detail the various aesthetic and visual issues associated with the elevated alignments and stations throughout Tysons Corner. Section 3.4 of the Final EIS outlines the visual impacts of the project, including those impacts that are predicted to occur in Tysons Corner. The chapter includes a description of physical changes, where visibility is at issue, the types of viewers involved, the viewers' sensitivity to the physical changes, and what the impact of the visual changes is anticipated to be. In addition, the final Team recommendations state: "With respect to Metrorail aerial structures, the Project Team should consider aesthetic designs that are compatible with the surrounding environment."*

Public Comment: The other negative component on this alignment [T4] was the visual and aesthetic impact of aerial tracks along Westpark Drive. It is unfortunate that the underground alternative of this alignment was eliminated from the EIS, as this would have been preferable. However, I believe that Lincoln at Tysons residents and other renters along Westpark will be best served by and will strongly support the aerial line, given the huge benefit of transit service next door. Furthermore, the negative impacts of an aerial alignment would not be eliminated with any other rail alignments, since each of the alternatives includes some aerial segments through Tysons. I would, of course, support reexamination of undergrounding a segment of this alignment if it became necessary to mitigate this impact. (0084, 0458-E –4)

Public Comment: In addition, we argue that the visual and aesthetic impact of aerial tracks along Westpark Drive applies to all four proposed alignments for Tysons Corner. While we would support further exploration of tunneling all or a portion of the T4 alignment, we believe that the positive gains of providing Metro access to ALL of Tysons Corner will far outweigh this perceived negative. (0455, 0455-L –4)

Public Comment: What will be the change in the aesthetic character of those communities and/or neighborhoods located along the corridor? (0147, 0459-L –12)

Response: *The Final EIS describes in detail the various aesthetic and visual issues associated with the elevated Alignment T6 and its aerial stations throughout Tysons Corner. Section 3.4 of the Final EIS outlines the visual impacts of the Project, including those impacts that are predicted to occur in Tysons Corner. Alignment T4 was eliminated from further consideration after the public and interagency review and comment on the Draft EIS. In addition, the final Team recommendations state: "With respect to Metrorail aerial structures, the Project Team should consider aesthetic designs that are compatible with the surrounding environment."*

Public Comment: Although we favor the metrorail option over the bus transit options for transit development on the Dulles Corridor, we are deeply concerned about the noise and visual impact to our community [Greenwich Street] that is directly adjacent to the proposed rail construction. Because our

neighborhood is below the grade of the proposed track site, and the rail is elevated, the effect for our homes in winter will be somewhat like living next to the monorail in a safari park. A visual barrier, such as a row of very tall evergreens (perhaps Norway spruce, white pine or other fast-growing, dense evergreen), strategically sited along the VDOT right-of-way is needed to separate the neighborhood from the transit route. (0389, 0389-E –1)

Public Comment: From what I understand of present planning, my neighbor, Scott Mays, eventually will endure the sight of an 8-car metro train, high in the air, whipping along at eye level every three minutes. His property is bounded by the sound barrier for the Dulles Connector Road…so the distance from his balcony railing to the metro rail action is only the length of his backyard, plus one half the width of the DCR. This situation = residences located below rail level = extends from approximately 745+00 to 785+00 on both sides of the DCR. Potential property buyers would have to weigh the convenience of having the West Falls Church Metro Station within walking distance against having the actual trains essentially in their back yards. Surely this would not be a positive sales feature and could only be a negative influence on property values. (0432, 0432-E –4)

> ***Response:*** *With the Supplemental Draft EIS and revised General Plans (October 2003) and as depicted in the final General Plans, the Project Team lowered the Metrorail profile such that the top-of-rail is, on average, 25 feet above the median of the Dulles Connector Road.*
>
> *Visual impacts in the Westhampton neighborhood associated with construction of the Metrorail Extension are evaluated in the Final EIS. In general, however, the Project Team will work with surrounding landowners and local government to integrate Project elements into the surrounding environment.*

Public Comment: The Reston area is rated in the draft (page 3-102, table 3.4-2) as that rail service will have "less than substantial visual impact." The rating neglects the fact that air rights and the adjacent Reston properties are planning to be of mixed use, including housing. In addition, the Rail Corridor will succeed in exacerbating the detrimental effects of the existing highway. Presently the highway includes some green landscaping that provides a modicum of relief from all the hot & noisy paving. Rail service will replace most of the green landscaping with the added noise, chain-link fencing, and that most ugly image of industry: railroad tracks. Most importantly, the combination of two highways and a railway will form a very formidable wall cutting Reston in two. We have the opportunity, instead, to use the rail service to improve the visual/aesthetic conditions and physically unite and encourage more efficient face-to-face interaction, by allowing more direct connections between north and south Reston. This can be accomplished by building the Reston stations below grade. (0441, 0441-E –3)

Public Comment: I submit that, based on the FHWA methodology, the route through Reston should be rated "substantial visual impacts" (see def. on page 3-71). Consequent mitigation should include grade cutting that places the Town Center and Wiehle Avenue stations (and highway) below grade. (0441, 0441-E –5)

> ***Response:*** *Chapter 3 of the Final EIS states that the actual physical change associated with the Metrorail Extension in the median will be minimal due to the removal of the landscaping for motorists, transit riders, and viewers in adjacent land uses, which would include any new residential development built as part of a mixed-use development. The stations were also determined to have a minimal impact since they are transportation facilities located within a transportation right-of-way and are not inconsistent in scale from the offices and major structures located on adjacent land uses.*
>
> *In the final General Plans, the station architecture of the Dulles Corridor Metrorail Project incorporates WMATA's "New Look" design that is now being completed for New York Avenue Station, and the two stations of the Largo Extension. This concept retains key principles of Harry Weese's original design, with more inviting and better-defined entrances, an emphasis on customer information, and an open, graceful, and light feel through the use materials such as steel and glass for enclosures. These are systemwide "signature" elements that support a unified*

system identity as well as economical design and construction. The project is expected to maintain a high level of design quality through the use of a special architectural consultant during preliminary engineering and final design.

The pedestrian bridges and stations are designed so that pedestrians may cross from one side of the corridor to the other without having to enter the stations and pay a fare.

Public Comment: As shown on Metro Alignment Exhibit T-4 (Exhibit C), the elevation of the first floor of 8484 Westpark Drive is at 472 feet, while the second floor is at 485 feet and the third floor is at 497 feet. As reflected in the August 27, 2002 letter from John F. Amatetti of VIKA, Incorporated (Exhibit D), "[t]he closest point between the road and building is approximately 84 feet. The distance from the existing wall and the edge of the rail is approximately 33 feet. …the elevation [of the T-4 alignment] at its closest proximity to the wall and building is at approximately elevation 490.00." At this point, the westbound track of the T-4 alignment is heading southbound on Westpark Drive, on a significant down gradient angle, and cuts sharply across the front of the property inside the curb line of the intersection. The train is an additional 11 feet above the rail, or elevation 501. This means that the rail and train will obscure the views of tenants located on the first, second and third floors of the building. Noise, vibration resulting from the short distance between the train, the retaining wall and the building pose serious economic concerns. (0461, 0461-E –3)

Public Comment: The building presently provides tenants with attractive surroundings at a prestige address conveniently located in the core of the Tysons Corner business center. These attributes enable Northwestern to successfully compete with similarly situated buildings in retaining and attracting tenants including, the high end restaurant and its customers. However, the eyesore of the above-grade alignment will so degrade the quality of the surroundings that this visual blight will obscure and overshadow any remaining positive attributes of the property, and will undermine the ability of Northwestern to retain and attract tenants. Because of the adverse impacts of visual blight, Northwestern will be forced to make significant financial concessions with respect to rates, tenant allowances and lease terms. The building's fair market value will decline substantially as a result of these financial concessions. (0461, 0461-E –4)

Public Comment: Apart from its ownership of its National Headquarters, NADA has a limited partnership interest in the Westpark Corporate Center adjacent to NADA's property. The visual impact from the immediate proximity of this segment of the T-4 alignment, coupled with the noise and vibration of the train, will invariably erode the value of NADA's investment in that property. As shown on Metro Alignment Exhibit T-4 Option, prepared by VIKA Incorporated and the NADA Impact Studies as set forth in five sketches prepared by VIKA Incorporated (Sketches), the horizontal proximity of the T-4 alignment to one of the Westpark Drive and Route 7 is about 33 feet from the existing wall and the edge of the rail. The foregoing Sketches show that the elevation of the first floor of the building is at 472 feet, while the second floor is at 485 feet and the third floor is at 497 feet. The rail elevation is at 490 feet. This means that the rail and train will obscure the views of tenants located on the first, second and third floors of the building. The noise, both during and after construction, will cause distraction. Vibration resulting from the short distance between the train and a retaining wall pose serious safety concerns. (0477, 0477-L –5)

Public Comment: The other source of visual blight upon NADA's headquarters is the above-grade alignment of T-4. As stated in the VIKA Incorporated letter dated August 27, 2002 (Engineering Report) "The first floor of the building is at elevation 502.00. The second floor is at 514.00. The third floor is at 526.00. Based on this, and the rail elevation of 530 feet, the views of most of the tenants on most of first, second, and third floors are obscured by the rail and train profile." (0477, 0477-L –7)

Public Comment: The Headquarters Building presently provides tenants with attractive surroundings at a prestige address conveniently located in the core of the Tysons Corner business center. These attributes enable NADA to successfully compete with similarly situated buildings in retaining and attracting tenants. However, the eyesore of the Substation and the above-grade alignment will so degrade the quality of the Headquarters' surroundings that this visual blight will overshadow any remaining positive attributes of the Headquarters property. (0477, 0477-L –9)

Response: *Alignment T4 was eliminated from further consideration after the public and interagency review and comment on the Draft EIS, due to its visual effects. However, the Locally Preferred Alternative (LPA) evaluated in the Final EIS includes four Tysons stations along Alignment T6. An assessment of project-related visual impacts is presented in Section 3.4 of the Final EIS.*

Public Comment: Aesthetics -- The appearance of the aerial structure and the aerial stations will have a tremendous impact on the ability of the Metro facilities to be integrated into the area aesthetically. Before the WMATA Board approves the Dulles line, the design configurations for both the stations and the aerial structures should be thoroughly vetted and approved by the community and the County. Obviously, little work has been done to date in this regard. For example, the engineering plans show one aerial structure configuration (similar to that used at National Airport and elsewhere on the Metro system), while the architectural drawings show a significantly different configuration, one that's entirely new to the Metrorail system. (0387, 0387-L –13)

Public Comment: General. The design of the aerial structure in the architectural plans does not match the design of the aerial shown with the alignment drawings. Is the design of the aerial structure as shown in the architectural plans even feasible? Which structure design will be used? Is there any difference in cost? (I would bet that there would be.) (0387, 0387-L –47)

Response: *The Project Team recognizes that the aerial guideway and stations are important visual elements that merit careful study and sensitive treatment. The final Team recommendations state: "With respect to Metrorail aerial structures, the Project Team should consider aesthetic designs that are compatible with the surrounding environment." This will occur during preliminary engineering and final design. The aerial guideway configuration has not been selected at this time; both configurations shown in the final General Plans are under consideration and both are structurally feasible. The cost difference between the two alternatives has not been determined. This selection will be based on an analysis of aesthetics, cost and structural performance.*

Public Comment: No specific information was provided on whether there were visual or vibration impacts and no commitments for mitigation were made. (0430 03-02)

Response: *With the Supplemental Draft EIS and revised General Plans (October 2003) the Project Team lowered the Metrorail profile such that the top-of-rail is, on average, 25 feet above the median of the Dulles Connector Road. Comments pertaining to potential visual impacts in the Westhampton neighborhood have been addressed in the Final EIS. Ground-borne vibration and ground-borne noise levels from activities at project facilities, such as a Metrorail Service and Inspection Yard, are expected to be well below the ambient background levels. Therefore, no exceedances of the FTA or WMATA impact criteria are expected.*

Public Comment: Additional study of the feasibility of running the feeder rail line to the West Falls Church S&I Yard underground near the Westhampton neighborhood to address visual and noise pollution concerns. (0500 03-01)

Public Comment: Additional study of the feasibility of running the feeder rail line to the West Falls Church S&I Yard underground near the Westhampton neighborhood to address visual and noise pollution concerns. (0501 03-01)

Response: *The planning for the connection to the Orange Line of the proposed Metrorail extension has always incorporated the use of at-grade and aerial methods of construction for connecting the flyover from the median of I-66 to the median of the Dulles Connector Road. Provisions for this connection were made with the original construction of the Orange Line in the early 1980s, including the construction of a pier and foundation in between the Orange Line tracks to facilitate such an aerial structure to minimize eventual disruption to the Orange Line during construction.*

The impacts and costs for underground construction of this connection were not evaluated as part of any current alternative in the Final EIS. Making this connection would present extremely complex construction challenges to keep the Orange line fully operational and not impact both directions of I-66, a major interstate highway. Due to its complexity, the cost of this underground construction for this segment would be significantly greater than typical cut-and-cover construction, and many times greater than the planned at-grade and aerial construction.

Public Comment: Concerned with visual and noise impacts since the community lies within 80 feet of the right of way, at the exact location where the Metrorail alignment would become elevated and curve into Tysons Corner. (0137 03-01)

Response: *Section 3.4 of the Final EIS describes in detail the various aesthetic and visual issues associated with the project. This chapter outlines the visual impacts of the LPA, including those impacts that are predicted to occur in Tysons Corner. In addition the chapter includes a description of physical changes, where visibility is at issue, the types of viewers involved, the viewers' sensitivity to the physical changes and what the impact of the visual changes is anticipated to be.*

Public Comment: Commenter says that Alignment T6 was recommended over Alignment T9 because it has less visual impact. Figure 3.4-7 in the Draft EIS conflicts with this reasoning. Figure shows that double column and extra track width of T6 has much greater visual effect than T9 for the entire length of the above grade section. Suggested architectural treatments do nothing to minimize shadow effect on the Route 7 corridor. This effect will have long term negative impact on property owners along the corridor, and will not balance the positives of increased transit options. (Bob Wilberg, Prentiss Properties)

Response: *In Section 3.4 of the Draft EIS, the visual impacts of the Alignments T6 and T9 alignments were listed as identical. Both alignments would have resulted in substantial visual effects to viewers such as motorists, transit riders, and office/commercial workers. These viewers have a moderate sensitivity to visual changes. Impacts to residents, who are more sensitive viewers but whose views are distant, would be less than substantial. With Alignment T6, the Tysons Central 7 Station is underground, while with Alignment T9; the Tysons Central C Station would have been high above ground and would have resulted in more visual effects. As shown in Figure 3.4-7 in the Draft EIS, the areas traversed by the aerial portions of Alignments T6 and T9 include relatively wide roadways surrounded by substantial office and retail development. The addition of an aerial transit alignment and stations would not be out of character with such areas and appropriate architectural treatments are planned.*

Public Comment: Concerned about direct effects on his property at 8521 Leesburg Pike. Transition from underground to aerial will cut off access to Route 7, and would relocate the service road into his front door. T6 will also have visual effects. (0488 03-01)

Response*: As currently shown in the General Plans, there would be access and visual effects to this property from Alignment T6 of the selected LPA. The analysis of visual and aesthetic conditions in support of the EIS considered the relationship of the Project to Tysons Corner as whole and Route 7 for its entirety. The analysis considered the types of viewers and their sensitivity to visual changes and also the degree of visual impact to these viewers.*

Mitigation of Visual Impacts

Public Comment: At any rate, what I wanted to say was in the statements that Mr. Dittmeier made, he mentioned that there were impacts and conflicts which were mitigated in the report. I wish to take exception to that. One of the statements in the report - I may be not exactly quoting verbatim, but it says that the aerial system will dominate the view from hundreds of apartments, many of them, hotel rooms, and certainly from office space. That's true. That is an impact. But it has not been mitigated in the report. (0160, 0160-T –1)

Response: *Alignment T4 was eliminated from further consideration after the public and interagency review and comment on the Draft EIS, in part due to its visual effects.*

Public Comment: Mitigation for visual pollution, such as additional and higher walls, tree plantings, and a structure to cover the rail line [near Westhampton]. (0386, 0386-E –8) (0398, 0398-L –8) (0399, 0399-L –8) (0403, 0403-L –7) (0412, 0412-L –8) (0415, 0415-L –8) (0416, 0416-L –8) (0430, 0430- E- 8) (0431, 0431-E –8) (0438, 0438-E –7) (0442, 0442-L –7) (0465, 0465-L –8) (0466, 0466-L –7) (0467, 0467-L –7) (0469, 0469-L –7) (0470, 0470-L –8) (0471, 0471-L –7) (0473, 0473-L –8) (0474, 0474-L –8)

Response: *With the Supplemental Draft EIS and revised General Plans (October 2003) the Project Team lowered the Metrorail profile such that the top-of-rail is, on average, 25 feet above the median of the Dulles Connector Road. Visual impacts in the Westhampton neighborhood associated with construction of the Metrorail Extension are evaluated in the Final EIS. The Final EIS states: "DRPT and WMATA would consider designs for Metrorail stations, aerial structures, and portals that are compatible with the surrounding environment."*

Public Comment: Use shrubs and trees to bring parking/storage/inspection/maintenance areas into harmony with residential areas. (0432, 0432-E-7)

Response: *The Project Team will work with property owners to re-establish landscaping removed for the construction of facilities and alignment.*

Public Comment: Visual pollution and loss of privacy at many of the houses in Westhampton due to elevated tracks, bus parking areas, and the train yard. Mitigation for visual pollution, such as additional and higher walls and tree plantings. (0483 03-01)

Public Comment: Visual pollution and loss of privacy at many of the houses in Westhampton due to elevated tracks, bus parking areas, and the train yard. Mitigation for visual pollution, such as additional and higher walls, tree plantings, and a structure to cover the rail line are needed. (0499 03-01)

Public Comment: Visual pollution and loss of privacy at many of the houses in Westhampton due to elevated tracks, bus parking areas, and the train yard. Mitigation for visual pollution, such as additional and higher walls, tree plantings, and a structure to cover the rail line are needed. (0500 03-02)

Public Comment: Visual pollution and loss of privacy at many of the houses in Westhampton due to elevated tracks, bus parking areas, and the train yard. Mitigation for visual pollution, such as additional and higher walls, tree plantings, and a structure to cover the rail line are needed. (0501 03-02)

Public Comment: Is concerned that the responses in the *Public Hearings Report* focused exclusively on adding rail to the median of the DAAR. Since their homes lie 20 to 30 feet below the level of the adjoining roadway, they will be exposed to both the sight and sound of the project. While the community supports the project and recognize its value, without mitigation, the Metrorail Alternative will substantially affect their quality of life. (0137 03-02)

Response: *With the Supplemental Draft EIS and revised General Plans (October 2003), the Project Team lowered the Metrorail profile such that the top-of-rail is, on average, 25 feet above the median of the Dulles Connector Road. Section 3.4 of the Final EIS describes in detail the various aesthetic and visual impacts associated with the Locally Preferred Alternative. The effects vary with respect to the type of visibility involved, the types of viewers involved, the viewer's sensitivity to the physical changes, and the level of physical change anticipated to occur. The final Team recommendations state: "DRPT and WMATA would consider designs for Metrorail stations, aerial structures and portals that are compatible with the surrounding environment."*

Opportunities for Aesthetic Enhancements

Public Comment: What we need here in Reston East is an inspired "gateway." (0072, 0072-CC-2)

***Response**: In accord with the final Team recommendations for Wiehle Avenue Station, the final General Plans include a site plan that accommodates future joint development at the station. The site of the joint development would be on the current Reston East park-and-ride facility along Wiehle Avenue.*

Fairfax County Supervisor Hudgins has appointed the Wiehle Avenue Steering Committee, which advise the County staff in the creation of a Request For Proposal (RFP) to solicit transit-oriented joint development proposals for a mixed use development of the County-owned parcel adjacent to the station. Using the conclusions from the Supervisor's Reston Charrette as a starting point, the committee is establishing the process, scope and criteria for the RFP.

While an "inspired gateway" is not explicitly part of the Metrorail Extension, it is possible that a joint development project at Wiehle Avenue Station could include "gateway" elements.

Need to Maintain and/or Improve Visual Quality of Area

Public Comment: County and Reston Center for government and industry architectural review priorities should be to maintain or improve the visual quality of the station areas. (0170, 0170-T –14)

Public Comment: County and RCIG Architectural Review priorities must be concerned about the visual quality of the station area. Reston is interested in innovative design of the corridor stations and measures that mitigate the visual impact of removing the grassy median and trees. (0233, 0426-M –10)

***Response:** The Fairfax County Comprehensive Plan is implemented through its Area Plans, which convey the Policy Plan's goals and objectives at the more-detailed Planning District and Community Planning Sector levels. The change in character at the transit stations is discussed in Chapter 5 of the Final EIS. The Fairfax County Comprehensive Plan includes several design guidelines for the Reston area to maintain or improve visual quality. These include guidelines on character and form, building design and height, access considerations, provisions to enhance the pedestrian environment such as the use of plazas and courtyards, subtle design features such as building facades and rooflines, and creating a sense of enclosure and defined space. Fairfax County and the Reston Association govern the refinement of design guidelines in Reston.*

In the final General Plans, the station architecture of the Dulles Corridor Metrorail Project incorporates WMATA's "New Look" design that is now being completed for New York Avenue Station, and the two stations of the Largo Extension. This concept retains key principles of Harry Weese's original design, with more inviting and better-defined entrances, an emphasis on customer information, and an open, graceful, and light feel through the use materials such as steel and glass for enclosures. These are systemwide "signature" elements that support a unified system identity as well as economical design and construction. The project is expected to maintain a high level of design quality through the use of a special architectural consultant during preliminary engineering and final design.

In addition, as discussed in Section 3.4 of the Final EIS, the removal of stands of trees from the median of the DIAAH would represent a minimal visual impact along the corridor.

Public Comment: Western Portal At Dulles Airport - The western rail portal at Washington Dulles International Airport should be moved to a point north of Rudder Road to preserve as much as possible the views of the historically-protected main terminal building [for T6]. It would also move the portal and the noise of the trains further away from the Dulles Airport Marriott hotel and its guests. (0071, 0214-M –7)

***Response**: With the Supplemental Draft EIS and revised General Plans (October 2003) the Project Team relocated northward the portal at the western end of the Dulles Airport tunnel so that the Project's effects on the Dulles Airport Marriott have been reduced. This relocation is part*

of the Full LPA and final General Plans.

The Section 106 Memorandum of Agreement, included as Appendix F of the Final EIS, describes the mitigation of the Project's effects on the Dulles Airport historic district. One mitigation measure is that "The design of aerial structures and portals located within the historic district boundaries will consider, and incorporate where appropriate, concepts and materials that are mutually agreed to be compatible with the historic terminal and other contributing elements of the historic district." Noise effects near the Marriott at Dulles Airport from Metrorail trains are not anticipated to exceed criteria require mitigation measures.

Public Comment: WATF welcomes the comments in Section 7.3.2 of the *Public Hearings Report* on page 595 regarding adequate landscaping and consideration to visual impacts. However, WATF believes that the responses should be strengthened and made a specific requirement for the project. Additionally believe that, project landscaping should be maintained as part of the project and should not be an airport cost. Believes good public architecture should be a requirement. (0133 03-01)

Public Comment: The WATF applauds the reduction in visual intrusion for aerial tracks reported in the revised DEIS, and urges project managers to continue to pay very careful attention to landscaping and architecture for the reasons stated earlier. In addition, good, well maintained landscaping and architecture can increase rider ship as some potential users take them as evidence of a safe and efficient system. Also, visual appeal saves money by generating good will and reduced complaints. (0108 0127-6)

Response: *Landscaping plans of station facilities will be developed during preliminary engineering and final design. In the final General Plans, the station architecture of the Dulles Corridor Metrorail Project incorporates WMATA's "New Look" design that is now being completed for New York Avenue Station, and the two stations of the Largo Extension. This concept retains key principles of Harry Weese's original design, with more inviting and better-defined entrances, an emphasis on customer information, and an open, graceful, and light feel through the use materials such as steel and glass for enclosures. These are systemwide "signature" elements that support a unified system identity as well as economical design and construction. The project is expected to maintain a high level of design quality through the use of a special architectural consultant during preliminary engineering and final design.*

Public Comment: Suggests depressing the rail line in a covered trench, as was done for Centennial Village near Addison Road on the Metrorail Blue Line. Believes that it is possible to cross under (instead of over) the two eastbound lanes of the Dulles Toll Road, and still be high enough to approach an elevated station at Tysons East. Suggests that it would be much more economical than tunneling, and that this cut and cover solution would be much better in terms of visual and noise impacts. (0137 03-03)

Response: *Placing the Metrorail Extension underground between the Dulles Connector Road and an aerial Tysons East Station presents several difficulties, foremost cost, which would be many times more expensive than the approved aerial segment. The Tysons East Station and adjacent alignment was carefully located horizontally and vertically to work in concert with current and future land-use and roadway plans for this area*

Importance of Neighborhood Compatibility of Stations

Public Comment: I would also like to make the following suggestions: Every effort should be made to provide high quality stations with ample parking to help ensure that the stations are not only convenient, but attractive additions to the surrounding neighborhoods. (0393, 0393-L –3)

Response: *In the final General Plans, the station architecture of the Dulles Corridor Metrorail Project incorporates WMATA's "New Look" design that is now being completed for New York Avenue Station, and the two stations of the Largo Extension. This concept retains key principles of Harry Weese's original design, with more inviting and better-defined entrances, an emphasis*

on customer information, and an open, graceful, and light feel through the use materials such as steel and glass for enclosures. These are systemwide "signature" elements that support a unified system identity as well as economical design and construction. The project is expected to maintain a high level of design quality through the use of a special architectural consultant during preliminary engineering and final design.

B. Supplemental Draft EIS Comments

Public Comments

Potential Changes in Character of Neighborhoods

Public Comment: We anticipate the adverse visual impact of the rail link as described in current planning documents. While no longer raised as it passes by our immediate community, even the at-grade rail bed will have a visual impact due to the fact that we do not have the benefit of neither noise abating nor privacy fencing. I envision the effect to something akin to turn-of -the century New York City rail systems or current day "El" in downtown Chicago - neither of which is what my family and neighbors envisioned when acquiring our otherwise bucolic setting where we make our home. (0014 0015-2)

Response: *Comment noted. Chapter 3 of the Final EIS describes the visual effects of the Project and its effects on neighborhoods.*

In regards to the absence of conventional highway noise walls, the final Team recommendations state "With respect to the concerns of communities on the noise of the Dulles Connector Road, the Commonwealth of Virginia will seek to address the existing noise effects upon the residential communities with noise abatement measures. If the Commonwealth decides to proceed with noise abatement measures, it would bear most of the cost of the abatement, since this is an existing condition due mainly to traffic to and from the Dulles Toll Road. The Project itself would share in the cost of abatement proportional to the Project's contribution to the future levels of noise and to its visual effects. DRPT has been identified as the lead agency for the coordination among VDOT, MWAA, WMATA, FTA, Fairfax County officials and staff, and representatives of the affected communities."

Public Comment: The SDEIS needs to evaluate visual effects throughout the entire corridor and its affected environs, not merely in Tysons Corner, the W&OD Railroad Regional Park and the Dulles Airport Historic District (e.g., at TABLE 2-2). The evaluation needs to include not only an operational metrorail system, but also years of construction, resulting gridlock and the likely increase in traffic along arterial routes as drivers avoid the increased tolls due to this project. (0068 0173-27)

Response: *Section 3.4 of the Final EIS provides a visual analysis of the entire Project corridor, including a description of the existing visual character, quality of views, and important visual resources along the corridor; an assessment of the project's potential impacts on these resources; and a discussion of proposed mitigation measures in areas where any substantial impact was determined to possibly occur. The final Team recommendations state: "DRPT and WMATA would consider designs for Metrorail stations, aerial structures and portals that are compatible with the surrounding environment."*

Public Comment: n. The SDEIS needs to provide detailed explanation as to what is contemplated in the contention that east of Wiehle Avenue a change in visual character at stations will result (e.g., at TABLE 2-2). This explanation needs to be detailed in respect of both geographic extent – how far east? – and the type of visual character change anticipated in order for the public to be adequately informed for purposes of public comment. (0068 0173-31)

Response: *The Final EIS states that the visual impact of the project in the Tysons Corner area would be reduced relative to the impacts described in the Draft EIS. Based on comments received during the Draft EIS process, a segment of the proposed alignment immediately west of*

the Route 123/Dulles Connector Road interchange was revised to reduce visual impacts. By shifting a portion of the proposed alignment to the north side of Route 123, a series of structural bents for a lengthy oblique crossing of aerial structure over Route 123 was eliminated.

Public Comment: While your report states in Section 3.4.3 that "neither the proposed LPA nor the proposed LPA Phase I would result in any substantial visual impacts to resources along the corridor." As one of those "resources," our community will be exposed to 8 car trains running at speed (or braking) at a height of 52 feet over the level of our homes as they curve into Tysons. (0036 0037-2)

Public Comment: Second, the visual impact of the elevated and curved rail line at our location should also not be overlooked. While your report states, in Section 3.4.3, that "Neither the proposed LPA nor the proposed LPA Phase 1 would result in any substantial visual impacts." We feel that we will be impacted by that as we are exposed to eight-car trains running at speed or braking at a height, as I understand the profile, of about 52 feet over the level of our homes as they curve into Tysons. (0036 0062-2)

Response: *Potential visual impacts of the LPA are discussed in Section 3.4 of the Final EIS and noise impacts are discussed in Section 4.7. Proposed mitigation to alleviate potential impacts is discussed at the end of each section and summarized for all impact areas in Chapter 2. DRPT will continue to communicate with residents of the Hallcrest Heights neighborhood and other adjacent property holders throughout preliminary engineering and final design to address neighborhood concerns.*

3.5 Cultural Resources

A. Draft EIS Comments

State Agency Comments

Section 106 Process

State Comment: We are currently working with the FTA, USDOT, VDRPT, WMATA, the FAA, and their consultant, Parsons Engineering Science, Inc., on the identification of historic properties within the proposed transportation corridor. Currently, Parsons is drafting a Programmatic Agreement among the federal and state agencies and our department. This programmatic agreement will outline the procedures to be followed in the identification and evaluation of historic properties as well as plan for the mitigation of effects to properties eligible for listing on the National Register of Historic Places. We encourage the federal and state agencies involved to continue coordinating with our office as the project evolves. (0407, 0407-A –40)

State Comment: Historic Structures and Archaeological Resources. The Department of Historic Resources indicates that it is working with project management agencies and their consultant on the identification of historic properties in the proposed corridor. The agencies involved will sign a Programmatic Agreement with the Department of Historic Resources which outlines procedures for the identification and evaluation of historic properties and plans for mitigation of effects upon properties listed on or eligible for the National Register of Historic Places. We encourage the agencies involved to continue coordinating with the Department of Historic Resources as this project evolves. (0407, 0407-A – 7)

State Comment: Cultural Resources Technical Report - (June 2002)

§ As stated in previous comments, this study has not established which resources previously identified are in fact eligible for the National Register. This is a fundamental flaw. There are clearly a number of resources previously documented within the APE (for example Bois de Gosses, Shiloh Baptist

Church, Plantation, Wiehle/Sunset Historic District, etc) that have not been evaluated by the FTA or VDHR. Comments on eligibility for each resource need to be obtained from VDHR.

- § Without knowing which resources are eligible for listing in the National Register, an effect determination cannot be made.
- § Without knowing which resources are eligible and what their boundaries are, Section 4(f) evaluations cannot be made.
- § If documentation is provided by the FTA (or their consultants) to VDHR, several of the resources may well drop from consideration in the context of Section 106. There appear to be very few resources that will be eligible for listing in the National Register.
- § The report states on page 111, that additional architectural resources may exist beyond those previously documented. This is a potentially fatal flaw in the study. If there are other eligible historic properties they need to be identified now. Their location may well effect a location decision (via Section 4(f)).
- § Page 111 - Archaeological survey needs should be depicted on maps. (0421, 0421-A –8)

State Comment: To date the Section 106 process has not been initiated. Other than the meeting on held on February 28, 2001, agency has not received any information regarding NHPA compliance. Understand that the identification of previously identified historic properties is well under way and that the identification of previously unidentified properties will begin in the near future. (0516 03-01)

> ***Response****: Appropriate coordination regarding the Section 106 process continued through the development of the Final EIS. The executed Section 106 Memorandum of Agreement is included as Appendix F of the Final EIS. Additional information on impacts to the Dulles Airport historic district is included in Chapter 7 of the Final EIS (Section 4(f) Evaluation).*

Regional Agency Comments

Need for Appropriate Mitigation

Regional Comment: As the development of the IAD Metrorail station would occur below grade, it would not have direct visual impact on the Main Terminal or historic district; however, this new facility would still technically fall within the historic district and the architectural design would need to take into account the general historic character of the airport. The original Saarinen plan included a careful consideration of both the inbound and outbound "passenger experience." As the new facility will become a new element of that experience, architectural sensitivity to the character of the airport will need to be addressed. Further consultation with the Airports Authority and the review agencies (under the terms of a Programmatic Memorandum of Agreement) would be required to assess potential effects and develop mitigation measures (if required). (0440, 0440-A –7)

Response: *The Section 106 Memorandum of Agreement, included as Appendix F of the Final EIS describes the mitigation of the Project's effects on the Dulles Airport historic district. Per the terms of that agreement the design of the Dulles Airport Metrorail station and terminal connections will consider, and incorporate where appropriate, established airport design themes and finishes within the context of the WMATA design criteria, approved system-wide facility requirements and operational practices in effect at the time of the design. In addition, the design of aerial structures and portals located within the historic district boundaries will consider, and incorporate where appropriate, concepts and materials that are mutually agreed to be compatible with the historic terminal and other contributing elements of the historic district.*

Boundaries of the Washington Dulles International Airport (IAD) Historic District

Regional Comment: The eligible historic district at IAD is substantially larger than that shown in Figure 7.3-1b, and includes the proposed location of the rail tunnel portal and elevated track northwest of the Main Terminal. The effects of these structures need to be addressed in the context of cultural resources and the Section 4(f) evaluation. (0440, 0440-A –6)

***Response*:** *Further coordination occurred during the preparation of the Final EIS and Section 106 Memorandum Agreement to confirm the boundaries of the Dulles Airport historic district. Additional information on impacts to the Dulles Airport historic district is included in Section 3.5, Cultural Resources, and Chapter 7 (Section 4(f) Evaluation) and Appendix F (Section 106 MOA) of the Final EIS.*

Local Agency Comments

Concern for Impacts to Previously Identified and Potential Cultural Resources

Local Comment: From the standpoint of this office, site 44FX1569 is of particular interest from an overall resource planning perspective. The site was subjected to a phase 2 assessment in the 1980s. The results were conclusive from a functional standpoint but without chronological data the functional data is largely worthless. To justify the phase 2 cost to the public this situation should be rectified. I urge the oversight agencies to build additional phase 2 testing or construction monitoring into the plans for any construction that will destroy this site. Arrangements can be made with FCAS for this archeological work. (0306, 0306-A –8)

Response: *As noted in Section 3.5 of the Final EIS, the referenced site underwent Phase II testing in 1989 during studies related to the Dulles Toll Road Extension. The site was determined to be eligible for the NRHP and Phase III testing was recommended, prior to construction. No record of Phase III excavations was found. No impacts to this site are anticipated to occur as a result of implementing the LPA. In addition, this site as well as the other archaeological sites within the Area of Potential Effect (APE) for the project would be avoided in siting construction staging areas. Therefore, no testing at Site 44FX1569 is warranted as a part of this project.*

Local Comment: The Cultural Resource Protection Group (CRP) of the Fairfax County Park Authority has reviewed the alignments for the Dulles Rapid Transit Corridor. Construction along this corridor will impact six parks owned by the Fairfax County Park Authority. The parks included in this assessment are Scott's Run, McLean Hamlet, Ashgrove, Difficult Run, Olney and Hutchison School Site. A number of important archaeological resources were found to exist in these parks. Important sites found within the parks include 44FX 2470 (Odrick Site), 44FX1597 (Ashgrove and other related sites, including 44FX2205 and 44FX2203). The CRP recommends complete avoidance of these sites. All of these sites are important to the history of Fairfax County, and as such, deserve special attention. (0306, 0306-A –5)

Response: *All resources potentially affected by the LPA were identified in the Final EIS. See Section 3.5, and Chapter 7for a discussion of historic resources and anticipated effects.. Mitigation commitments for adverse effects to historic properties are detailed in the Section 106 MOA (Appendix F).*

Local Comment: As noted on the figures from County Archaeological Services, areas of moderate or high potential for archaeological sites should also be surveyed prior to any construction. (0306, 0306-A –6)

Response: *Areas with moderate or high potential for archaeological sites within the APE of the LPA were investigated and discussed in the Final EIS. No effects to archaeological resources are anticipated. The Section 106 Memorandum of Agreement in Appendix F of the Final EIS discusses the mitigation of one adverse effect to a historic property.. See Section 3.5, Chapter 7, and Appendix F (Section 106 MOA) for a discussion of all potential impacts and mitigation measures associated with cultural resources.*

Coordination with Local Entities

Local Comment: Areas of cultural and historical resources were identified in the DEIS primarily based on information provided by the State Historic Preservation Officers (SHPO). To augment the information provided by the SHPO, we have attached an archeology impact assessment, analysis and

recommendations from the County Archeologist and FCPA Cultural Resource Protection Group. Please note that the County Archeologist has offered to assist in any archeological work that may be undertaken. (0306, 0306-A –2)

> ***Response*****:** *See Section 3.5, Chapter 7, and Appendix F (Section 106 MOA) for a discussion of all potential impacts and mitigation measures associated with cultural resources.*
> *. The Project Team will continue to coordinate with VDHR, the County Archaeologist, and the FCPA Cultural Resource Protection Group throughout preliminary engineering and final design.*

Public Comments

Concern for Impacts to Previously Identified and Potential Cultural Resources

Public Comment: The Draft EIS makes the common mistake of presuming that adequate cataloguing has occurred with respect to archaeological and architectural resources so that planners would have advance knowledge of any adverse impact. Based on recent experience, adequate cataloguing has not taken place and resources have been destroyed. The project should not further this loss. (0510 03-02)

> ***Response:*** *As described in Section 3.5 of the Final EIS, identification of historic and archaeological resources was conducted in accordance with applicable laws and regulations. The Project Team continued to coordinate with VDHR, the County Archaeologist, and the FCPA Cultural Resource Protection Group throughout preparation of the Final EIS to ensure that all resources were identified. .*

Public Comment: How will the new traffic patterns and traffic volumes generated by this project affect the scenic and historic character of Hunter Mill Road, which was declared eligible for listing as an historic district in state and national historic registries in 2002 and has been named a Virginia Byway? (0460, 0460-L –3)

Public Comment: The Draft EIS does not recognize that the Hunter Mill Road corridor was declared eligible for listing as a historic district in 2002 and has been named a Virginia Byway. The impact that the proposals would have on this resource should be assessed. (0510 03-03)

> ***Response:*** *. The proposed Hunter Mill Road historic district was included in the assessment of effects to cultural resources in Section 3.5 of the Final EIS. No effects from the Project are projected for communities in proximity to Hunter Mill Road. The increase in densities allowed by Fairfax County is also not anticipated to occur within these neighborhoods.*

Need for Section 106 Review

Public Comment: Finally, the Westhampton neighborhood, which is a 50 year-old subdivision would experience a significant architectural impact from the development of any raised structures which are located in or near the neighborhood. Therefore, we believe that any development under the Dulles Rail Corridor be done in accordance with the National Historic Preservation Act, and that an A-106 analysis be conducted and impacts to the Westhampton view shed be incorporated in the mitigation plans for the Dulles Corridor Project. (0388, 0388- L- 5)

> ***Response:*** *As noted in the Final EIS, an Area of Potential Effect (APE) was identified for the project in coordination with the Virginia Department of Historic Resources. Although a portion of the Westhampton neighborhood was within the APE, this neighborhood not identified as an historic resource eligible for the National Register of Historic Places (NRHP).*
>
> *Since the Westhampton neighborhood was not identified as an eligible historic resource impacts related to the view shed were only evaluated as part of the visual conditions Analysis presented in Chapter 3*

B. Supplemental Draft EIS Comments

State Agency Comments

Need for a Programmatic Agreement

State Comment: We welcome the opportunity to discuss this project further at our next scheduled Section 106 meeting on December 16, 2003. At that meeting we will also continue our dialogue regarding the development of a Programmatic Agreement (PA) for the undertaking. We request that you continue to consult with DHR through the Section 106 process on this undertaking. (0010 0010-3)

> ***Response:*** *DRPT continued to coordinate with the Department of Historic Resources on a Section 106 Memorandum of Agreement for the Project. The executed MOA is included as Appendix F of the Final EIS.*

Issues Related to the Dulles Airport Historic District

State Comment: Similarly, the report cites "further analysis" confirming that the proposed LPA would not cause an adverse visual effect on the "peekaboo" sequence along the approach to Dulles Airport. We have not had the opportunity to review and comment on the aforementioned analysis. Therefore, we cannot agree that your assertion is correct. In fact, the issue of an appropriate National Register boundary for the airport is still an outstanding issue that must be settled before the discussion of effect can happen. (0010 0010-2)

State Comment: Regarding the potential establishment of an eastern boundary of the Dulles International Airport Historic District, any decision/actions that would lead to minimization of harm to the district should not preclude (or should take into account) any future surface transportation improvements on the DTR/DAAR (Sections 3.5 & 7) for the entire length of the Project. (0091 0106-22)

> ***Response:*** *The executed Section 106 Memorandum of Agreement, included as Appendix F of the Final EIS, describes the Project's adverse effect on the remaining historic "peekaboo" views of the main terminal control tower for approaching travelers from the Dulles International Airport Access Highway (DIAAH) and the mitigation measures. One measure is that the vertical profile of the Metrorail tracks and the concrete safety barrier will be constructed as low as practicable given site conditions to minimize any obstruction of these views of the main terminal control tower.*
>
> *Based on further consultation with MWAA and VDHR during the preparation of the Final EIS and Section 106 Memorandum Agreement, the eastern boundary of the Dulles Airport historic district has been confirmed.*

Issues Related to Hunter Mill Road

State Comment: The revised EIS asserts that there would be no adverse effect to architectural resources as a result of the LPA. We cannot concur with this statement. The project corridor crosses the boundary of the Hunter Mill Road Historic District. Despite the claim that "because the Hunter Mill Road Historic District is located within an existing transportation corridor, impacts to the district associated with this project would be minimal," you have not provided the Department of Historic Resources (DHR) sufficient information in order for us to agree with this statement. (0010 0010-1)

> ***Response:*** *DRPT continued coordination with the Virginia Department of Historic Resources during the preparation of the Final EIS and Section 106 Memorandum of Agreement. The results of this work are contained in Chapter 7 (Section 4(f) Evaluation) and Appendix F (Section 106 MOA). That coordination and the analyses in support of the Final EIS and the Section 106 process did not identify any adverse effects on the Hunter Mill Road Proposed Historic District.*

Regional Agency Comments

Issues Related to the Dulles Airport Historic District

Regional Comment: Regarding the discussion of the Dulles Airport Historic District (page 3-33), the Airports Authority maintains that the eastern boundary of the eligible historic district does not extend east of the location on the DIAAH where westbound travelers are first able to view the Main Terminal and the original Air Traffic Control Tower. (0131 0166-5)

> ***Response:*** *DRPT continued to coordinate with the Metropolitan Washington Airports Authority and the Virginia Department of Historic Resources regarding the eastern boundary of the Dulles International Airport historic district during development of the Final EIS. The Section 106 Memorandum of Agreement in Appendix F of the Final EIS describes the Project's adverse effect on the remaining historic "peekaboo" views of the main terminal control tower for approaching travelers from the Dulles International Airport Access Highway (DIAAH) and the mitigation measures. One measure is that the vertical profile of the Metrorail tracks and the concrete safety barrier will be constructed as low as practicable given site conditions to minimize any obstruction of these views of the main terminal control tower. The*
>
> *Based on further consultation with MWAA and VDHR during the preparation of the Final EIS and Section 106 Memorandum Agreement, the eastern boundary of the Dulles Airport historic district has been confirmed.*

Local Agency Comments

Definitions of the Area of Potential Effect

Local Comment: The County should continue to be a consulting party as impact mitigation strategies are discussed. Additionally, the Area of Potential Effect (APE) was defined as 200 feet beyond station footprints to allow for possible variation during construction. The County should be contacted if variations to the proposed alignment will impact additional sites. (0084 0099-2)

> ***Response:*** *Coordination efforts undertaken by DRPT during the preparation of the Final EIS have resulted in the development of both a Section 4(f) Evaluation and Section 106 Memorandum of Agreement (MOA) outlining potential effects and proposed mitigation to address impacts to cultural resources.*

Issues Related to Hunter Mill Road

Local Comment: Section 3.4.1.2 Under the last bullet on this page, the text refers to the "Hunter Mill Road Historic District". This area is not a "District"; the area is eligible for being considered for placement on the state or national registers; in other words a proposed "District". The bullet should be corrected by referring to this area as a "proposed District". References to this area are throughout the SEIS; (0093 0109-14)

Local Comment: Section 3.5 the last row of the third column indicates that the Road [Hunter Mill] has "not yet" been designated a Scenic Byway, which is not correct. The Road has been designated a Scenic Byway. (0093 0109-15)

> ***Response:*** *Thank you for your comments on the status of the Hunter Mill Road Proposed Historic District. Both of the items identified by the commenter have been clarified in the Final EIS.*

3.6 Parklands and Recreation Areas

A. Draft EIS Comments

State Agency Comments

Impacts on Existing or Planned Recreational Facilities

State Comment: Lastly, the proposed project is not anticipated to have any adverse impacts on existing or planned recreational facilities. Nor will it impact any streams on the National Park Service Nationwide Inventory, Final List of Rivers, potential Scenic Rivers, or existing or potential State Scenic Byways. Please contact DCR for an update on this information if a significant amount of time passes before it is utilized. (0407, 0407-A –29)

Response: *Comment noted.*

Regional Agency Comments

Construction Impacts to Parklands

Regional Comment: The Draft EIS states that construction would be timed for low-use periods and continued access to the park would be maintained during hours of peak use. The Draft EIS also states that construction would be in compliance with the Park Authority's Guidelines for the Development of W&OD Trail Bridge Crossings. It is Park Authority policy and the intent of the Guidelines that the trail is to remain open and safe at all times during bridge construction. Overhead protection for the trail, phased construction across the park property, trail detours, and other safety features will be required as necessary. Although not addressed in the Draft EIS, it is assumed that construction access to the Toll Road easement area will be along the Toll Road and not along the W&OD paved or gravel trails. (0456, 0456-L –2)

Response: *DRPT will continue coordination with the Northern Virginia Regional Park Authority to maintain safe access to the W&OD Railroad Regional Park during construction.*

Maintenance Responsibilities

Regional Comment: Section 7.3.2. of the *Public Hearings Report* states that any artificial lighting, which might be required by the project, would be the maintenance responsibility of the park owners. Since the artificial lighting is proposed as mitigation for the project's negative visual and safety impacts on park property, its maintenance would be the responsibility of the project sponsor.(0456 03-01)

Response: *Based on further coordination with the Northern Virginia Regional Park Authority during preparation of the Final EIS, it was determined that artificial lighting was not necessary.*

Local Agency Comments

Enhancing Accessibility to Parklands

Local Comment: FCPA comments on the NEPA EIS Scoping Process were provided on August 15, 2000. These comments stated that FCPA favors the rail alternative for the Dulles Rapid Transit Project. FCPA continues to support this alternative as the best alternative for improving regional transportation options, enhancing public accessibility to parkland and long term protection of Park resources. Further, our previous comments, a copy of which is attached, identified potential areas of impact to FCPA-owned properties. The impacts to FCPA properties are relatively similar for each alternative and have been adequately identified in the DEIS. (0306, 0306-A –1)

Response: *Comment noted. The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative.*

Local Comment: FCPA reiterates its concerns that trail crossings within Stream Valley Parks adjacent to the transit alignment be included in design efforts. Further, connections from existing and planned trails to the planned stations should be designed to enhance station access. Accommodations for pedestrian and bicycle access and trail connections should be coordinated with FCPA and the County trails planner and incorporated into right of way acquisition and rail alignment planning and development. (0306, 0306-A – 3)

> ***Response:*** *The Project Team will continue coordination with the FCPA regarding the trail crossings within Stream Valley Parks that will be spanned by the LPA. The responsibility for modifications of sidewalks and trails as part of station access is with Fairfax County, Loudoun County, Town of Herndon, City of Falls Church and VDOT. DRPT will, coordinate with these jurisdictions and agencies during preliminary engineering and final design on issues related to station access .*

Incorporation of Park-related Amenities at Stations

Local Comment: Potential partnerships with FCPA to incorporate park and recreation related amenities at station locations should be explored. As mentioned in our previous comments, features such as green space, landscaping, picnic tables, cultural or natural resource interpretive areas or open space design with fountains or other elements creating a sense of place should be explored. (0306, 0306-A –4)

> ***Response:*** *Most station facilities would include landscape elements. Other amenities cited in this comment could be provided by others, and would be subject to coordination with project site access, functional requirements, risk management, real estate constraints and regulations of local government. Further coordination will occur as the project moves through preliminary engineering and final design.*

B. Supplemental DEIS Comments

State Agency Comments

Issues Related to the W&OD Trail

State Comment: the SDEIS does a thorough job of addressing the impacts of crossings of the Washington and Old Dominion (W&OD) Trail. It should be noted that a planned future greenway/trail in the area is not addressed in the SDEIS. That trail, the Fairfax Cross-Country Trail, is to connect Great Falls National Park with Fort Belvoir. The transit corridor will cross this trail corridor; accordingly, the proponents should consider, and provide accommodation for, this trail in final plans. (0080 0094-8)

> ***Response:*** *The Fairfax Cross-Country Trail is identified in Section 3.6 of the Final EIS.*

Issues Related to Other Trails and Recreational Areas

State Comment: Although there is "no change" in effects from the DEIS, this table [Table 3.6-1] indicates that there may be possible impacts to future trails from Tysons East Station, Tysons Central 7 Station, Tysons 7 Station, Tysons Central 123 Station, and Wiehle Avenue Station. Please indicate actions the Project will take to address these possible impacts. It is important to provide non motorized facilities for transit riders to access these stations, particularly in Tysons Corner. (0091 0106-6)

State Comment: "Increased vehicle traffic at Wiehle Avenue Station may impact future trails proposed in Fairfax County's Countywide Trails Plan (June 2002)." Please indicate actions the Project will take to address these possible impacts. (0091 0106-7)

Response: *Should any of the future trails included in the Fairfax County* Countywide Trails Plan *be constructed prior to construction of the Wiehle Avenue Extension (formerly LPA Phase 1), mitigation measures would be similar to those discussed in Section 3.6 of the Final EIS for existing park and recreation facilities.*

Regional Agency Comments

Issues Related to the W&OD Trail

Regional Comment: The Supplemental Draft EIS states that at the W&OD Railroad Regional Park, access to the park would be maintained during hours of peak use. As stated in previous comments on the Draft EIS, it is Park Authority policy and the intent of the Guidelines for the Development of W&OD Trail Bridge Crossings that the trail is to remain open and safe at all times during bridge construction. Overhead protection for the trail, phased construction across the park property, trail detours, and other safety features will be required as necessary. (0086 0101-1)

Response: *All bridge design and construction would be completed in accordance with the Northern Virginia Regional Park Authority's Guideline for the Development of W&OD Trail Bridge Crossings. Details relating to park access during construction activities would be coordinated with the Northern Virginia Regional Park Authority.*

Regional Comment: Also, please confirm that construction access to the Toll Road easement area will be along the Toll Road and not along the W&OD paved or gravel trails. (0086 0101-2)

Response: *Access for the construction of the Metrorail Extension in the median of the DIAAH will be via the DIAAH and would not be along the W&OD Railroad Regional Park's paved or gravel trails.*

Local Agency Comments

Issues Related to Other Trails and Recreational Areas

Local Comment: The document states that temporary construction impacts at the Moorefield Station recreation center and athletic fields will be mitigated, but does not provide any information as to how impacts will be mitigated. (0084 0099-3)

Response: *Although temporary increases in noise, vibration, and air-borne particles could occur in the vicinity of the proposed recreation center and athletic fields at Moorefield Station during the construction of the Route 772 Station, construction activities would occur at least one-half mile from these sites. Therefore, no potential impacts to facility use or access during construction have been identified and mitigation measures are not recommended.*

3.7 Safety and Security

A Draft EIS Comments

Federal Agency Comments

Concern About Airport Security

Federal Comment: Concerned about security at Dulles Airport. Concerned that the project, particularly the Service and Inspection (S&I) Yard (Site 15) would be a substantial intrusion into airport property. Would not be comfortable with anything unless the Transportation Security Agency (TSA) "signs off" on the project. (0485 03-02)

Response: *During preliminary engineering, DRPT will coordinate with TSA, MWAA, and the Federal Aviation Administration (FAA) regarding airport security issues.*

State Agency Comments

Protection Against Potential Hazards

State Comment: SWM ponds may require access for maintenance - show how this is to occur. Also these are regarded as hazards to be protected by guardrail - If joint pond, the pond will need to meet state or county design standards as appropriate. (0421, 0421-A –30)

Response: *The pond locations are preliminary. Access for maintenance and protection of roadways adjacent to proposed ponds would be designed in accordance with applicable federal, VDOT, or local jurisdiction design criteria. This will be further defined during preliminary engineering and final design.*

State Comment: Review guard rail / barrier requirements beyond normal roadway warrants if a vehicle striking obstruction would result in hazard or result in collateral hazard to road or rail if hit. IE would damage to facility cause further injury or loss of life (power stations/control facilities). (0421, 0421-A –31)

Response: *Preliminary engineering and final design will comply with current federal or VDOT standards for roadside barrier design.*

State Comment: Limited access facilities have special requirements that must be met even for the infrequent access to maintain ponds/power stations. If access can be reasonably or economically provided from other than the limited access facility this is recommended. (0421, 0421-A –32)

Response: *No access points are currently planned for ponds or ancillary facilities directly from the limited access freeways (Dulles Connector Road, Dulles Toll Road or Dulles Greenway). Access points currently shown along interchange ramps would be evaluated during preliminary engineering to determine if they can be safely implemented without impacting operations of the freeway.*

Safety of Structural Design

State Comment: All structures including columns should be of adequate design, location and depth so that planned / future interchanges shall not have to replace, reinforce or underpin these structures. (0421, 0421-A –33)

Response: *The Project Team has developed and coordinated the preliminary structural designs with planned/future interchange locations to ensure that there is no reconstruction of rail structures during implementation of identified, planned roadway improvements. This coordination would continue through preliminary engineering and final design.*

State Comment: In general, structures/ column placement at intersections should be placed to meet sight distance requirements for streets, side road and entrances. (0421, 0421-A –34)

Response: *Design of columns and structures will comply with federal and VDOT standards for sight distance criteria, which will be examined in more detail during preliminary engineering.*

Regional Agency Comments

Public Safety and Security Concerns

Regional Comment: As stated in the Draft EIS, the planned widening of the Dulles Toll Road overpasses and the new bridge for Metrorail would nearly eliminate the existing light well between the

existing overpasses resulting in "a visual impact to the trail." The Draft EIS states that the visual impact can be mitigated with the incorporation of natural and artificial lighting under the bridge. It should also be noted that elimination of the light well might result in safety and security impacts such as reduced visibility and crime. The Final EIS should address safety and security issues related to elimination of the light well and related mitigation, such as lighting and call boxes. Moreover, the Park Authority must be involved in the development of mitigation measures during all design phases. (0456, 0456-L –1)

Response: *DRPT will continue coordination with the Northern Virginia Regional Park Authority regarding appropriate mitigation measures for effects to the W&OD Railroad Regional Park. The current design for the Metrorail bridge shown in the final General Plans (Volume IV of the Final EIS is a three-span overpass. Based on further coordination with the Northern Virginia Regional Park Authority during preparation of the Final EIS, it was determined that requested artificial lighting was no longer necessary.*

Local Agency Comments

Public Safety and Security Concerns

Local Comment: The draft EIS has failed to adequately address public safety and infrastructure issues regarding pedestrian traffic (especially students) conflicting with vehicular traffic in and around the West Falls Church Metro Station, given the prediction for increased vehicle trips per day. (0122, 0122-A –4)

Local Comment: We suspect there may be tremendous safety concerns if proper evaluations are not conducted. We believe our neighborhood streets will be inundated with motor vehicles and that the project will be considered a failure by our citizens. Existing infrastructures will be adversely affected and must be effectively remedied by operational plans and new facilities. (0122, 0164-T –10)

Response: *Based on the analysis of the forecast traffic volumes for the East and West Falls Church Metrorail Stations, the Project Team does not feel that overflow parking onto residential streets will be a problem. Moreover, since completion of the Draft EIS analysis, WMATA has programmed a 960-space parking facility at West Falls Church to be completed in early 2005. The Project Team also initiated meetings with the City of Falls Church to discuss the issues of overflow parking and cut-through traffic.*

Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church Station will return to its former level. Nevertheless, the Project Team does not anticipate any increases in project-related cut-through traffic in the Westhampton neighborhood.

Local Comment: Provide safety and security to the community and the rail system by delineating law enforcement roles and through early implementation of rail to provide needed transportation capacity in the corridor for emergency or disaster events. (0437, 0437-E –11)

Response: *WMATA operates a police force that has jurisdiction in the stations, trains, buses, and parking lots of the Metrorail, Metrobus and MetroAccess systems. Outside the WMATA system, law enforcement is handled by local jurisdictions or agencies. In some cases, WMATA operates with local and state police agencies under mutual aid agreements. A similar mutual aid agreement would need to be finalized before the start of operations of the Metrorail Extension.*

Public Comments

Protection Against Potential Hazards

Public Comment: Underground emphasis enhances anti-terrorism defense and facility security. This should enable additional federal funding to be provided. (0047, 0047-CC-2)

> ***Response:*** *Comment noted. Security was a major concern for both the airport and the Project Team throughout the project. Safety and security issues are discussed in further detail in Section 3.7 of the Final EIS.*

Public Safety and Security Concerns

Public Comment: Safety is a serious concern! Boys from "the hood" will try to scale the high iron perimeter fence just replaced in 2001, at considerable expense. (0058, 0058-CC-2)

Public Comment: Bus safety is inferior to rail safety. Official Federal Transit Administration records show that rail service averages less than one injury or very rare fatality per million passenger-miles. Urban bus service averages closer to two such, at least seventy (70) percent more dangerous. (0013, 0013-L –11)

> ***Response:*** *The Project Team agrees that safety is a serious concern and, as standard practice, WMATA employs many measures to ensure patron safety at each of the stations and on the trains. Section 3.7 of the Final EIS addresses safety and security issues related to existing and proposed Metrorail stations, park-and-ride facilities, and vehicles.*

Public Comment: One extremely negative aspect of Bus Rapid Transit for Dulles is the double crossover at stations. Diagrams show buses at center island stations below a mezzanine. Buses have doors on the right hand (curb) side, so to use island platforms they have to operate a British style on the left lane. This means they must cross in front of each other in opposite directions both entering and leaving stations. This is extremely dangerous when there will be a bus every 72 seconds in each direction. On most days there will be no problem, but with over a million such conflicts a year, it is too much to assume perfection. A safety rate of 99.999 per cent would still result in one head-to-head collision per month. A safety signal system would slow travel, but should be required by the National Transportation Safety Board. (0013, 0013-L –18)

Public Comment: As I said in the hearing, the double cross-overs create unnecessary vehicle conflicts. But one can simply get around that by putting outside platforms at the stations. If you're not worried about a passing lane for the buses, this can be shoe-horned into 52 feet, with elevators, with ADA access. If you want a passing lane in the center, which would be a good idea of you're looking for a permanent Bus Rapid Transit system, then you could put that into 66 feet. This might require, in some locations, a minor adjustment to a half-lane adjustment to the Dulles Toll Road alignments, which would run up the cost somewhat. But if this is a permanent solution, it would be well worth it. (0255, 0420-T –1)

Public Comment: One of the first things I noticed in looking at the [BRT] plans is the actually crossing the buses over each other at each station to get to a metrorail type transit station twice. This kind of vehicle conflict is just asking for trouble. (0255, 0255-T –2)

> ***Response*****:** *BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Public Comment: Big parking lots and empty walkways over highways at night are creepy and dangerous. The West Falls Church Metro is a good example. Please keep safety and accessibility at the top of your priorities in planning the new stations and surrounding developments. Let's give teenagers, women, men, children, all of us, the chance to use the Metro line at all times. Our community will truly benefit. (0232, 0232-L –4)

Public Comment: My major point for the public record is that we need to make the Metro stations and ways to access them safer and less creepy, especially at night, or citizens will choose their cars. I would

like a study to be done on a few stations to understand how people use the station - what time of day, do they walk there, bicycle, drive, avoid it at certain times? I lived in Arlington on N. 17th St., a 15 minute walk to the Ballston Station, for three years. I tried to take the Metro a few times in the evening, but there was no one around when I walked. I've had a big knife pulled on me once in a similar situation. Isolation and a woman walking at night in a non-pedestrian friendly station and surroundings is a dangerous combination. I chose my car. (0232, 0232-L –2)

> ***Response***: *WMATA operates a police force that has jurisdiction in the stations, trains, buses, and parking facilities of the Metrorail, Metrobus and MetroAccess systems and will continue to work hard to ensure patron safety. Section 3.7 of the Final EIS addresses safety and security issues related to existing and proposed Metrorail stations, park-and-ride facilities and vehicles.*

Public Comment: Include in the project's draft environmental impact statement an analysis of and mitigation strategies for human health and environment impacts of pollution and cut-through traffic on the public safety and compliance with federal Clean Air and Water Acts of surrounding communities [Westhampton]. (0386, 0386-E –10) (0398, 0398-L –10) (0399, 0399-L –10) (0403, 0403-L –9) (0412, 0412-L –10) (0415, 0415-L –10)(0416, 0416-L –10) (0430, 0430-E –10) (0431, 0431-E –10)(0438, 0438-E –9)(0442, 0442-L –9)(0465, 0465-L –10)(0466, 0466-L –9)(0467, 0467-L –9) (0469, 0469-L –9) (0470, 0470-L –10) (0471, 0471-L –9) (0473, 0473-L –10) (0474, 0474-L –10)

Public Comment: Requests that the Project Team include an analysis of human health and environmental impacts of pollution and cut-through traffic on surrounding communities in terms of public safety and compliance with the federal Clean Air and Water Acts in the Final EIS. Also requesting appropriate mitigation strategies to address impacts. (0117 03-02)

Public Comment: Public safety hazards and pollution from increased cut-through traffic. The new facility will result in increased Metro ridership. This will in turn result in many more cabs and cars dropping off passengers at the West Falls Church Kiss and Ride and an increased volume of traffic cutting through our neighborhood to avoid the light at Haycock and Great Falls Streets. The cut-through traffic will create a public safety hazard to pedestrians and increased pollutants from cars in the form of exhaust; fugitive dust; and routine gasoline and oil leaks affecting the health of residents and contaminating Pimmit Run, a tributary of the Potomac River that passes through our neighborhood. (0386, 0386-E –5) (0398, 0398-L –5) (0399, 0399-L –5) (0403, 0403-L –4) (0412, 0412-L –5) (0415, 0415-L –5) (0416, 0416-L –5) (0422, 0422-E –3) (0430, 0430-E –5) (0431, 0431-E –5) (0465, 0465-L –5) (0470, 0470-L –5)(0473, 0473-L –5) (0474, 0474-L –5)

> ***Response:*** *Based on the analysis of the forecast traffic volumes for the East and West Falls Church Metrorail Stations, the Project Team does not feel that overflow parking onto residential streets will be a problem. Moreover, since completion of the Draft EIS analysis, WMATA has programmed a 960-space parking facility at West Falls Church to be completed in early 2005. The Project Team also initiated meetings with the City of Falls Church to discuss the issues of overflow parking and cut-through traffic.*
>
> *Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church Station will return to its former level. Nevertheless, the Project Team does not anticipate any increases in project-related cut-through traffic in the Westhampton neighborhood.*
>
> *While some of the proposed improvements near the West Falls Church Yard and in the median of the Dulles Connector Road would be located near an unnamed tributary to Pimmit Run, there would be virtually no impacts to the floodplain elevation, water quality, hydrology, or the CBPA and EQC designations of this resource. As discussed in Chapter 4 of the Final EIS, best management practices would be employed during the construction and operation of the transit improvements. With the use of these best management practices for stormwater management*

and erosion and sediment control during the construction and operation of the LPA, degradation of surface water and groundwater quality would be minimal and would be limited to the immediate vicinity of the proposed improvements. Therefore, resources such as the Potomac River would not be affected.

Public Comment: In addition, the traffic congestion on Haycock Rd. has already produced cut-through traffic in the Westhampton Neighborhood, as cars attempt to avoid the light at Haycock Road and Great Falls St. This is a danger to residents of the Westhampton neighborhood. We believe that the mitigation strategies in the plans for the Dulles Corridor Project should include measures such as speed bumps on Grayson Place and signs forbidding cut-through traffic in the Westhampton neighborhood. This should be coupled with increased traffic enforcement by Fairfax County. Such measures would help reduce mobile source air pollution impacts on the health of residents in the neighborhood and improve compliance with the provisions of the federal Clean Air Act. (0388, 0388- L-3)

Public Comment: There is a current problem with motorists who cut through our Westhampton neighborhood to avoid stoplights at the intersection of Haycock Road and Great Falls Street. Instead, they detour via Reynolds Street, to Grayson Place, to Romney Street, to Hutchison, to Great Falls. Narrow streets; fast driving; no sidewalks, curbs, or gutters; abrupt turns with several visual barriers; and occasional one-way "choke points" because [of] shoulder parking create safety hazards that can only grow worse. Residents have asked for help to "calm" the traffic, but according to Fairfax County guidelines, the neighborhood does not currently meet traffic volume criteria. With completion of the Dulles Corridor Rapid Transit Project…including construction of a new, 2,000-car park-and-ride facility…the cut-through problem will become more acute. It seems reasonable that traffic control features should be put into place along with construction of the Dulles Project/park-and-ride in anticipation of future traffic volumes. Therefore, it seems to me that there is a need for WMATA, VDT, and Fairfax County to coordinate planning and installation measures to deal with this potentially dangerous situation in a timely manner. (0432, 0432-E –14)

Response: *Based on the analysis of the forecast traffic volumes for the East and West Falls Church Metrorail Stations, the Project Team does not feel that overflow parking onto residential streets will be a problem. Moreover, since completion of the Draft EIS analysis, WMATA has programmed a 960-space parking facility at West Falls Church to be completed in early 2005. The Project Team also initiated meetings with the City of Falls Church to discuss the issues of overflow parking and cut-through traffic.*

Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church Station will return to its former level. Nevertheless, the Project Team does not anticipate any increases in project-related cut-through traffic in the Westhampton neighborhood.

It is not the responsibility of the Dulles Corridor Rapid Transit Project to mitigate existing roadway/traffic issues, such as cut-through traffic on Grayson Place. Since the project would not be increasing vehicle traffic within the station area, but would actually be ameliorating the number of vehicle trips, speed bumps an/or additional signage would not be required as mitigation measures as part of this Project.

Based on the analysis provided in Chapter 6 of the Final EIS, mitigation would not be warranted at the Haycock Road/Great Falls Street intersection for the LPA. . For the traffic analysis, the Project Team used the Synchro software package, which optimizes consecutive traffic signals as a unit so that they all run on the same cycle. The traffic signals that were optimized/synchronized for the traffic analysis include the Great Falls Street/Haycock Road, Haycock Road/West Falls Church Metrorail Station entrance, and Haycock Road/Route 7 intersections.

Public Comment: Need to analyze project impacts of cut-through traffic and related safety and air quality effects. Was not done in the Draft EIS. (0430 03-03)

> ***Response:*** *The Project Team does not anticipate any increases in project-related cut-through traffic in the Westhampton community. Additionally, since the project would not be increasing cut-through traffic, the Project would not have additional negative effects on air quality.*

Public Comment: Concerned that the pond will create a drowning and fall hazard for children and that the pond could serve as a breeding ground for mosquitoes, which could increase the threat of West Nile Virus. (0383 03-03)

> ***Response:*** *None of the proposed dry ponds would have a permanent water surface elevation, and all will have security fencing discouraging unauthorized access.*

Emergency Evacuation Using Rail

Public Comment: Use of Metrorail during 9/11 evacuation demonstrated utility of heavy rail to move large # of people in an emergency. (0047, 0047-CC-4)

> ***Response:*** *The LPA would provide the ability to move large numbers of people during emergencies that do not affect the transit system (e.g., loss of power).*

Need to Integrate the Project within the Context of the National Transportation Emergency System

Public Comment: The only rational way to discuss the transportation problems of the Dulles Rail Corridor is within the context of the National Transportation Emergency which currently exists. The ongoing breakdown of the rail and airline systems of the United States currently represents a grave threat to the national security of our country, as well as to the integrity of our nation and national economy. We don't need patchwork; we need a federally funded, national emergency program. (0482, 0482-E –1)

> ***Response:*** *The Final EIS considered rapid transit improvements within the Dulles Corridor. The development of a federally funded national emergency program is beyond the scope of the study and would not be within the control of the Project Team.*

B. Supplemental Draft EIS Comments

Public Comments

Safety Hazards Related to Construction

Public Comment: The noise is so severe in our neighborhood that one cannot walk along our streets safely due to the inability to hear an approaching automobile from behind. This is a public safety hazard that will only be made worse by the construction of Metrorail without the construction of sound walls along the Dulles Toll Road. (0116 0141-5)

> ***Response:*** *Comment noted. A discussion of noise impacts and proposed mitigation along the corridor is contained in Section 4.7 of the Final EIS.*

Safety Hazards Related to Stormwater Retention

Public Comment: The pond that is to be constructed on my property is said to be a dry pond. I have consulted a licensed PE who was formerly employed by Fairfax County that actually maintain these ponds. He informed me there would always be some moisture in these ponds which provides for an excellent breeding ground for mosquitoes, which raises the threat of West Nile virus, especially for the senior citizens and immuno compromise who live within the bounds of our neighborhood. (0116 0141-7)

Response: *The locations shown in the General Plans of Best Management Practice (BMP) and Stormwater Management (SWM) ponds throughout the corridor are approximate and were included to illustrate that a potential need for one of these facilities exists. During preliminary engineering, a comprehensive drainage study will be undertaken for the entire corridor to address final locations of all BMP and SWM ponds. This effort should result in some facilities being eliminated, consolidated, or relocated to further minimize impacts to the adjacent areas.*

Final design of stormwater management facilities would meet all jurisdictional standards and approval requirements of Fairfax County. According to the Fairfax County Department of Public Works and Environmental Services, "dry" stormwater retention ponds, as designed, are meant to hold water for brief periods of time. Typically, a "dry" facility is designed to hold water for a maximum of 48 to 72 hours. However, proper maintenance would be required to ensure that these facilities operate as designed. Mosquito larvae require 7 to 10 days in standing water to produce mosquitoes. Properly maintained "dry" retention ponds should not provide adequate conditions for mosquito larvae to survive long enough to produce mosquitoes. For more information, please refer to the Fairfax County government website and practices relating to mosquito control.

3.8 Environmental Justice

A. Draft EIS Comments

No comments pertaining to this topic were received.

B. Supplemental Draft EIS Comments

Public Comments

Outreach Efforts to Minority Groups

Public Comment: A question was asked that you identify the public outreach programs to minority groups. Your responded by referring me to the DEIS. On p II-8 of the DEIS, there is a lack of evidence noting the public outreach to minority groups. Therefore, my environmental justice question has not been appropriately answered.(0109 03-01)

Response: *Chapter 11 of the Final EIS provides additional detail regarding the comprehensive public involvement effort employed by the Project Team, including media outlets, project information, and press statements prepared in both Spanish and English.*

Issues Related to Potential Discrimination

Public Comment: Discriminates against the Less Affluent: The proposal is to spend as much to enhance an existing rapid transit service to the wealthiest single community in Virginia as the Governor's Six-Year Plan proposes to spend on all transportation projects in Northern Virginia from now through 2009. Meanwhile, the State provides over that same period no transit service enhancements at all to the un-served and under-served less affluent communities in N. VA and the rest of the state. (0072 0150-7)

Response: *The Dulles Corridor Rapid Transit Project is an important part of the region's approved constrained long-range transportation plan. The project was designed to link the region's busiest activity centers and bring Metrorail to Washington Dulles International Airport.*

The Project will also offer an opportunity for reverse commuting from the District of Columbia and other jurisdictions to the Corridor. Job-seekers from across the region will be able be reach employment opportunities in one of the nation's fastest-growing business centers.

Public Comment: What are the environmental justice issues that will be present when Reston East to West Falls Church is eliminated? (0107 0125-14)

> ***Response:*** *The existing bus service between the Reston East Park-and-Ride and West Falls Church would be replaced by Metrorail service upon the start of operations of the Wiehle Avenue Extension. The impacts of the Project on communities considered for environmental justice impacts under Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, are discussed in Section 3.8 of the Final EIS.*

Public Comment: What is the minority bus ridership on the present Reston East to West Falls Church? (0107 0125-13)

Public Comment: What percentage of ridership from Reston East bus riders is drawn from minority groups? Please do not state that this analysis was not done. This analysis is an environmental justice issue that is required by the NEPA process. If this analysis was not done, then please explain why not and what steps you will take to rectify. (0109 0128-14)

Public Comment: The SDEIS must contain meaningful data concerning the disproportionate impacts to Minority/Low income populations (e.g., TABLE 2-2).

This aspect demonstrates the critical importance of conducting a meaningful, objective Alternatives Analysis, since the issue is not whether phasing a Metrorail project will disproportionately affect minority/low income populations, but whether rail vs. some other mode of mass transit would have a less disproportionate impact on those populations. (0068 0173-28)

> ***Response:*** *Data on minority bus ridership between Wiehle Avenue and West Falls Church Station is not collected because it does not support any of the route and service planning done by Fairfax County.*
>
> *Section 3.8 of the Final EIS explains the methodology used to conduct the environmental justice analysis for the project. This analysis was completed in accordance with Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, as well as relevant guidance from the Council on Environmental Quality, U.S. DOT, and U.S. EPA.*

Public Outreach to Minority Groups

Public Comment: What public outreach programs were implemented to reach minority groups? Be very specific and identify. The listing in the back of the DEIS and SDEIS fails to clearly identify this type of outreach. How was the environmental justice requirement met? How many DEIS and SDEIS were distributed to minority groups? How many community meetings were held with minority groups? (0109 0128-24)

> ***Response:*** *Section 3.8 of the Final EIS describes the methodology used to meet federal requirements on environmental justice, per Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. Since the start of the Project's environmental review, extensive public outreach to all communities has been conducted through the use of various types of media, public displays, community meetings, and public hearings. The largest minority community identified throughout the Dulles Corridor is Spanish-speaking. Therefore, all newsletters and updates have a section in Spanish that informs Spanish-speaking individuals how to obtain more detailed project information in Spanish. In addition to Spanish-speaking communities, other minority groups were informed through various communications outlets directed toward minority populations. All communities and minority groups were encouraged to participate in the public outreach process. Chapter 11 of the Final EIS outlines the public outreach efforts throughout the course of the project. A list of document recipients can be found in Appendix B of the Final EIS.*

4.0 ENVIRONMENTAL EFFECTS

4.1 Geologic Resources

A. Draft EIS Comments

Impacts to Soils and Prime Farmland

Federal Agency Comments

Federal Comment: NRCS has reviewed this document to ensure that impacts to soils and prime farmland were adequately documented. Section 4.1.3.3 - Soils and Section 4.1.3.4 - Prime Farmland provide this documentation. Virginia NRCS has no objection to this proposal. (0001, 0001-A –1)

Response: *Thank you for your input.*

State Agency Comments

Submittal of Erosion and Sediment Control Specifications to the Virginia Department of Conservation and Recreation

State Comment: On behalf of the Virginia Soil & Water Conservation Board, the Virginia Department of Conservation and Recreation (DCR) requests Erosion & Sediment Control (ESC) Specifications for 2003 for your company per Section 10.1-563 of the Virginia Erosion & Sediment Control Law. The deadline for submitting these specifications is September 15, 2002. (0002, 0002-A –1)

State Comment: Additionally, please provide updated company contact person information along with your ESC Specifications, and route this letter to the appropriate engineer or regulatory person within your company. (0002, 0002-A –2)

Response: *A Locally Preferred Alternative (LPA) has been selected that is detailed in the Final EIS. More specific erosion and sediment control specifications will be developed during preliminary engineering and the appropriate Project staff person will contact the DCR for further coordination required.*

Comments on Natural Resources Technical Report

State Comment: Natural Resources Technical Report (June 2002). The 95% Draft EIS Technical Report was reviewed and deemed to adequately address Natural Resources issues. Since the Final Draft Technical Report appears to be essentially unchanged, we have no further comments on this section of the report. (0421, 0421-A –10)

Response: *Thank you for your input.*

Virginia Department of Mines, Minerals, and Energy Determination of No Impact

State Comment: States that the Virginia Department of Mines, Minerals, and Energy determined that the project would have no impact on the geology or mineral resources of the corridor. (0517, 4-01)

Response: *The Natural Resources Conservation Service and the Virginia Soil and Water Conservation Board made similar comments.*

B. Supplemental Draft EIS Comments

No comments pertaining to this topic were received.

4.2 Water Resources

A. Draft EIS Comments

State Agency Comments

DEQ's Water Division's Comments on Mitigating Impacts on Water Resources

State Comment: According to DEQ's Division of Water Program Coordination, Office of Water Permits Support (hereinafter "DEQ's Water Division"), any of the "build alternatives" would affect surface waters and wetlands. The limitation of proposed construction to the median of existing roads, as much as practicable, will be helpful in avoiding and minimizing wetland and waterway impacts of the project; we encourage additional efforts in this regard as the project progresses. Examples of avoidance and minimization efforts include completely spanning wetlands to avoid impacts, and shifting the alignment of road or rail structures. Unavoidable impacts to wetlands and streams may require compensatory mitigation, as the Draft EIS explains (pages 4-54 through 4-58, section 4.2.6). (0407, 0407-A-8)

> ***Response:*** *Through an iterative design process, impacts to wetlands, streams, and floodplains were avoided to the extent practicable. In many cases, these efforts avoided direct impacts to these resources completely. As described in Section 4.2 of the Final EIS, compensatory mitigation will be implemented where unavoidable effects remain.*

Consistency with the Chesapeake Bay Preservation Area Designation and Management Regulations

State Comment: Chesapeake Bay Preservation Act Compliance. Road and railway projects are conditionally exempt from the requirements of the Chesapeake Bay Preservation Area Designation and Management Regulations (9 VAC 10-20-10 et seq.) provided such projects are constructed, operated, and maintained in accordance with the Virginia Erosion and Sediment Control Law and the Virginia Stormwater Management Act (or an equivalent local program). This conditional exemption also requires that road alignments and design prevent or otherwise minimize (i) encroachment in Resource Protection Areas, as defined in the Regulations, and (ii) adverse effects on water quality. Non-linear features of the project, such as parking lots and stations, are not exempt and must be consistent with the General Performance Criteria and the Development Criteria for Resource Protection Areas. (Both the General Performance Criteria and the Development Criteria are found in the Regulations.) During planning and design phases, site-specific surveys should be concluded to verify the presence or absence, and boundaries, of any Resource Protection Areas. (0407, 0407-A –10)

> ***Response:*** *The boundaries of Resource Protection Areas (RPA) have been identified in the Final EIS. A discussion of Chesapeake Bay Preservation Areas including Resource Management Areas (RMA) and RPA can be found in Section 4.2 of the Final EIS and are illustrated in Figure 4.2-4. Impacts to RPAs from the Build Alternatives studied were minimized through an iterative design process.*

Department of Conservation and Recreation of No Impact on Certain Water Resources

State Comment: The Department of Conservation and Recreation has indicated that the proposed project will not affect any streams on the National Park Service Nationwide Inventory, Final List of Rivers, or existing or potential State Scenic Rivers. Nor will the project affect existing or potential State Scenic Byways. (0407, 0407-A –11)

> ***Response:*** *This information is included in Section 4.2 of the Final EIS.*

Recommendation to Develop an Environmental Management System

State Comment: Consider development of an effective Environmental Management System (EMS). An effective EMS will ensure that the proposed facility is committed to minimizing its environmental impacts, setting environmental goals, and achieving improvements in its environmental performance. DEQ offers EMS development assistance and recognizes facilities with effective Environmental Management Systems through its Virginia Environmental Excellence Program. (0407, 0407-A –13)

> ***Response:*** *The Virginia DEQ Internet site states: "In April, 2000, DEQ launched the Virginia Environmental Excellence Program, a voluntary program designed to encourage Virginia organizations to develop environmental management systems and pollution prevention plans. As part of its efforts to promote the use of environmental management systems (EMS), DEQ announced in June 2001 that it had developed an EMS of its own." At this time, the Project Team has not made any decision regarding the Virginia Environmental Excellence Program for the Dulles Corridor Rapid Transit Project, but has already minimized impacts to natural resources through an iterative design process.*

Comments on Virginia Pollutant Discharge Elimination System Stormwater General Permits

State Comment: Water Quality and Wetland Permitting. The Draft EIS addresses the need for obtaining Virginia Pollutant Discharge Elimination System (VPDES) Stormwater General Permits for construction activity that disturbs 5 or more acres of land (page 4-19, section 4.2.1). The project manager should be aware that the regulation on this subject is changing; sites that are between 1 and 5 acres will also be required to apply for coverage under this General Permit by March 10, 2003. (0407, 0407-A –21)

State Comment: Stormwater management facilities are proposed along the route to handle storm flow from the system (Draft EIS, section 2, Figure 2.3-16). The project manager should work with DEQ to ensure that necessary VPDES permits are obtained for these facilities. If de-watering of the tunnels for the underground Metrorail stations is necessary, a VPDES permit might be necessary for discharges resulting from this activity. (0407, 0407-A –22)

State Comment: Site-specific VPDES permits and/or VPDES Stormwater General Permits may also be needed for BRT stations and the Maintenance and Storage Facility contemplated under the BRT alternative. Similarly, if the Metrorail alternative is selected, permits may be required for discharges from the Service and Inspection Yard. The Yard is to include a car wash and stormwater management facilities of its own. If flow from the car wash is discharged to the sanitary sewer, then an industrial user permit is likely to be required for the wastewater treatment plant accepting the flow. (0407, 0407-A –23)

State Comment: The Draft EIS indicates that both VPDES and Virginia Water Protection Permits (VWPP) will be required for construction of the underground sections of the Metrorail, according to DEQ's Northern Virginia Regional Office. However, VWP permits will only be required if wetlands will be involved. (0407, 0407-A –24)

State Comment: This project may require a Virginia Water Protection Permit, which includes coordination of this project with the Virginia Marine Resources Commission, the Army Corps of Engineers and the DEQ through the Joint Permit Application process. (0407, 0407-A –35)

> ***Response:*** *All permits that are required for implementation and construction of the LPA, a Metrorail Extension, will be identified through coordination with resource agencies and permits will be obtained prior to construction. The information contained in the above comments is reflected in Section 4.2 of the Final EIS, as appropriate. BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS. The LPA is described in more detail in Chapter 2.*

Avoiding and Mitigating Effects on State Waters

State Comment: The DEIS indicates all Build Alternatives will impact state waters, including wetlands. All attempts should be made to select the most feasible alternative that also avoids and minimizes potential direct and indirect impacts to wetlands and streams to the greatest extent practicable. We understand that impacts have been avoided and minimized by limiting proposed construction to the median of existing roadways as much as practicable. As the project progresses, please continue to investigate ways for additional avoidance and minimization of direct and indirect impacts to wetlands and streams to the greatest extent practicable. Examples of avoidance and minimization efforts include completely spanning wetlands to avoid impact and shifting the alignment to avoid or minimize wetland impacts. The selected alternative's unavoidable impacts to wetlands and streams will require full compensatory migration as explained in the DEIS. (0407, 0407-A –34)

> ***Response:*** *The Metrorail Extension was selected as the LPA after public and agency review of and comment on the Draft EIS. Impacts to water resources such as wetlands are described in Section 4.2 of the Final EIS. Preliminary efforts have been made to minimize direct and indirect impacts to wetlands. During preliminary engineering and final design, the Project Team will continue to investigate methods for additional avoidance and minimization of direct and indirect impacts to wetlands and streams, as suggested. Where impacts are unavoidable, compensatory mitigation measures will be developed in coordination with resource agencies.*

Avoiding and Minimizing Effects on State Waters During Construction

State Comment: Appropriate design and construction measures should be employed to avoid and minimize impacts to state waters during construction. All applicable best management practices should be used to minimize potential impacts. Machinery should be kept out of waterway and wetlands when possible. Machinery that must be operated within wetland areas should be maintained on mats in order to prevent tire rutting. In general, DEQ encourages the use of erosion and sediment control measures, adherence to storm water management regulations, and careful construction practices to minimize temporary impacts to state waters during site construction activities. (0407, 0407-A –36)

State Comment: In general, DEQ recommends that stream and wetland impacts be avoided to the maximum extent practicable. For unavoidable impacts, DEQ encourages the following practices to minimize the impacts to wetlands and waterways: operate machinery and construction vehicles outside of stream-beds and wetlands; use synthetic mats when in-stream work is unavoidable; erosion and sedimentation controls should be designed in accordance with the most current edition of the Virginia Erosion and Sediment Control Handbook. These controls should be in place prior to clearing and grading, and maintained in good working order to minimize impacts to State waters. The controls should remain in place until the area is stabilized. (See item 6, below.) Place heavy equipment, located in temporarily impacted wetland areas, on mats, geotextile fabric, or use other suitable measures to minimize soil disturbance, to the maximum extent practicable. Restore all temporarily disturbed wetland areas to pre-construction conditions and plant or seed with appropriate wetlands vegetation in accordance with the cover type (emergent, scrub-shrub, or forested). The project managers should take all appropriate measures to promote re-vegetation of these areas. Stabilization and restoration efforts should occur immediately after the temporary disturbance of each wetland area instead of waiting until the entire project has been completed. Place all materials which are temporarily stockpiled in wetlands, designated for use for the immediate stabilization of wetlands, on mats or geotextile fabric in order to prevent entry into State waters. These materials should be managed in a manner that prevents leachates from entering state waters and must be entirely removed within thirty days following completion of that construction activity. The disturbed areas should be returned to their original contours, stabilized within thirty days following removal of the stockpile, and restored to the original vegetated state. The project may require a Virginia Water Protection Permit, and it is likely to require a Virginia Pollutant Discharge Elimination System (VPDES) Stormwater permit. (0407, 0407-A –9)

Response: *As discussed in Section 4.2 of the Final EIS, the Project Team will follow the Public Facilities Manual, Virginia Erosion and Sediment Control Handbook, and all other applicable requirements.*

Coordination with Federal, State, and Local Governments to Minimize Effects

State Comment: In general, the document states in numerous sections that all necessary environmental permits will be obtained, which satisfies the thrust of NRO concerns. However, close coordination with the various federal, state, and local governments will be key to ensuring that a project of this magnitude is completed with minimal environmental damage. (0407, 0407-A –39)

Response: *Coordination with key agencies will be conducted throughout the life of the Project.*

Commending the Project Team for Addressing Agency Comments on Water Resources

State Comment: Thanks the Project Team for addressing comments regarding water quality and water permitting issues including impacts to wetlands and streams. Requests that the Project Team continue to investigate ways to reduce the impact on state waters. (0518, 4-01)

Response: *During preliminary engineering and final design, the Project Team will continue to coordinate with the Virginia Department of Environmental Quality (VDEQ) on any future water quality issues.*

Requirements for Submission of a Joint Permit Application

State Comment: All work performed in, over, or under waters within the Commonwealth of Virginia would require the submission of a Joint Permit Application (JPA) to the Virginia Marine Resources Commission (VMRC). VMRC would then act as a clearinghouse, distributing copies of the application to state, local, and federal agencies for review and comments. Detailed engineered plans showing the exact location of all water crossings will be required to determine whether or not a permit will be required. (0518, 4-02)

Response: *The Project Team will coordinate with VMRC on these issues during preliminary engineering and final design.*

Regional Agency Comments

Notice of Need to be Consistent with the Virginia Coastal Zone Management Plan

Regional Comment: DEIS Section 4.2.3.5 states that the project is not in the coastal zone. It is our understanding that Fairfax County is part of the Virginia Coastal Zone, and that consistency with the Virginia Coastal Zone Management Plan should be addressed in the EIS. (0440, 0440-A –9)

Response: *Thank you for the correction. The portion of the Project that extends through Fairfax County is considered to be within the coastal zone. Section 4.2.of the Final EIS has been updated accordingly.*

Local Agency Comments

Addressing Effects on Water Resources in the City of Falls Church

Local Comment: The draft EIS has failed to address the environmental impact to surface and groundwater as it might affect the City [of Falls Church], the City's water distribution system that serves much of the Corridor, and Four Mile Run. (0122, 0122-A-5)

Local Comment: The Draft EIS addresses possible impacts to surface and ground water. Section 4.1.5.2 acknowledges the possibility of ground water degradation from contaminates, but the ground water study does not address Falls Church ground water. (0122, 0122-A –24)

Local Comment: Furthermore, the inventory of surface water sources that might be negatively impacted within the watershed of the affected project area omits the Four Mile Run and its tributaries. This is a significant omission that must be addressed. (0122, 0122-A –25)

Local Comment: Additionally, Section 4.1.3.2 addresses consideration of Fairfax and Loudoun County public water and waste water systems, but omits consideration of possible impact to the Falls Church water system, which not only serves Falls Church City but also a substantial portion of the project area. This omission is very significant and must be addressed by analyzing possible impacts and proposing mitigation measures. (0122, 0122-A –26)

Local Comment: The draft EIS has failed to address the environmental impact to surface and groundwater as it might affect the city's [of Falls Church] water distribution system that serves much of the corridor and Four Mile Run. (0122, 0164-T –6)

> ***Response:*** *The residents of the City of Falls Church obtain their water from the Public Utilities Division of the City of Falls Church Department of Environmental Services, a water distribution agency that purchases water from the Washington Aqueduct Division of the Baltimore District Army Corps of Engineers (WAD). WAD gets its water from the Potomac River through intakes at Great Falls and Little Falls in Maryland. WAD has two water treatment plants, the McMillan and Dalecarlia plants. Generally, Falls Church receives its water from the Dalecarlia plant. None of the improvements proposed under the Locally Preferred Alternative (LPA) would affect the Potomac River or the water distribution system that serves the City of Falls Church. Likewise, groundwater within the City of Falls Church is not expected to be affected.*
>
> *Four Mile Run is situated outside of the study area for water resources. Some of the proposed improvements near the West Falls Church Yard and in the median of the Dulles Connector would be located near an unnamed tributary to Pimmit Run. These water resources do not drain to Four Mile Run. None of the proposed improvements are located close enough to Four Mile Run or its watershed to cause effects. In addition, the water intake pipes for the Great Falls and Little Falls plants are located upstream of Pimmit Run (and well upstream of Four Mile Run).*
>
> *As referenced in Section 4.2 of the Final EIS, best management practices (BMPs) would be employed during construction and operation of the transit improvements. With the use of these BMPs for stormwater management and erosion and sediment control during the construction and operation of the selected alternative, degradation of surface water and groundwater quality would be minimal and be limited to the immediate vicinity of the proposed improvements. Therefore, resources such as the Potomac River, the water supply controlled by the WAD, and Four Mile Run, would not be affected.*

Local Comment: Continuous coordination with the Department of Public Works and Environmental Services and the Department of Planning and Zoning should be maintained to ensure compliance with the requirements of Virginia's Chesapeake Bay Preservation Area Designation and Management Regulations and the County's Chesapeake Bay Preservation Ordinance (to be amended in March 2003). (0479, 0479-L –5)

> ***Response:*** *Thank you for your input. Coordination with these agencies will continue throughout the life of the Project.*

Public Comments

Suggestion to Employ Bio-Retention Techniques

Public Comment: Suggest employing "bio-retention techniques" in stormwater management design. This concept uses vegetative media to filter out contaminants and often decreases pipe sizes and swm pond sizes, as well as looks nicer as vegetation than pavement. I've heard Loudoun county is receptive to this attractive alternative. It can be used in landscaped strips. (0079, 0079-CC-2)

> ***Response:*** *During preliminary engineering and final design, bio-retention techniques will be explored further for possible incorporation into stormwater management design. Furthermore, as referenced in Section 4.2 of the Final EIS, adequate measures for stormwater management would be in accordance with the requirements of the Commonwealth of Virginia, and Fairfax and Loudoun counties that encourage minimization of clearing and use of bio-retention facilities whenever practical.*

Mitigation of Cut-Through Traffic in the Westhampton Neighborhood

Public Comment: The issue of cut-through traffic also raises problems of pollution for the branch of Pimmit Run which goes through the Westhampton Neighborhood. Pimmit Run is a tributary of the Potomac River and therefore is a Water of the United States under the federal Clean Water Act. If cut-through traffic is allowed in Westhampton, leaking gasoline and oil from automobiles will find its way directly into Pimmit Run through the culvert under Grayson Place every time it rains. The branch of Pimmit Run in that area provides a source of drinking water for wildlife in the Westhampton neighborhood including migratory birds which are protected by federal law. We have seen over thirty species of birds, including migratory waterfowl, four species of reptiles, and at least six species of wild mammals on our property alone. Therefore protection of wildlife is another important reason to mitigate to reduce cut-through traffic in the Westhampton neighborhood. (0388, 0388- L-4)

> ***Response:*** *The present condition of Pimmit Run has been rated "Poor" by Fairfax County for both water quality and habitat due to the intense development that surrounds this stream corridor. Concrete-lined channels draining the area surrounding Pimmit Run have already contributed numerous amounts of highway constituents into the stream. Pimmit Run may provide a source of drinking water for wildlife in this area, but the water source is already receiving pollutants from upstream highway runoff. Implementation of the LPA is not anticipated to alter these existing conditions; the wildlife patterns associated with the Pimmit Run corridor would not be altered due to anticipated cut-through traffic.*

Addressing Section 4(f) Regulations in the Tysons Central B Station Area

Public Comment: I could not see any reference to the EQC area that would be taken for the Tysons Central B station area on Westpark Drive. Although it is not a park per se, subject to Section 4(f) it should be sacrosanct with regard to the Fairfax County Comprehensive Plan. (0429, 0429-E –6)

> ***Response:*** *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. This comment concerned the potential effects of Alignment T4, which was eliminated from further consideration after the public and agency review and comment on the Draft EIS.*

Effect on the Difficult Run Watershed

Public Comment: How will construction activities and increased traffic congestion on Hunter Mill Road affect Fairfax County's largest watershed, the fragile Difficult Run Watershed, water and air quality? (0460, 0460-L –8)

Public Comment: For water resources, the Draft EIS states "minor additional long-term effects to water resources, potential additional runoff impacts from increases in allowable density at station/stop areas". Each of these factors needs to be quantified and evaluated, particularly in view of the fragility and burdens placed on scarce water resources in the area and in light of the downstream attributes of Difficult Run. (0510, 4-02)

> ***Response:*** *These effects are discussed in Section 4.2 of the Final EIS. Mitigation of Project-related impacts would be through a series of BMPs. With these BMPs in place, long-term Project-related impacts to water resources would be minimal. As discussed in Chapter 9 of the Final EIS, the mitigation of secondary development effects would be done through the county development permitting processes.*

Effects on Well Water Used by Residents in the Mid-Corridor

Public Comment: Some homes in the Mid-Corridor use well water and depend on the aquifer for water needs. The Draft EIS does not adequately address the potential for aquifer contamination. (0510, 4-06)

> ***Response:*** *Section 4.1 of the Final EIS discusses the Project-related impacts to groundwater resources. Because the Metrorail Extension would result in a small increase in impervious surface, there would be minor effects to the groundwater recharge capacity of the local aquifers. However, this effect would be partially offset by the increased aquifer recharge that would occur as a result of the proposed stormwater management facilities.*

Secondary Development Effects on the Difficult Run Ecosystem

Public Comment: Potential effects due to secondary development on aquatic biota and habitat are summarily stated as "no additional impacts are projected". I find this astounding particularly in light of the fragility of the Difficult Run Ecosystem. The dramatically increased footage of the impervious surfaces in higher-density bonus areas near stations can only result in intensification of runoff, yet the Draft EIS states that there will be no additional impact. (0510, 4-03)

> ***Response:*** *As discussed in Section 4.3 of the Final EIS, since the streams located in the Mid-Corridor have been channelized, and since the Metrorail Extension, and therefore new development, would be located in the median of the Dulles International Airport Access Highway (DIAAH), no additional impacts to aquatic biota are anticipated. Permanent stormwater management ponds would be located along the DIAAH and Dulles Toll Road to replace the grassy swales currently in the median of the DIAAH. These ponds would add a marginal amount of aquatic habitat to the area. However, as discussed in Chapter 9 of the Final EIS, the mitigation of secondary development effects would be done through the county development permitting processes.*

Concern About Run-Off from Stormwater Management Pond

Public Comment: Concerned about a proposed stormwater management facility on part of his property. Concerned that the potential pollutants from run off will stay in the pond and eventually seep into local groundwater. (0464 4-01)

> ***Response:*** *The pollutants in these ponds settle out as solids through the sediment residue at the bottom of the pond. Through regular maintenance of the ponds and protective layers of the pond bottom, the pollutants would be removed without seeping into the local groundwater and underlying aquifers.*

B. Supplemental Draft EIS Comments

Federal Agency Comments

Issues Related to the Chesapeake Bay Resource Management Area

Federal Comment: According to the Northern Virginia Regional Commission, Fairfax County and the Town of Herndon have enacted jurisdiction-wide Chesapeake Bay Resource Management Area (RMA) designations. This designation requires that all development result in a no-net-increase standard for phosphorus loadings, based on the jurisdiction's average imperviousness. In addition, since a Resource Management Area is one of two classifications of a Chesapeake Bay Preservation Area, the threshold for application of the Erosion and Sediment Control Plan is 2,500 square feet of land disturbance, rather than 10,000 square feet in areas not so designated. (0080 0094-7)

Response: *The boundaries of Resource Protection Areas (RPA) have been identified in the Final EIS. A discussion of Chesapeake Bay Preservation Areas including Resource Management Areas (RMA) and RPA can be found in Section 4.2 of the Final EIS and are illustrated in Figure 4.2-4. Impacts to RPAs from the Build Alternatives studied were minimized through an iterative design process.*

State Agency Comments

Consistency with Regulations for Stormwater Management

State Comment: Special attention should be given to post-construction stormwater quality management, according to the Northern Virginia Regional Commission. The project proponents must adhere to the post-development water quality requirements set out in the Virginia Stormwater Management Regulations. (0080 0094-5)

State Comment: A Virginia Water Protection Permit will be required for this project pursuant to 9 VAC 25-210-10 et seq. In addition, because it is likely to disturb one acre or more of land area, the project will require a Virginia Pollutant Discharge Elimination System (VPDES) Stormwater General Permit for Construction Activities. (0080 0094-10)

State Comment: The Marine Resources Commission has permit jurisdiction over any encroachments in, on, or over any state-owned rivers, streams, or creeks. If any portion of the project involves any encroachments channelward of ordinary high water along natural rivers and streams, a permit may be required from the Commission. (0080 0094-11)

State Comment: Pursuant to the Coastal Zone Management Act of 1972, as amended, the applicant agency for federal licensing or permitting is required to certify the consistency of it activities affecting Virginia's coastal resources or coastal uses with the Virginia Coastal Resources Management Program (VCP) (see section 307(c) (1) of the Act and the Federal Consistency Regulations at 15 CFR Part 930, sub-part D, section 930.57. (0080 0094-15)

State Comment: DEQ's Water Division recommends strict adherence to erosion and sediment control practices and stormwater management requirements, and effective monitoring of construction activities to ensure that erosion controls and stormwater management practices are adequately preventing sediment and pollution from entering adjacent surface waters. (0080 0094-2)

State Comment: [T]he project proponents should prepare and implement Erosion and Sediment Control Plans and Stormwater Management Plans that comply with state law. The project proponents are ultimately responsible for achieving project compliance through oversight of on-site contractors, regular field inspection, prompt action against non-compliance, and/or other mechanisms consistent with agency policy. (0080 0094-4)

Response: *All necessary permits required for the implementation of the LPA will be identified through coordination with resource agencies and obtained prior to construction. All Project activities will be completed in accordance with all relevant federal, state, and local laws and regulations.*

State Comment: The Regional Commission also recommends that the proponents explore opportunities, where possible, for retrofit of existing stormwater quantity facilities to stormwater quality facilities through new construction activities. (0080 0094-6)

Response: *As documented in Section 4.2 of the Final EIS, the Project Team will follow the Public Facilities Manual, Virginia Erosion and Sediment Control Handbook, and all other applicable requirements.*

Issues Related to Watershed Management, Wetlands, and Water Quality

State Comment: The document should reference Fairfax County's development of a watershed management plan for the Difficult Run watershed (Section 4.2). (0091 0106-23)

Response: *Thank you for the information. The Project Team will design the Project to appropriate federal, state, and local standards.*

Regional Agency Comments

Issues Related to the Chesapeake Bay Resource Management Area

Regional Comment: Please be advised that Fairfax County and the Town of Herndon have enacted jurisdiction-wide Chesapeake Bay Resource Management Area (RMA) designation. This RMA designation requires that all development result in a no-net-increase standard for phosphorus loadings, based on the jurisdiction's average imperviousness. (0006 0006-1)

Response: *The boundaries of Resource Protection Areas (RPA) have been identified in the Final EIS. A discussion of Chesapeake Bay Preservation Areas including Resource Management Areas (RMA) and RPA can be found in Section 4.2 of the Final EIS and are illustrated in Figure 4.2-4. Impacts to RPAs from the Build Alternatives studied were minimized through an iterative design process.*

Consistency with Regulations for Stormwater Management

Regional Comment: Special attention should be given to post-construction stormwater quality management. The developing agency must adhere to the post-development water quality requirements set forth by the Virginia Stormwater Management Regulations (VR 215-02-00 Part IV and S2.3). Meeting the Virginia Stormwater Management Regulations should comply with the requirements that state agencies meet the local ordinances pursuant to the Virginia Chesapeake Bay Act.

Please refer to the Northern Virginia BMP Handbook for calculation procedures. A copy of the handbook is available on NVRC's website, www.novaregion.org. (0060 0006-2)

Response: *All necessary permits required for the implementation of the LPA will be identified through coordination with resource agencies and obtained prior to construction. All Project activities will be completed in accordance with all relevant federal, state, and local laws and regulations.*

Regional Comment: We would also suggest that, where possible, opportunities for retrofit of existing stormwater quantity facilities to stormwater quality facilities through new construction activities should be explored. NVRC's Guidebook for Maintaining BMPs in Northern Virginia is available, without charge, should you need it, and can also be downloaded from our website, or call me if you would like to receive a copy to use as a reference. (0060 0006-3)

Response: *As documented in Section 4.2 of the Final EIS, the Project Team will follow the Public Facilities Manual, Virginia Erosion and Sediment Control Handbook, and all other applicable requirements.*

Local Agency Comments

Issues Related to Watershed Management, Wetlands, and Water Quality

Local Comment: Please ensure that all the elements of the RSCOD [River and Stream Corridor Overlay District] have been taken into account when determining impacts to water resources. (0084 0099-4)

Response: *All necessary permits required for the implementation of the LPA will be identified through coordination with resource agencies and obtained prior to construction. All Project activities will be completed in accordance with all relevant federal, state, and local laws and regulations.*

Local Comment: The County prefers any wetland impacts incurred in Loudoun County from the proposed project be mitigated within the Suburban Policy Area. However, if a wetland mitigation bank is not available within the Suburban Policy Area at the time the impacts are incurred County staff prefers that impacts to wetlands within Loudoun County be mitigated at the Bull Run Wetland Bank as shown on Figure 4.2-2. (0084 0099-5)

Response: *DRPT and WMATA will continue to coordinate with Loudoun County regarding the mitigation of wetland impacts within the County.*

Public Comments

Stormwater Management Ponds Locations and Potential Effects

Public Comment: The second issue is the storm water pond. This decision, the location of it, we believe will cause various health and safety hazards for children, will remove valuable ground cover, and will have an ecological impact on the wildlife and provide an insect breeding ground. We recommend that the pond be constructed in the cul-de-sac at the end of Chathams Ford Drive, where the impact would be far less. (0174, 0174-T –6)

Public Comment: The proposed location of the [stormwater] pond will cause various health and safety hazards for children, will also remove valuable ground cover and will provide an insect breeding ground. Construct the pond in the cul-de-sac at the end of Chathams Ford Drive where the impact would be less direct. (0174, 0300-L –12)

Public Comment: The Draft Environmental Impact Statement and Proposed General Plans for the project propose that a stormwater pond be created on the property of 9620 Chathams Ford Drive. This property backs up to the Toll Road. In order to create the pond, at least 100 trees will have to be cut down. Our concerns about the pond are as follows:

1. It will remove valuable ground cover in the form of the 100 trees.
2. These trees also provide sound protection to 9620 Chathams Ford Drive and to other homes in the neighborhood. The trees are also an important visual barrier from the Toll Road.
3. The pond will also create a drowning hazard to children because it will hold standing water. Chathams Ford Drive is already hazardous to children because of inadequate safety barriers between the street and the Toll Road.
4. The pond will create a breeding ground for mosquitoes and other predatory insects, which multiply rapidly in standing water. This situation raises the threat of West Nile virus, especially for senior citizens and immuno-compromised residents who live in the neighborhood.

5. In addition, it will create a place where children may fall and injure themselves because of the depth of the pond.
6. The pond will impair the value of 9620 Chathams Ford Drive.
7. Finally, the pond will destroy one of the last remaining natural habitats in the area. Destruction of the trees to construct the pond will take away shelter and food from the deer, and likely will drive them more actively onto streets and highways, thereby creating life-threatening conditions for both humans and animals. (0174, 0300-L –13)

Public Comment: In addition, the proposed Stormwater pond to be located on the property of 9620 Chathams Ford Drive would remove approximately 100 trees which provide at least some sound protection. (0174, 0300-L –8)

Public Comment: We recommend that the Task Force consider moving the pond to the cul-de-sac at the end of Chathams Ford Drive. This area will have less of a direct impact and no additional homes can be built there because of its proximity to the Toll Road. (0174, 0300-L –14)

Public Comment: Although the "pond" is said to be a dry pond, I have consulted a licensed professional engineer who was formerly employed by a division of Fairfax County that maintained these ponds. He informed me there will always be some moisture that will serve as an excellent breeding ground for mosquitoes. This situation raises the threat of West Nile Virus, especially for the senior citizens and immunocompromised who live in our [Chathams Ford] neighborhood. (0383, 0383- L- 3)

Public Comment: The pond [Chathams Ford] will create a drowning hazard for my children and other neighborhood children. I understand the "pond" will not hold water all the time, however, after storms, this area will be a drowning hazard of which the county and state will be directly liable for. It will also create hazards of which my children and other neighborhood children can fall and injure themselves. (0383, 0383- L-2)

Public Comment: The acquisition of my land and the construction of this pond will severely impact the monetary resale value of my home [Chathams Ford]. My wife and I had planned on remaining in this home for the next 20-30 years. It is very difficult to predict the monetary impact over this time period, however, I would estimate it to be in excess of one million dollars. (0383, 0383- L-4)

Public Comment: My wife and I are in favor of the Rapid Transit Project, however, we are vehemently against the acquisition of our property for the construction of a storm water retention pond. If the pond were located at the end of Chathams Ford Drive in the vacant cul de sac, this would provide for minimal resident disruption and impact. This area is not adjacent to any homes. (0383, 0383- L-6)

Public Comment: This letter is written in regards to the proposed Dulles Corridor Rapid Transit Project. My wife and I reside in Vienna and our backyard borders the Dulles Toll Road. It is proposed that approximately 1 acre of our land be acquired for the construction of a storm water retention pond if the transit project is approved for Metrorail service. The construction of this retention pond will adversely affect our lives and property in a drastic manner. The following points describe the severe impact that this portion of the project will have on our family and our property: The construction of the "pond" will remove valuable mature trees and ground cover. These trees are the only natural sound and visual protection from the Toll Road. Removal of these trees will provide not only the eye sore of the Toll Road but will also increase the already intolerable noise from the highway. At this time, no sound wall/barrier exists in the neighborhood nor is there a plan for the construction of a wall in the Environmental Impact Statement. (0383, 0383-L –1)

Response: *The locations shown in the General Plans of Best Management Practice (BMP) and Stormwater Management (SWM) ponds throughout the corridor are approximate and were included to illustrate that a potential need for one of these facilities exists in the vicinity of the location shown. During preliminary engineering, a comprehensive drainage study will be undertaken for the entire corridor to address final locations of all BMP and SWM ponds. This effort should result in some facilities being eliminated, consolidated, or relocated to further*

minimize impacts to the adjacent areas. See the final General Plans (Final EIS Volumes IV (Line) and V (Facilities)) for more information.

Issues Related to Watershed Management, Wetlands, and Water Quality

Public Comment: That Phase 1 would not adversely affect streams and water quality, and that a full-project would only affect 245 linear feet of streams and water quality (E.g., at TABLE 2-2). Again, this claim fails to evaluate the protracted impact of a massive construction project, the increase in impervious surfaces while construction is underway, and the likely shifting of vehicular traffic onto non-toll roads if Route 267 tolls increase as a funding mechanism. (0068 0173-20)

Response: *The Final EIS provides an estimate of the direct impacts to streams and wetlands within the corridor that would be caused by the Project based on current design assumptions. This information will be updated and refined as necessary as part of preliminary engineering and final design. Both Section 4.2 of the Final EIS and the Natural Resources Technical Report (June 2002) provide a detailed explanation of the methodology used to calculate stream and wetland impacts in the corridor. Both the Full LPA and the Wiehle Avenue Extension would be constructed in accordance with all relevant federal, state, and local laws and permitting regulations. DRPT and WMATA have committed to use accepted Best Management Practices (BMPs) to ensure that areas other than those directly impacted would not be affected by the construction and operation of the Project.*

Public Comment: Moreover, the claim is all the more suspect since Phase 2 of the envisioned project goes through wetlands throughout the Materials Road-Greenway-Anane Way areas (Sheet 10) and various project sites abut or go through wetlands shown in Sheet 11. (0068 0173-21)

Response: *The potential long-term impacts to wetlands caused by the Project were identified and calculated in coordination with the U.S. Environmental Protection Agency (EPA), the U.S. Army Corps of Engineers, and the Virginia Department of Environmental Quality. This information will be updated and refined as necessary throughout preliminary engineering and final design. The Project would be constructed in accordance with all relevant federal, state, and local laws and permitting regulations. DRPT and WMATA have committed to use accepted Best Management Practices (BMPs) to ensure that areas other than those directly impacted would not be affected by the construction and operation of the Project.*

Public Comment: not to mention the negative environmental impact that widening [Wiehle] will inflict on Lake Anne and its drainage system. (0105 0123-3)

Response: *Lake Anne is located outside the study area for water resources and is not part of any of the drainage systems that would be affected by the proposed improvements associated with the Project. DRPT and WMATA have committed to use accepted Best Management Practices (BMPs) during construction and operation of the proposed Full LPA and the Wiehle Avenue Extension. With the use of these BMPs for stormwater management and erosion and sediment control, degradation of surface water quality would be minimal and would be limited to the immediate vicinity of the proposed improvements. Therefore, resources such as Lake Anne would not be affected.*

Public Comment: Our final concern is one of drainage. The runoff of water from the very steeply graded existing berm has caused some major drainage problems in the back of our property. We are at a low spot along the Dulles Connector Road corridor and the runoff from the berm along the entire section of homes in our neighborhood ends up accumulating at the back of our property. During this admittedly very wet year we had standing water in the back along the berm area all year long, which resulted in an infestation of mosquitoes. We would hope that during the construction phase the drainage problems at the back of the properties in our area will be addressed. (0081 0096-2)

Response: *The Dulles Corridor Rapid Transit Project is not responsible for mitigating existing drainage problems along the corridor. If the area in question is disturbed by any grading associated with temporary or permanent facilities of the Project, the area will be provided adequate drainage during and following construction in compliance with all applicable drainage codes and standards.*

Public Comment: The adoption of the Wetland, EQC and RPA standards by Fairfax and Loudoun Counties may conflict with the objective of providing concentrated, mixed use, high density projects at rail stops. The Tysons East Station will provide a challenge to balance the Scotts Run and Pimmit Run RPAs and yet maximize development densities. Provisions such as "no net loss" of wetlands, EQCs and RPAs provision must be adopted to meet both environmental and smart growth objectives. Compensatory replacement area(s) or prorate share contributions for downstream channel stabilization projects should be limited to the Scotts Run Stream Valley below the DAAR and connector. (0113 0132-2) (0123 0158-3)

Response:*. DRPT and WMATA will continue to coordinate with both Fairfax and Loudoun counties and property holders regarding these issues during preliminary engineering and final design.*

Impacts on Water Resources caused by Ancillary Development

Public Comment: That Phase 1 will result in "Reduced Impervious" areas as compared with the full LPA project (i.e., described as "more impervious") (e.g., at TABLE 2-2). Defensible, informative data quantifying the incremental addition of impervious surfaces from the current baseline needs to be presented, and its impact assessed. Further, the impact of a protracted construction period in this regard needs to be quantified and evaluated. (0068 0173-22)

Public Comment: 4.2, page 4-4. The Board of Supervisors did not adopt IDA for Tysons which would have provided a mechanism for developing in areas adjacent to stations that had been designated for preservation based on environmental factors. Therefore special considerations for RPAs and EQCs around the four Tysons stations must be carefully coordinated. Discussions of no net loss mitigation by providing downstream improvements to offset RPA encroachments at rail stations appears to be an acceptable alternative to the environmental community. Wetland mitigation will be addressed on a case by case basis through the Corps of Engineers, but mitigation will be required for Tysons East Station and the WEST*GROUP master plan does not contemplate onsite mitigation. (0113 0132-7)

Public Comment: special considerations for RPAs and EQCs around the four Tysons stations must be carefully coordinated. Discussions of no net loss mitigation by providing downstream improvements to offset RPA encroachments at rail stations appears to be an acceptable alternative to the environmental community. Wetland mitigation will be addressed on a case by case basis through the Corps of Engineers, but mitigation will be required for Tysons East Station and the WEST*GROUP master plan does not contemplate onsite mitigation. (0123 0158-9)

Response: *The Final EIS provides an estimate of the direct impacts to streams and wetlands within the corridor that would be caused by the Project based on current design assumptions. This information will be updated and refined as necessary during preliminary engineering and final design. Both Section 4.2 of the Final EIS and the Natural Resources Technical Report (June 2002) provide a detailed explanation of the methodology used to calculate stream and wetland impacts in the corridor. Both the Full LPA and Wiehle Avenue Extension would be constructed in accordance with all relevant federal, state, and local laws and permitting regulations. DRPT and WMATA have committed to use accepted BMP to ensure that areas other than those directly impacted would not be affected by the construction and operation of the Project. DRPT and WMATA will continue to coordinate with both Fairfax and Loudoun counties and property owners regarding these issues during preliminary engineering and final design.*

4.3 Aquatic Biota and Habitat

A. Draft EIS Comments

Federal Agency Comments

Concern About Effects From Rail Yard Leads at Site 7 and 15

Federal Comment: Concerned that the rail yard lead for Site 15 would cut through 2,500 feet of forested wetlands and cross Horsepen Run. Feel that Site 7 is the most viable both operationally and environmentally since it would have floodplain but not wetland impacts. Suggest that the Project Team coordinates with the U.S. Army Corps of Engineers and VDEQ to provide documentation of impacts in the Final EIS. The Final EIS must demonstrate that Site 15 is the least damaging practicable alternative if it were to be approved. (0485, 4-01)

> ***Response:*** *The Project Team is aware of these concerns and will continue to coordinate with the Federal Aviation Administration (FAA) during preliminary engineering and final design. Every effort will be made to avoid and/or minimize impacts to natural resources during the design process. Yard Site Y7 was eliminated from consideration after the public and agency review and comment on the Draft EIS.*

B. Supplemental Draft EIS Comments

Public Comments

Affected Upland
Public Comment: f. A detailed evaluation of affected prime upland areas and streams with glade habitats needs to be presented and assessed for Phase 1 construction. (0068 0173-23)

> ***Response:*** *Sections 4.3 and 4.4 of the Final EIS describes the potential effects of the full LPA and the Wiehle Avenue Extension on aquatic and terrestrial biota and habitats in the corridor. Additional detail on the analysis was provided in the Natural Resources Technical Report (June 2002). Impacts to upland areas are minimal, most of which are of limited importance for terrestrial wildlife and serve mostly as foraging areas. There would be no additional effects to aquatic habitat as a result of the Wiehle Avenue Extension. If the Full LPA is not implemented by 2025, then an additional 0.1 acres of wetland W-80 would be affected near the Herndon-Monroe Park-and-Ride to accommodate an expansion of park-and-ride capacity.*

4.4 Terrestrial Biota and Habitat

A. Draft EIS Comments

State Agency Comments

Mitigate Effects on Forest Lands During Construction

State Comment: Forest and Tree Protection. According to the Department of Forestry, this project will not significantly affect forest lands of the Commonwealth. In order to protect trees in project construction areas from the effects of this project, the trees should be marked and fenced at least to the dripline or the end of the root system, whichever extends farther from the tree stem. Marking should be done with highly visible ribbon so that equipment operators see the protected areas easily. Parking and stacking of heavy equipment, construction materials, or soil stockpiles near trees can damage root systems by compacting the soil. Soil compaction, from weight or vibration, affects root growth, water and nutrient uptake, and gas exchange. If parking and stacking are unavoidable, temporary crossing bridges, or mats to minimize soil compaction and mechanical injury to plants, should be used. Soil stockpiles should be covered to prevent

soil erosion and fugitive dust. (0407, 0407-A –12)

> ***Response:*** *The Project Team will comply with federal and state laws and will implement BMPs during construction of the Project.*

Public Comments

Effect of Stormwater Facilities on Natural Resources

Public Comment: The [Stormwater management] pond [near Chathams Ford] will destroy one of the last remaining natural habitats in the area. Destruction of the trees to construct the pond will take away shelter and food from the deer, and likely will drive them more actively into streets and highways, thereby creating life-threatening conditions for both humans and animals. (0383, 0383- L-5)

> ***Response:*** *Construction of the pond would reduce the available habitat for deer, but not to the point that deer would be forced onto nearby roads. Several wildlife corridors are accessible from the Chathams Ford Road vicinity and include Difficult Run, Wolftrap Run, and Courthouse Spring. Forested corridors parallel the Dulles Toll Road from Beulah Road to Route 7 providing a transportation route for wildlife.*

Public Comment: Draft EIS does not refer to effects to terrestrial biota and habitat from 888% increase in density at mid-corridor stations. (0510, 4-04)

> ***Response:*** *Secondary effects to terrestrial habitat would be minimal and would primarily be the result of clearing and grading areas of habitat. See Chapter 9 of the Final EIS for a discussion of the secondary and cumulative effects of the Project.*

Replace Trees Destroyed During Construction

Public Comment: Provide replacement trees within the corridor for those destroyed. Use sustainable species for the area's climate and soils. (0487 4-01)

> ***Response:*** *The Project Team will comply with federal and state laws and will implement BMPs during construction.*

B. Supplemental Draft EIS Comments

No comments pertaining to this topic were received.

4.5 Rare, Threatened, and Endangered Species

A. Draft EIS Comments

State Agency Comments

Timing of Survey for Rare, Threatened, and Endangered Species

State Comment: Commenter would like to look at the survey for rare, threatened, and endangered species performed by Coastal Resources, Inc. in April and August of 2000, prior to its inclusion in the Final EIS. Commenter needs to verify the results and verify that the survey was conducted during the appropriate time of year. Concerned that the rare diabase plant, earleaf foxglove *(Agalinis auriculata)* may have been missed in the August survey due to the difficulty in verifying the plant in its vegetative state. The actual flowering period for the plant is in September. (0519, 4-01)

Response: *According to the Manual of Vascular Plants of Northeastern United States and Adjacent Canada by Gleason and Cronquist (New York Botanical Garden, 1991), the flowering period of the ear-leaf foxglove (Agalinis auriculata) occurs between August and September. All field surveys relating to rare, threatened, and endangered species known to occur in diabase glades were based on the information presented in this manual. The survey for the presence of state and/or globally rare diabase glade plant species was conducted on Dulles Airport property for potential Yard Site 15 on August 16, 2002. The Project Team will forward the documentation to Rene Hypes at the Department of Conservation and Recreation as part of the agency coordination process.*

DCR Recommendation for Survey of Potential Suitable Habitat For Rare Diabase Plans

State Comment: Natural Heritage and Wildlife Resources. According to the Department of Conservation and Recreation (DCR), "natural heritage resources" are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geological formations. According to DCR files, several rare plants may occur in project locations if suitable habitat is present. These plants are typically associated with prairie vegetation and inhabit semi-open diabase glades in Virginia. Diabase glades are characterized by historically fire-dominated grassland vegetation on relatively nutrient-rich soils underlain by Triassic bedrock. Diabase flatrock, a hard, dark-colored volcanic rock, is found primarily in northern Virginia and located within the geologic formation known as the Triassic Basin. Where the bedrock is exposed, a distinctive community type of drought-tolerant plant occurs. Diabase flatrocks are extremely rare natural communities that are threatened by activities such as quarrying and road construction. In Northern Virginia, diabase supports occurrences of several globally rare and state rare plant species (see the "Definition of Abbreviations" on pages 2 and 3 of the attached August 1, 2002 comments from DCR). These include: earleaf foxglove (*Agalinis auriculata*) white heat aster (*Aster ericoides*), blue-hearts (*Buchnera americana*), hairy beardtongue (*Penstemon hirsutus*), downy phlox (*Phlox pilosa*), stiff goldenrod (*Oligoneuron rigidum var. rigidum*), marsh hedgenettle (*Stacbys pilosa var. arenicola*). The earleaf foxglove is currently tracked as a species of concern by the U.S. Fish and Wildlife Service; however, this designation has no legal status, according to DCR. Because the project corridor has the potential to support populations of these natural heritage resources, DCR recommends an inventory of suitable habitat in the study area. With the survey results, DCR can more accurately evaluate potential resource impacts and recommend specific protection measures to minimize the impacts. In this regard, the Department of Conservation and Recreation's Division of Natural Heritage employs biologists who are qualified and available to conduct inventories for rare, threatened, and endangered species. We recommend that the project manager (Department of Rail and Public Transportation, the Washington Metropolitan Area Transit Authority, or other project management agency) contact the Division of Natural Heritage (Christopher Ludwig, Natural Heritage Inventory Manager, telephone (804) 371-6206) to discuss arrangements for field survey work. The Department of Conservation and Recreation has not surveyed any sites within the project area (see Draft EIS, pages 4-77 through 4-81, section 4.5.3), but recommends doing so before September ends if possible. The Draft EIS concludes that there is no suitable habitat for rare diabase plants (page 4-81); this conclusion should be re-evaluated during the appropriate season. (0407, 0407-A –2)

State Comment: According to the information currently in our files, several rare plants, which are typically associated with prairie vegetation and inhabit semi-open diabase glades in Virginia may occur at this location if suitable habitat is present. Diabase glades are characterized by historically fire-dominated grassland vegetation on relatively nutrient-rich soils underlain by Triassic bedrock. Diabase flatrock, a hard, dark-colored volcanic rock, is found primarily in northern Virginia counties and is located within the geologic formation known as the Triassic Basin. Where the bedrock is exposed, a distinctive community type of drought-tolerant plants occurs. Diabase flatrocks are extremely rare natural communities that are threatened by activities such as quarrying and road construction (Rawinski, 1995). (0407, 0407-A –25)

State Comment: In Northern Virginia, diabase supports occurrences of several global and state rare plant species: earleaf foxglove (*Agalinis auriculata*, G2/S1/SOC/NS), white heath aster (*Aster ericoides*, G5/S2/NF/NS), blue-hearts (*Buchnera americana*, G3G4/S1/NF/NS), hairy beardtongue (*Penstemon hirsutus*, G4/S2/NF/NS), downy phlox (Phlox pilosa, G5T5/S2/NF/NS), stiff goldenrod (*Oligoneuron*

rigidum var. rigidum, G5/S2/NF/NS), marsh hedgenettle (*Stacbys pilosa var. arenicola*, G5/S1/NF/NS). Please note that earleaf foxglove is currently tracked as a species of concern by the United States Fish and Wildlife Service (USFWS); however, this designation has no official legal status. (0407, 0407-A –26)

State Comment: Due to the potential for this site to support populations of natural heritage resources, DCR recommends an inventory of suitable habitat in the study area. With the survey results we can more accurately evaluate potential impacts to natural heritage resources and offer specific protection recommendations for minimizing impacts to the documented resources. DCR-Division of Natural Heritage biologists are qualified and available to conduct inventories for rare, threatened, and endangered species. Please contact J. Christopher Ludwig, Natural Heritage Inventory Manager, at (804) 371-6206 to discuss arrangements for field work. A list of other individuals who are qualified to conduct inventories may be obtained from the USFWS. Any absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks other natural heritage resources. DCR's Biological and Conservation Data System is continuously revised. Please contact DCR for an update on this natural heritage information if a significant amount of time passes before it is utilized. (0407, 0407-A –27)

State Comment: The Draft Environmental Impact Statement discusses some of these issues in 4.5.3: Existing Conditions, pp. 4-77 thru 4-81, and states on page 81, the indication of the "absence of suitable habitat for rare diabase plants". That should be re-evaluated with a survey during the appropriate season. DCR has not surveyed any sites within the project area, but recommends doing so either this month or during September, if possible. As stated above, DCR-Division of Natural Heritage biologists are qualified and available to conduct inventories for rare, threatened, and endangered species. Please contact J. Christopher Ludwig, Natural Heritage Inventory Manager, at (804) 371-6206 to discuss arrangements for field work. (0407, 0407-A –28)

> ***Response:*** *As documented in Section 4.5f the Final EIS, the Project Team has delineated the areas where suitable habitat to support the rare plants referenced above would occur. It was determined that one area, which could be developed under the Metrorail Extension, could contain rare plants associated with diabase glades.*
>
> *Mr. Lugwig of the Department of Conservation and Recreation's Division of Natural Heritage was contacted and agreed to allow a wildlife biologist from Coastal Resources, Inc., a member of the Project Team, conduct an assessment of potential diabase habitat to determine the absence or presence of Rare, Threatened, or Endangered (RTE) plant species. Surveys were conducted based on flowering periods of the RTE plant species, which occurred in April and August 2002. Survey results indicated that there were no RTE plant species found within the study area.*

Statement of No Comment from the Department of Agriculture and Consumer Services

State Comment: The Department of Agriculture and Consumer Services, which is responsible for protection of state-listed plant and insect species, indicates that it has nothing to add to the discussion of rare, threatened, and endangered species (Draft EIS, pages 4-76 through 4-81, section 4.5). (0407, 0407-A –3)

> ***Response:*** *Thank you for your input.*

B. Supplemental Draft EIS Comments

No comments pertaining to this topic were received.

4.6 Air Quality

A. Draft EIS Comments

Federal Agency Comments

Project Will Help Improve Air Quality by Reducing Auto Trips

Federal Comment: Projected opening year ridership is estimated to be 27,000 to 72,000 average weekday riders depending on the alternative chosen. This project will provide a clean air alternative transportation mode for many commuters and travelers. (0303, 0303-A –2)

> ***Response:*** *If the Dulles Corridor Rapid Transit Project were to reduce auto trips in favor of transit, then a reduction in regional emissions and pollutant concentrations would also be expected*.

Virginia DEQ's Statement that Build Alternatives are Preferable to No Build

State Comment: Air Quality. According to DEQ's Division of Air Program Coordination (hereinafter "DEQ's Air Division"), the project is in an ozone non-attainment area, which means that the project managers should take all precautions to limit the emissions of volatile organic compounds (VOCs) and oxides of nitrogen (NOx). Detailed modeling studies have established that none of the alternatives under consideration will significantly affect air quality. It appears to us that any of the "build" alternatives would be preferable to the no-action alternative, given the widely acknowledged beneficial air quality impacts of improved mass transit, particularly in the Northern Virginia ozone non-attainment area. (0407, 0407-A –6)

> ***Response:*** *In addition to the decrease in the exhaust emission factors from 2000 to 2025 as a result of the Federal Motor Vehicles Emission Control Program), the Dulles Corridor Rapid Transit Project is also expected to improve the air quality in the region due to the diversion of passenger vehicles to transit. As stated in Section 4.6 of the Final EIS, the Dulles Corridor Rapid Transit Project is included in the Financially Constrained Long Range Plan, which conforms to the federally approved State Implementation Plan (SIP). The Dulles Corridor Rapid Transit Project is presumed to conform to the SIP by reducing regional emission levels under implementation of the LPA.*

Local Agency Comments

Build Rail in the Dulles Corridor to Help Improve Air Quality

Local Comment: The summer of 2002 has been one of the worst in terms of air quality as measured by Code Red days for the region. It is time to cease debate and studies. The matter of relieving congestion and addressing the severe damage to the region's air quality requires that we act now. This project is long overdue. It is time to build rail in the Dulles Corridor, now. (0437, 0437-E –3)

> ***Response:*** *The Dulles Corridor Rapid Transit Project is expected to improve the air quality in the region due to the diversion of passenger vehicles to transit.*

Local Comment: The public hearing report should include a discussion of the extent to which each build alternative would contribute to the attainment of air quality standards, particularly as related to emissions of ozone precursors. One would expect ozone benefits to be greatest for those alternatives that will have the highest transit capacity, particularly if the benefits of high density, transit-oriented, development near transit stations are considered. The DEIS does not, however, address this issue. The DEIS should, ideally, identify differences among alternatives in terms of emissions of ozone precursors (or some surrogate, such as vehicle miles traveled in the region). (0479, 0479-L –7)

Response: *In addition to the decrease in the exhaust emission factors from 2000 to 2025 as a result of the Federal Motor Vehicles Emission Control Program (, the Dulles Corridor Rapid Transit Project is also expected to improve the air quality in the region due to the diversion of passenger vehicles to transit. As stated in Section 4.6 of the Final EIS, the Dulles Corridor Rapid Transit Project is included in the Financially Constrained Long Range Plan, which conforms to the federally approved State Implementation Plan (SIP). Therefore, the Dulles Corridor Rapid Transit Project is presumed to conform to the SIP by reducing regional emission levels. If the Dulles Corridor Rapid Transit Project were to result in a reduction in regional emissions of VOC and NOx, then a reduction in ozone concentrations would also be expected.*

Public Comments

Statements on Effects on Air Quality of Metrorail Extension Versus BRT Alternative

Public Comment: Air quality is a very important consideration to us. We'd like to point out that metrorail will not start improving air quality until it begins service, which will be at least 2010 and we think much later. BRT, on the other hand, which uses compressed natural gas buses, CNG buses, can be in operation soon and can bring relief to this foul air we're breathing today. (0138, 0138-T –6)

Public Comment: It is our understanding that due to a recent ruling in a federal appeals court related to extending the clean air deadline for the Washington, DC area, the region will soon be re-designed as "serious nonattainment"' for ozone pollution. This action demonstrates the deterioration of the air quality in the region and will require additional controls to address smog. Ozone is the principle component of ground-level smog. It is formed when hydrocarbon and nitrogen oxide pollution from vehicles, power plants, refineries and other sources react in the atmosphere in the presence of sunlight. Ozone is a powerful oxidizing agent that damages lung tissue. Recent research has found that health effects from ozone include increased respiratory symptoms, damage to cells of the respiratory tract, pulmonary inflammation, declines in lung function, increased susceptibility to respiratory infections, increased risk of hospitalization and premature death. Groups most sensitive to ozone pollution are children, people with chronic respiratory disease like asthma or emphysema, people who exercise or work outdoors, and "responders", people who, for reasons that remain unknown, are more sensitive to ozone pollution. Fifty-two percent of nitrogen oxide emissions in the northern Virginia area come from on-road mobile sources. The expansion of rail in the Dulles Corridor will help reduce vehicle miles traveled and support development that is not road-centered but designed to encourage bike and pedestrian friendly modes of travel. The American Lung Association of Virginia believes these outcomes will help improve the quality of the air in the region. Thank you for the opportunity to share our support for rail today! (0198, 0198-L –2)

Public Comment: Air quality is enhanced by MetroRail. The typical suburban automobile gets about 22.5 passenger-miles per gallon of fuel. The typical urban bus gets 31 such passenger-miles. Light Rail produces 41 passenger-miles per gallon if the electricity is made from oil. MetroRail and commuter rail get 54 passenger-miles per gallon of fuel. When a motorist converts to transit there is a saving of at least 58 percent. Fewer trips may be made, increasing the saving. (0013, 0013-L –35)

Public Comment: Air quality, which I said before, is enhanced by metrorail. The typical suburban automobile gets 22.5 passenger miles pre gallon of fuel. The typical urban bus gets 31 such passenger miles, depending on what they're using. Light rail produces 41 passenger miles per gallon if the electricity is made from oil. Metrorail and commuter rail get 54 passenger miles per gallon of fuel. When a motorist converts to transit, there is a savings of at least 58 percent. Fewer trips may be made. That also increases savings. (0244, 0244-T –3)

Response: *From an air quality standpoint, the Dulles Corridor Rapid Transit Project is expected to improve the air quality in the region due to the diversion of passenger vehicles to transit, which would result in an overall reduction in vehicle miles traveled, as discussed in Section 4.6 of the Final EIS.*

EIS Should Reflect Positive Air Quality Effects of Reducing Carbon Monoxide (CO)

Public Comment: From a review of the Air Quality Technical Report, it appears that only the intersections in the vicinity of the corridor were modeled. Because many of these are in close proximity to the future station sites, many of these intersections would be expected to be encumbered with additional station generated traffic. The good news from the report is that despite the additional station generated traffic added by the project, air quality won't be any worse at these intersections. Just because the EPA and VDEQVDEQ don't REQUIRE an assessment of CO concentrations from highway mainlines, the air quality improvement resulting from the elimination or trip length reduction of up to 38,000 trips per day from the road system along the corridor has got to be significant. Clearly, this very important benefit needs to be quantified and reflected in the EIS. (0387, 0387-L –18)

> ***Response:*** *Agency requirements focus on intersections as the "worst case" (i.e., highest carbon monoxide (CO) concentrations) for assessment of Project impacts. Compared to intersection conditions, the more efficient operation of vehicle engines at highway mainline speeds, along with the greater right-of-way widths, results in much lower CO levels at locations where people may be exposed. If the Dulles Corridor Rapid Transit Project were to reduce auto trips on highway mainlines, then a reduction in CO levels near the mainlines would be expected. At the regional level, a reduction of auto trips in favor of transit would be expected to result in a reduction in overall CO emissions, which would benefit air quality.*
>
> *The adverse levels of CO due to traffic on highway mainlines are very unlikely to occur because of the relatively low emission rates from recent model year vehicles as well as the distances from the travel lanes to receptors at or beyond the right-of-way boundary. For these reasons, EPA and the Virginia Department of Environmental Quality do not require assessment of CO concentrations from highway mainlines.*

Conclusion that the Build Alternatives Will Reduce CO

Public Comment: The conclusion that none of the transit alternatives will reduce CO is ridiculous. How can the reduction of as many as 38,000 trips NOT reduce pollution? That's simply not possible. The air quality improvements associated with transit improvements such what's proposed in the Dulles Corridor are well known and essential if the Washington area is to solve its air quality problem. (0387, 0387-L –17)

> ***Response:*** *In addition to the decrease in the exhaust emission factors from 2000 to 2025 as a result of the Federal Motor Vehicles Emission Control Program, the Dulles Corridor Rapid Transit Project is also expected to improve the air quality in the region due to the diversion of passenger vehicles to transit. As stated in Section 4.6 of the Final EIS, the Dulles Corridor Rapid Transit Project is included in the Financially Constrained Long Range Plan, which conforms to the federally approved SIP. Therefore, the Dulles Corridor Rapid Transit Project is presumed to conform to the SIP by reducing regional emission levels.*
>
> *Additionally, the air quality analysis focused on "worst-case" locations where localized traffic impacts of the Dulles Corridor Rapid Transit Project would be expected to result in the highest CO concentrations. At the regional level, a reduction of auto trips in favor of transit would be expected to result in a reduction in overall CO emissions, which would benefit air quality.*

Air Quality Improvements Will Come From Technological Advances, Not Rail

Public Comment: None of the rail proposals do anything for air quality and the impact on the environment is greater than with buses. (0112, 0269-M-8)

Public Comment: That the study says that this project provides no long-term regional air quality benefit, that technological advances, not transit, generate the real benefits over the next 25 years. (0446, 0146-T –10)

Public Comment: That the DEIS says this project provides no long-term regional air quality benefit. Technological advances, not transit, generate the real benefits over the next 25 years. (0446, 0218-M – 10)

> ***Response:*** *In addition to the decrease in the exhaust emission factors from 2000 to 2025 as a result of the Federal Motor Vehicles Emission Control Program, the Dulles Corridor Rapid Transit Project is also expected to improve the air quality in the region due to the diversion of passenger vehicles to transit. As stated in Section 4.6 of the Final EIS, the Dulles Corridor Rapid Transit Project is included in the Financially Constrained Long Range Plan, which conforms to the federally approved SIP. Therefore, the Dulles Corridor Rapid Transit Project is presumed to conform to the SIP by reducing regional emission levels.*

EIS Should State that Air Quality Would Worsen Under Metrorail Extension

Public Comment: The final EIS should clearly state that as a result of the implementation of rail in the Dulles Corridor, air quality would be worse than what would be expected without rail. The basis of this statement is that under both scenarios (e.g., with and without rail) air quality would supposedly improve because EPA requirements for decreased automobile emissions. The draft EIS states that with rail, traffic in the corridor would increase over what would be expected without rail. Ergo, the level of pollution that could be expected as a result of implementation of rail would be higher than that expected without rail. (0203, 0384-L –1)

> ***Response:*** *The air quality analysis does not support the reviewer's assertion that air quality would be worse under the Metrorail Alternative than under the No Build Alternative. As shown in Section 4.6 of the Final EIS, predicted maximum CO concentrations differ only slightly between the No-Build Alternative and the Metrorail Alternative. All of the maximum CO levels are well below the National Ambient Air Quality Standards (NAAQS). Localized increases in traffic volumes predicted along the access routes to rail stations and Park-and-Ride facilities are responsible for slightly higher CO levels at some locations. Similarly, other locations, which would experience decreases in traffic volumes because drivers would choose to ride Metrorail, would experience slightly lower CO levels.*
>
> *Furthermore, the Final EIS shows that CO levels are predicted to improve under both the No-Build Alternative and the Metrorail Extension, compared to the existing conditions, because of EPA requirements for decreased vehicle emissions. This improvement will occur with all of the alternatives and is not an impact of the project.*

Buses Will Not Help Improve Air Quality

Public Comment: The National Capital area suffers an air pollution problem that may bring sanctions under the Clean Air Act as amended. Buses are not clean. Greatly improved buses have been developed, but some are too heavy to comply with highway weight laws and pavement strength. Some are too costly to maintain. All are experimental when considered in relation to the fifteen (15) year bus life expectancy. Some are underpowered. (0013, 0013-L –10)

Public Comment: To complicate this problem, our region has severe air quality problems and we are struggling to meet the requirements of the Clean Air Act. As you may know, today was another Code Orange day indicating poor air quality, one of 12 we've already had this year, in addition to four Code Red days, those days when air quality is at its worst. If we cannot reach our air quality goals, we run the risk of losing billions of Federal transportation dollars while allowing the increased health risks of breathing polluted air. (0142, 0142-T –3)

> ***Response:*** *The Dulles Corridor Rapid Transit Project is expected to improve the air quality in the National Capital area due to the diversion of passenger vehicles to transit. As illustrated in*

Section 4.6 of the Final EIS, improvements in CO concentrations over existing conditions are predicted at intersections throughout the Project area under the two Build Alternatives.

Metrorail Extension Will Help Reduce Use of Motor Fuel

Public Comment: With the Dulles MetroRail estimated to carry 290 million annual passenger-miles of travel, it would consume about 13 million gallons of motor fuel per year to move these people by automobile. Saving at least 13 millions gallons of motor fuel per year may be worth $18 million per year in addition to the clean air benefits. (0013, 0013-L –36)

Response: *Thank you for your input.*

Questions on Consideration of Increased Density in Air Quality Analysis

Public Comment: Second, I have not had enough time to thoroughly analyze the information presented, but I do have reservations about three of the factors impacting the air quality. First, it was not clear to me that the study took into account the significant increase in the number of people who will be working and residing in the areas around the stations as a result of the increases in FAR within a mile of the stations. (0203, 0203-L –2)

Public Comment: Second, with the new FAR increase, it is not clear to me that the models take into account the canyoning effect of the higher buildings. This will tend to keep the exhausts from all those cars in the area longer and at higher concentrations. (0203, 0203-L –4)

Response: *The air quality analysis is based on traffic volumes and growth projections developed by the Metropolitan Washington Council of Governments (MWCOG) and the Counties of Fairfax and Loudoun. These projections include anticipated land-use and density changes as discussed in Section 3.1 of the Final EIS.*

As described in Section 4.6. of the Final EIS, the air quality analysis was conducted using EPA's CAL3QHC Version 2.0 dispersion modeling program. The effects of taller buildings on CO concentrations near intersections (canyoning effect) are negligible. CO concentrations may even decrease due to higher wind speeds between buildings. The canyon effect is typically only applicable in dense metropolitan areas where buildings are over 400 feet tall.

Air Quality Analysis Should Reflect EPA's Decisions on Emissions in the Mid-West

Public Comment: While increases in fuel efficiency and reduced emissions play a significant part in maintaining the air quality in Reston and other areas over the next 20 to 50 years, given the EPA's recent move to reduce the required reductions for petrochemical and power plant emissions in the mid-West need to be factored into any model and certainly indicates to me that we cannot count on the reductions in automobile exhausts to actually take place. (0203, 0203-L –5)

Response*: Potential changes to the current federal emissions regulations for petrochemical facilities and power plants are not included in the Final EIS modeling analysis and are outside the scope of this Project. These effects may be reflected in future revisions to the SIP as mandated by the EPA. Regardless of these potential effects, emission rates from motor vehicles will continue to decline over time due to the requirements of the Federal Motor Vehicles Emission Control Program as mandated under the Clean Air Act. Newer cleaner-burning vehicles will replace the automobile fleet over time.*

EIS Should Address Cumulative Impacts of Increased Traffic on Noise and Air Quality

Public Comment: Cumulative impacts resulting from increased vehicular traffic on noise and air quality need to be assessed. (0150, 0150-T –12)

Public Comment: The effect of increased vehicular traffic on noise and air quality has not been sufficiently addressed and there is a lack of planning for adequate parking facilities, particularly within Tysons, where only a 2000-space facility is planned at Tysons West. (0150, 0150-T –6)

> ***Response:*** *As described in Section 4.7 of the Final EIS, the Virginia Department of Transportation "State Noise Abatement Policy" (January 1997) established evaluation criteria for vehicular traffic. The VDOT noise criteria, which utilize the FHWA Noise Abatement Criteria (NAC), were used to evaluate Project impacts using the peak hour cumulative noise level (or Leq) for those residences located adjacent to the proposed realignment of the Dulles Connector Road, DIAAH, and Dulles Toll Road.*
>
> *The cumulative impacts on air quality as a result of vehicular traffic were evaluated as part of the region's Financially Constrained Long Range Plan and in Chapter 9 of the Final EIS. As stated in Section 4.6 of the Final EIS, the Dulles Corridor Rapid Transit Project is included in the Financially Constrained Long Range Plan, which conforms to the federally approved SIP. Therefore, the Dulles Corridor Rapid Transit Project is assumed to conform to the SIP by reducing cumulative emission levels within the region.*
>
> *Park-and-ride capacity at each station/stop was designed and sized based on projected demand for spaces, site constraints, cost, and projected funding availability. Consultation with local governments was also an integral part of the sizing of park-and-ride facilities. The park-and-ride capacity identified in the Final EIS (see Table 6.3-3) and supporting documents such as General Plans – Facilities reflect this analysis and design process.*

Give More Consideration of Positive Air Quality Effects of Density Bonuses

Public Comment: Considering Northern Virginia has already stated that it will not be able to comply with the Clean Air Act by the deadline, the density bonus that would be given would have a greater impact than has adequately been considered. (0159, 0159-T –3)

> ***Response:*** *An evaluation of the cumulative effects of the transit alternative and secondary development due to the density bonuses is included in Chapter 9 of the Final EIS. Increasing the densities at the transit station areas results in much higher non-Single Occupancy Vehicle (SOV) splits in traffic and a much greater increase in walk and bike trips to the transit stations. The increase in SOV trips and in pedestrian and bicycle trips to transit stations, attributable to the density bonus, would have a positive impact on air quality.*

Air Quality Analysis is Not Adequate

Public Comment: I think also your air quality section is lacking and remiss. I have two examples. In your ozone, where you talk about ozone on page 4-89, you use the hour standard, and I understand that your data is only good through 2000 in the draft EIS, but there is 2001 data and there is some 2002 data, and I would recommend that you update your data in the study. (0258, 0258-T –4)

> ***Response:*** *With respect to the 1-hour standard, the NAAQS for ozone have been subject to continuing judicial challenges. In 1997, EPA promulgated new NAAQS for ozone, based on a new 8-hour average standard intended to replace the 1-hour average standard. On May 14, 1999, the U.S. Court of Appeals for the District of Columbia Circuit invalidated portions of the rules establishing the 8-hour ozone standard. In the July 20, 2000 Federal Register, EPA reinstated the 1-hour ozone standard in counties where the standard was previously revoked. This action returned the affected areas of Virginia, including the Project corridor, to the Serious ozone non-attainment designation that was in place when the 1-hour standard was revoked. In February 2001, the Supreme Court overruled the Circuit Court's decision on a number of grounds and remanded the case back to the Circuit Court for further proceedings. In the interim, the 8-hour ozone standard has not been vacated but also is not being implemented. EPA has not designated areas in attainment or non-attainment of the 8-hour ozone standard. Accordingly, the*

1-hour standard was the only applicable NAAQS for ozone at the time that the air quality analysis was performed.

With respect to the use of year 2000 data, the most recent ambient air quality measurements available at the time that the air quality analysis was performed were used. The most current data do not alter the results or conclusions of the air quality analysis.

Disagree with EIS that Regional Air Quality has Improved

Public Comments

Public Comment: But the statement that you make that says a number of violations of the ozone standard has been generally decreasing over time as a result of emission controls mandated by the Clean Air Act and the Virginia SIP, I would argue is not a true statement. It may be based on your three data points that you used, '98, '99, and 2000, but if you look at 2001 and look at 2002, I don't think that that data substantiates that statements. (0258, 0258-T –5)

Public Comment: Air Quality-- First of all, I would strongly suggest that the statement indicating the number of Code Red days was decreasing over the past several years be eliminated. We have already had more code red days this year than in any of the past ten years. (0387, 0387-L –15)

Response: *The decreasing trend in the number of violations of the ozone standard was based on the most recent data (1990-2000) that was available at the time the air quality analysis was performed. These data are available in the annual Virginia Ambient Air Monitoring Data Report from the VDEQ, Office of Air Quality Assessment, and online at http://www.deq.state.va.us/. The most current data do not alter the results or conclusions of the air quality analysis.*

Findings in a George Washington University Report on Regional Air Quality

Public Comment: Specifically I would refer you to a George Washington University recent publication that reported -- and here I'm going to talk about the eight-hour average standard rather than the one-hour, but in Ashburn, here in Ashburn, taken at Broad Run High School, the measurements from '98 to 2002, although, yes, from '98 to 2000, they show a declining number of eight-hour exceedance hours, when you look at 2001, it's the number of nine. '98 was 15, '99 was 7, 2000 was 1. But 2001 was 9, and already for 2002, we have had 9 occasions to exceed the eight-hour standard. We're not even through the summer yet. The forecast is this might be the worst year yet. I would argue that your ozone statement in here is not quite accurate. (0258, 0258-T –6)

Response: *With respect to the use of year 2000 data, the Draft EIS used the most recent ambient air quality measurements available at the time that the air quality analysis was performed. The statement that the number of violations of the ozone standard has been generally decreasing over time was based on 1990-2000 data for the number of days on which the primary standard of 0.112 parts per million was exceeded at any VDEQ monitoring station in the Northern Virginia Ozone Non-attainment Area. Therefore, it is possible that 8-hour data for 2001-2002 from the single site, such as the Ashburn monitoring station, might show a different trend from the 1999-2000 regionwide data discussed in the Draft EIS.*

The decreasing trend in the number of violations of the ozone standard was based on the most recent data (1990-2000) that was available at the time the air quality analysis was performed. These data are available in the annual Virginia Ambient Air Monitoring Data Report from the VDEQ, Office of Air Quality Assessment and online at http://www.deq.state.va.us/. The most current data do not alter the results or conclusions of the air quality analysis.

Review Analysis of Effects on Carbon Monoxide

Public Comment: And then moving to the carbon monoxide. I had hoped to be able to see in the draft EIS some quantitative data that shows that air quality is improved as a result of building metro or bus rapid transit to Dulles, and I was disappointed to find what I think is data that doesn't give full credit for the air quality -- I won't say improvements, because I kind of suspect our air quality is going to stay the way it is. I think hopefully we can keep it as good as it now. But if you look at the base line alternative, if you look at page 4-93, Table 4.6-5, the base line alternative is to build nothing, and you in your table show that carbon monoxide improves in 2006, 2010 and 2025. And I am told that the reason for that is the assumptions you have used in your model, that you assume that there will be compliance as is regulated, and I would argue that that's not a realistic assumption. I would argue that you need to go back and look at your assumptions. (0258, 0258-T –7)

> ***Response:*** *CO concentrations with the No-Build Alternative decrease from 2000 to 2025 because emission rates from motor vehicles will continue to decline over time due to the requirements of the Federal Motor Vehicles Emission Control Program mandated under the Clean Air Act. Additional decreases in emission rates are projected due to the Virginia Inspection and Maintenance (I&M) Program. For the Draft EIS air quality analysis, the assumptions regarding compliance with these programs were taken from* the *State Implementation Plan Revision, Phase II Attainment Plan, for the Washington DC-MD-VA Non-Attainment Area, Appendix G: Mobile Emissions Factors and Mobile Emissions Inventory Projections (MWCOG, February 2000). The VDEQ and the U.S. Environmental Protection Agency (EPA) have approved this document.*

Comment on Methodology for Air Quality Analysis

Public Comment: I would argue that your using regulations as the assumption in your models causes you to understate what you will gain if you were allowed to do some sensitivity analysis that would put in some better data. I do not think that not building anything we will see carbon monoxide improve the rate that it shows in the table on the page. And then if you take the base line alternative of carbon monoxide and how it improves by doing nothing, in terms of build, and compare that to the metro alternative on the table 4.6-9, it appears that the quantity of improvement is very, very slim, and therefore, I think that the draft EIS is subject to, and I've seen some data that says, most of the air quality improvement is not due to mass transit, but is due to technological advances over the next 25 years. I would argue that if you look at the data for the past five years in terms of air quality carbon monoxide that no one can say that with any amount of assurance or with any accuracy that using the regulations and the standards as your assumption is a reasonable thing to do. (0258, 0258-T –8)

> ***Response:*** *As the commenter suggests, fleet-wide technological advances in emission controls generally have a greater effect in reducing regional CO concentrations than could any one mass transit project. For the Draft EIS air quality analysis, the assumptions regarding technological advances and regulatory compliance were taken from the State Implementation Plan Revision, Phase II Attainment Plan, for the Washington DC-MD-VA Non-attainment Area, Appendix G: Mobile Emissions Factors and Mobile Emissions Inventory Projections (MWCOG, February 2000). This document has been approved by the VDEQ and the U.S. EPA. Notwithstanding the assumptions made about technological advances and regulatory compliance, the purpose of the Draft EIS and Final EIS has been to report the specific impacts of the Dulles Corridor Rapid Transit Project. The impacts of the project would occur regardless of background trends in technology or compliance rates.*

Do Not Constrain Air Quality Analysis to Federal Regulations

Public Comment: I think if you look at the last five or however many years you want to look at, pick out several data points and project them forward based on the population and the amount of transit increase projected in your draft EIS and see what that comes out to. Don't constrain it by of course we're going to meet the laws and do the right thing, because I think the data will show that we are not headed to do that

currently. And I don't think that the technology -- I don't think we are seeing evidence that there will be technology that will make those things get better. Otherwise, in terms of air quality, your draft EIS, in my mind, doesn't give you enough credit for the air quality improvements, and I think you need to do some modeling outside the box. I think you need to not be constrained by assumptions that might not be realistic. (0258, 0258-T –9)

> ***Response:*** *The purpose of the Draft EIS and Final EIS has been to report the specific impacts of the Dulles Corridor Rapid Transit Project. The impacts of the Project will occur, and the Project alternatives can be compared, regardless of background trends in technological advances and regulatory compliance. The assumptions used in the Draft EIS and Final EIS air quality analysis regarding technology or compliance rates were taken from the State Implementation Plan Revision, Phase II Attainment Plan, for the Washington DC-MD-VA Non-attainment Area, Appendix G: Mobile Emissions Factors and Mobile Emissions Inventory Projections (MWCOG, February 2000). This document has been approved by the VDEQ and the U.S. EPA.*
>
> *Furthermore, if the assumptions about air quality regulations and emission control technology were altered from those in the Draft EIS and Final EIS, the magnitude of the predicted concentrations might vary, but the conclusions of the analysis with respect to the impacts of the Dulles Corridor Rapid Transit Project would remain the same.*

Assumption of Metrorail Extension in Regional State Implementation Plan

Public Comment: The use of the Metrorail as a basic assumption (though unfunded) in the Regional Air quality (AQ) State Implementation Plan (SIP) essentially makes the argument for rail to Dulles. If the decision were made to not do one of the alternatives in this EIS, the region would have to re-run the AQ models to determine if we will remain in compliance with the National Ambient Air Quality Standards (NAAQS) especially for ozone for which we are not in non-compliance. It is highly unlikely that we could meet the NAAQS and this would have disastrous consequences: 1) it will shut off any new Federal Highway funds and 2) it would require the addition of new lanes of traffic where no additional lanes are possible without tremendous dislocations of land uses along the corridor. (0287, 0287-T –2)

> ***Response:*** *The regional air quality conformity analysis and the State Implementation Plan Revision, Phase II Attainment Plan, for the Washington DC-MD-VA Non-Attainment Area include Metrorail as one of the anticipated alternatives for implementation of the Dulles Corridor Rapid Transit Project. The commenter suggests that if none of the Draft EIS alternatives were implemented, the region would not be able to demonstrate attainment of the NAAQS for ozone. In that event, the VDEQ and the MWCOG would be required to implement additional emission controls in order to demonstrate attainment. However, based on the proportion of the Dulles Corridor Rapid Transit Project to all the other projects included in the Plan, it is highly unlikely that the Plan's conformity status depends on the Dulles Corridor Rapid Transit Project alone to maintain conformity.*

Concern About Assumption of Rail Fleet Turnover

Public Comment: The assumptions of ridership using metro or one of the other options is an important element of the Metropolitan SIP but the other assumption made in this EIS which is that fleet turnover (newer cars with tighter emissions standards taking the place of older ones having lower exhaust and engine emissions) which over the next 30 years will keep us in compliance with the NAAQS is while technically possible a chancy bet. Metrorail will reduce emissions by hundreds of tons because it keeps autos out of the peak hour of traffic and provides relief from the necessity of creating additional transportation lanes. (0287, 0287-T –3)

> ***Response:*** *The purpose of the Draft EIS and Final EIS has been to report the specific impacts of the Dulles Corridor Rapid Transit Project. The assumption made in the Draft EIS about fleet turnover is the same assumption as was made in the State Implementation Plan Revision, Phase II Attainment Plan, for the Washington DC-MD-VA Non-Attainment Area, Appendix G: Mobile*

Emissions Factors and Mobile Emissions Inventory Projections (MWCOG, February 2000). The benefits of Metrorail in reducing emissions would occur regardless of the assumption made about fleet turnover.

Metrorail Has Better Air Quality Effects than More Highway Lanes

Public Comment: Adding highway lanes as opposed to the Metrorail option will exacerbate AQ concerns and our ability to remain in attainment for the NAAQS. If we are out of attainment for the NAAQS we will lose new Federal highway funds. (0287, 0287-T –4)

Response: *The commenter correctly states that one of the potential consequences of inability to remain in attainment of the NAAQS for ozone is a loss of federal highway funds. More specifically, a failure to maintain conformity of the Financially Constrained Long Range Plan (National Capital Region Transportation Planning Board, MWCOG, Washington, DC) with the SIP could lead to a cutoff of federal highway funds. The regional air quality conformity analysis for the Financially Constrained Long Range Plan includes Metrorail as the anticipated alternative for implementation of the Dulles Corridor Rapid Transit Project. In the event of a failure to maintain conformity with the SIP, the VDEQ and the MWCOG would be required to implement additional emission controls in order to demonstrate attainment and ensure restoration of federal highway funds.*

Suggestions for Alternative Scenarios to Air Quality Analysis

Public Comment: Since the EPA requirements which form the basis for improved air quality in the corridor are a) subject to change, b) subject to revocation, or c) may not be attainable, the final EIS should consider three scenarios for air quality. The first would be no change for the current emissions rates; the second would be some intermediary reduction; and the third would be the level of reduction forecast in the draft EIS. (0203, 0384-L –2)

Response: *The scenarios proposed by the reviewer involve potential trends in emission rates that would occur with or without the Dulles Corridor Rapid Transit Project (i.e., they would be included in the No-Build Alternative and all Build Alternatives). However, the purpose of the Draft EIS and Final EIS has been to disclose and compare the impacts of the project alternatives. The impacts of the project would occur regardless of trends in emission rates. Therefore, the analysis proposed by the reviewer is not necessary for purposes of the Draft or Final EIS.*

Explain How CO Relates to Ozone Concentrations

Public Comment: The DEIS doesn't make clear why one needs to model CO concentrations when the only non-attainment pollutant is ozone. An apparent "statement of fact" as presented in the first sentence of the second paragraph of Section 4.6.1.4 in the DEIS is insufficient. Instead, why not just include all of Section 3.8 (Pollutants of Concern) from the Air Quality Technical Report. Providing this explanation of how CO relates to ozone concentrations would make it perfectly clear to the readers of the report -- and especially the project's critics. (0387, 0387-L –16)

Response: *The NAAQS were established using criteria based on protection of human health. The NAAQS specify a different concentration standard for each pollutant, and the NAAQS for CO are relatively stringent. Emissions rates from vehicles are also different for each pollutant, and the pollutant emitted in greatest quantities from vehicles is CO. As a result, under adverse air quality conditions, the CO standard would be the first NAAQS to be exceeded due to local traffic impacts. If the CO standard is not exceeded, then the ambient concentrations of the other pollutants that have localized impacts also should be less than the NAAQS. Therefore, CO is used as the indicator pollutant in evaluating air quality impacts from vehicles.*

CO concentrations tend to be highest in localized areas because they are most affected by local traffic congestion. By comparison, motor vehicles do not emit ozone. Rather, cars and trucks are

responsible for precursor pollutants (primarily volatile organic compounds and nitrogen oxides), which react in the presence of sunlight to form ozone in the atmosphere. These reactions occur over periods of hours and days, while the pollutants are diluted and transported downwind. Consequently, ozone is considered a regional pollutant.

The effects to air quality from all planned transportation improvements are evaluated as part of the region's Financially Constrained Long Range Plan. The Dulles Corridor Rapid Transit Project is included in this plan, which conforms to the federally approved State Implementation Plan (SIP). The air quality analysis was performed in accordance with EPA guidance (U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards). Guideline for Modeling Carbon Monoxide From Roadway Intersections (EPA-454/R-92-005, November 1992.)

Provide More Information on Impact of Preferred Alternative on Regional Air Quality

Public Comment: Further refine the impact the preferred alternative will have on metropolitan Washington's air quality. The public deserves more definitive information on addressing these two critical issues. (0396, 0396-L –7)

Response: *The air quality analysis was performed in accordance with National Environmental Policy Act (NEPA) requirements to evaluate and disclose the impacts of the Dulles Corridor Rapid Transit Project. The air quality analysis followed the guidance of EPA, VDEQ, and MWCOG.*

Draft EIS Should Evaluate the Potential Negative Impact of Increased Density

Public Comment: Tables 9.3-3 and 9.3-5 state that no exceedance of the NAAQS are anticipated. But exceedance is not the appropriate way to assess whether or not an impact is adverse. Instead, the Draft EIS would quantify and evaluate the extent to which the increased density would contribute to a deterioration in air quality. (0510, 4-05)

Response: *Air quality analysis was conducted in accordance with all standard procedures and followed the guidance of EPA, VDEQ, and MWCOG. Since the Project was determined to meet be in conformance with the federally approved SIP, and since no exceedance of NAAQS are anticipated, no secondary or cumulative effects would occur.*

Analyze the Impacts of Generating Electric Power for the Metrorail Extension

Public Comment: The use of Metrorail must include an analysis for the pollution impacts on the Washington metropolitan region resulting from the generation of the electrical power for the system. (0487 4-02)

Response: *Power-generation facilities were not evaluated. Electricity for public transportation operations would be purchased from existing sources. Analyzing power-generation methods is beyond the scope of this study.*

Need to Improve Regional Air Quality

Public Comment: We face a future that will include many new residents and jobs. Over the next 25 years the Greater Washington region will add 1.4 million people (+32%) and 1.1 million jobs (+39%). In the Dulles Corridor alone, this increase will amount to an additional 206,000 people (+56%) and 203,000 jobs (+71%) - a rate of growth nearly twice the rate of the region as a whole. For purposes of perspective, this rate of growth will be equivalent to the corridor accommodating the populations of Arlington and the City of Fairfax and approximately the number of workers who are currently employed in Loudoun, Prince William and Manassas. At the same time, the Council of governments also forecasts that vehicle miles traveled (VMT) in our region will increase by 46% by 2025, while freeway and arterial lane miles are forecast to increase by only 13 percent - a recipe for further gridlock compounding our current ranking as the nation's third most congested region. To complicate this problem, our region has severe air quality

problems, and we are struggling to meet the requirements of the Clean Air Act. As you may know, today was a "code orange" day, indicating poor air quality - one of 12 this year already. In addition, we have already had four "code red" days - those days when air quality is at its worst. If we cannot reach our air quality goals we run the risk of losing billions of federal transportation dollars, while allowing the increased health risks of breathing polluted air. (0142, 0219-M –1)

> ***Response:*** *As outlined in detail in Chapter 1 of the Final EIS, the purpose of the Dulles Corridor Rapid Transit Project is to provide transit system enhancements that would provide a direct connection to the existing Metrorail system. These enhancements would offer an alternative means of travel for the growing number of residents, employees, and visitors in the Dulles Corridor as well as a high quality transit link to the Metrorail system in order to improve mobility throughout the region. These proposed improvements would help to address the issues raised in the comment, namely improving transportation service, providing an alternative mode of travel to that of the automobile, increasing transit ridership, and supporting current and future population growth and development in the Dulles Corridor and region.*

B. Supplemental Draft EIS Comments

Federal Agency Comments

Control of Emission

Federal Comment: DEQ's Air Division reiterates its earlier guidance relative to open burning and fugitive dust emissions. The Division also continues to recommend restricting emissions of volatile organic compounds and oxides of nitrogen because the project will take place in an ozone non-attainment area and an emissions control area for volatile organic compounds and oxides of nitrogen, the precursors to atmospheric ozone. (0080 0094-1)

> ***Response:*** *The air quality analysis conducted for the Dulles Corridor Rapid Transit Project was developed in accordance with EPA and Federal Transit Administration (FTA) requirements for NEPA evaluations. All air quality effects associated with the construction and long-term operation of the Dulles Corridor Rapid Transit Project are discussed in the Section 4.6 of the Final EIS.*

Public Comments

Control of Emission

Public Comment: g. The claim (e.g. at TABLE 2-2) that Phase 1 will “improve vehicular emissions” needs to be supported with detailed data, based on an objective study meeting industry standards that takes account of likely use patterns (e.g., congestion resulting in the rush to/from stations, as well as revised traffic patterns resulting from avoidance of increased tolls by motorists that will increase, not decrease vehicular emissions along arterial routes and in neighborhoods radiating out from the Dulles Toll Road corridor both to the north, south, east and west). (0068 0173-24)

> ***Response:*** *Although improvements in regional air quality are anticipated in conjunction with the development of the Dulles Corridor Rapid Transit Project, it is true that most improvements are attributable to the reduction of high emission vehicles over time as mandated by EPA regulations. The Dulles Corridor Rapid Transit Project would help support regional air quality goals by providing an alternative mode of transportation to single occupant automobiles and additional transit capacity within the region.*

Impacts on Air Quality

Public Comment: Many parties claim that Dulles Rail will enhance air quality. Our research indicates that air quality would be the same regardless of whether Dulles Rail is built or alternate methods are employed. I believe this conclusion falls from the table shown in the DEIS but if this conclusion is not

correct please explain. (0061 0069-6)
Public Comment: Statements that Dulles Rail improves air quality attainment are not supported by fact. (0016 0122-14)

Public Comment: The claim has been made that Dulles Rail will enhance air quality. Our research indicates that air quality will be the same regardless of whether Dulles Rail is built or alternate transit methods are employed. If you disagree with this conclusion, please provide evidence. Figure in your calculations extra emissions to generate the electricity to keep Dulles Rail running and its impact on NOx. (0061 0117-8)

Public Comment: Parties claim the Dulles Rail will enhance air quality. We don't think that that's indicated or in the DEIS, and we dispute that conclusion. (0061 0136-5)

> ***Response:*** *Although improvements in regional air quality are anticipated in conjunction with the development of the Dulles Corridor Rapid Transit Project, most improvements are attributable to the reduction of high emission vehicles over time as mandated by EPA regulations. The Dulles Corridor Rapid Transit Project would help support regional air quality goals by providing an alternative mode of transportation to single occupant automobiles and additional transit capacity within the region.*

Public Comment: Please explain how it is possible for both the DEIS and the SDEIS to ignore the emissions associated with operating Metrorail. These emissions are among the most significant environmental impacts of the project. (0063 0151-12)

Public Comment: l. The SDEIS needs to evaluate Air Quality (e.g., TABLE 2-2) with data and discussion that accounts for the years of MetroRail-related construction, gridlock emissions and delay that would continue to make this “Severe Non-Compliance” area for Clean Air Act NAAQS parameters suffer. This blinders approach is particularly evident in the SDEIS contention that no NAAQS violations will occur – an indefensible assertion given the fact that at the earliest, 2009 would be the beginning of operation of mass transit in an area of severe non-compliance. (0068 0173-29)

> ***Response:*** *The air quality analysis conducted for the Dulles Corridor Rapid Transit Project was developed in accordance with EPA and FTA requirements for NEPA evaluations. Air quality effects associated with the construction and long-term operation of the Dulles Corridor Rapid Transit Project are discussed in Section 4.6 of the Final EIS.*

Air Quality Related to Power Consumption

Public Comment: The SDEIS states that the project is necessary to help meet national air quality standards. Yet, the SDEIS does not consider that Metrorail is a massive consumer of electricity, that much of this electricity is generated by coal-fired power plants, and that the regional Council of Governments has determined that pollution from coal-fired power plants is one of the leading causes of our region's air quality problems. (0063 0151-10)

Public Comment: In 2001, Metrorail consumed well over 400 million kWh of electricity – enough to power a small city. Much of this electricity was generated by coal-fired power plants. Some of these plants are within our region and have a direct impact on air quality. Other plants are outside of our region, but their emissions are transported here by prevailing winds. Metrorail actually is a significant polluter, responsible for large level of NOx, particulate matter, carbon dioxide, SO2, mercury, and other compounds. In some cases, Metrorail actually emits more pollution, on a per passenger mile basis, than a typical passenger automobile. (0063 0151-11)

> ***Response:*** *The emissions that result from the demand for Metrorail are not described in the Draft EIS nor in the Supplemental Draft EIS due to the conformity process required by the Clean Air Act and the requirements to account for mobile and stationary source emissions. Power plant*

emissions due to all existing and future projected demands, including those for the Metrorail extension, are accounted for as part of the statewide emissions inventory and included in the SIP.

In addition, all power plants must submit to a strict permitting process by demonstrating compliance with all applicable emission limits and ambient air quality standards established by the U.S. EPA and the VADEQ. Therefore, power plant emissions caused by power demand to operate Metrorail, or the rest of the region's electrical grid, are documented and regulated by the federal and state conformity process. Emissions from all power plants located in the MWCOG region are accounted for in the SIP prepared by the MWCOG. Emissions from the Mount Storm facility in West Virginia would not be included MWCOG's SIP, but rather the West Virginia SIP.

4.7 Noise

A. Draft EIS Comments

State Agency Comments

Noise Analysis Should Consider VDOT, MWAA and FTA Criteria

State Comment: VDOT's noise criteria were judged not to apply because "no other roadway changes affecting either capacity or elevation are expected…" This is a narrow and not totally accurate viewpoint since both VDOT traffic projections and expectation for increased vehicle usage stemming from density allowances, will substantially increase traffic in the Dulles Connector section that adjoins our community. The EIS references plans to widen the connector, giving further indication of the prospect of increased vehicular traffic. The EIS should broaden its noise abatement scope to include both MWAA and VDOT policy as well as that of the FTA. (0012, 0468-L –5)

Response: *Except where noted, no other changes to the existing roadways are proposed as part of the Dulles Corridor Rapid Transit Project. Any other roadway changes are part of other projects sponsored by either the VDOT or the Metropolitan Washing Airport Authority (MWAA), and these projects are independent of the Dulles Corridor Rapid Transit Project.*

EIS Should Consider Local Ordinances on Any Transportation-Related Noise

State Comment: The EIS further references local ordinances on noise, but again narrowly excludes transit operations. The Policy Plan for the Comprehensive Plan of Fairfax County has as its objective (number 5): "Minimize human exposure to unhealthful levels of transportation generated noise." It makes no distinction between vehicular and transit generated noise. In fact the local ordinance regulates new development, to ensure that people are protected from "transportation noise," and that noise impacts inn areas of existing development should be reduced. The EIS needs to address noise mitigation in this light. (0012, 0468-L –6) (0137, 0304-L-2)

Response: *As described in Section 4.7 of the Final EIS, the Fairfax County noise ordinance (Code of the County of Fairfax, Chapter 108, January 1, 1976) of 55 dBA at residential receptors and 60 dBA at commercial receptors applies only to stationary sources and facilities. The Fairfax County noise criteria were used to evaluate noise impacts from Project-related stationary facilities such as passenger stations, park-and-ride facilities, and Metrorail yards. Proposed noise mitigation locations are listed in Table 4.7-6 of the Final EIS.*

Several Office, Restaurant and Retail Land Uses Incorrectly Classified as FTA Land Use Category 3 Sites

State Comment: Noise and Vibration Technical Report (June 2002)

§ Table 3-13 - Several office, restaurant and retail establishments are incorrectly classified as FTA Land Use Category 3 sites. These and similar commercial and industrial properties are not considered noise-sensitive according to FTA.
§ The term "Baseline Alternative" as used throughout the report should be more appropriately termed the "No-Build Alternative." While FTA does not specifically require a noise assessment for the future No-Build Alternative, it is appropriate to provide such an assessment where significant changes in the noise environment are anticipated due to factors unrelated to the project. Typically, the No-Build conditions are similar to the existing conditions such that no assessment is needed. However, the No-Build case needs to be addressed in the EIS and thus it is of interest to know if impacts are expected without the project. Such information can be useful in determining if mitigation for the build alternatives is reasonable and feasible. (0421, 0421-A –11)

Response: *Although offices and conference rooms may be categorized as Category 3 land uses, restaurants and retail establishments are not considered noise-sensitive institutional receptors according to the FTA guideline* (Transit Noise and Vibration Impact Assessment, 1995). *) These discrete receptors were selected, however, as representative of the types of commercial land-uses identified along the Dulles Corridor in Tysons Corner, and their inclusion makes the environmental study more informative. Although project noise levels were reported at these discrete receptors, a noise impact assessment using the FTA criteria was not evaluated at these locations.*

Additionally, project mitigation measures are determined to be reasonable and feasible based on their noise reduction potential, their effects on transit service, capital and operating costs, and their social and visual impact, as well as other potential environmental factors.

The Baseline Alternative of the Draft EIS is the No-Build Alternative of the Final EIS. FTA noise analysis guidelines do not require an analysis of future No-Build noise conditions. FTA guidelines require only analysis of Project-induced noise levels relative to existing ambient conditions.

Noise Mitigation for the Hallcrest Heights Community

State Comment: I concur with Mr. Tyler's request that Hallcrest Heights should receive the same level of noise attention measures as nearby communities adjacent to the Dulles Airport Access Road have already received. I also agree with his suggestion that noise attenuation measures to address the concerns of Hallcrest Heights and the Westhampton area citizens should be initiated before the construction of transit operations facilities. (0012, 0468-L –4)

State Comment: Insufficient attention is being paid to mitigating the impact of rail on adjoining communities. Communities that are already suffering from inadequate abatement of noise from the Toll Road must be guaranteed that they will finally receive sufficient mitigation measures. Of particular concern is Hallcrest Heights in McLean, which has had only a deteriorating, dilapidated wooden barrier to stop the noise. Given that the proposal is for an elevated, curving rail structure to adjoin the community, they urgently need attention. However, noise is a serious concern for communities along the entire length of the proposed rail system and must be addressed responsibly. (0298, 0298-L –4)

Response: *The Project Team utilized the guidelines established by the FTA in its Transit Noise and Vibration Impact Assessment* (1995) *to determine the applicable noise impact criteria in all areas of the proposed corridor. The FTA noise criteria are based on existing noise levels that increase as the background level increases to a point beyond which impact is determined on Project noise alone. The FTA criteria are not used to assess existing background noise but rather, are used to evaluate impacts due to new transit projects. However, in areas, such as Hallcrest Heights, with higher background levels, Project noise limits established by the FTA are*

more stringent than in quieter areas allowing the ambient levels to remain the same in the future or increase only slightly before an impact is identified.

There is a potential for wheel squeal noise based on the 800-foot radius of curvature proposed near the Hallcrest Heights. However, to better define the onset of wheel squeal, actual source measurements were conducted along an existing Metrorail line near the Ronald Regan Washington National Airport with a radius of 755 feet. Based on the results of the modeling analysis, ambient day-night noise levels from the Metrorail operations are predicted to range from 50 to 54 dBA at the Hallcrest Heights residences. The modeling analysis includes three to four-foot parapets (or barriers along the edge of the track bed) proposed along all sections of aerial guideway (except on Airport property). These levels are well below the measured ambient background noise level of 59 dBA recorded at a residence at 7405 Hallcrest Drive. As a result, no exceedances of the FTA criteria are predicted from Metrorail operations near Hallcrest Heights.

Currently, sound barriers are not proposed along the property lines adjacent to the Dulles Connector Road or Dulles Toll Road as part of the Project. Four- or six-foot parapets or track edge barriers are proposed along all aerial Metrorail sections (except on Airport property). The types and location of the proposed mitigation measures are described in Section 4.7 of the Final EIS. Figures 4.7-5a and 4.7-5b are included to help identify the location of the proposed parapet barriers closest to Hillcrest Heights.

Roadside sound barriers are typically evaluated during the design of major highway improvement projects such as widening or new alignment when noise impacts are forecast for adjacent noise-sensitive receptors. Evaluation criteria, including effectiveness and cost, are typically used to make decisions on sound barrier location, height, and type. Generally speaking, roadside sound barriers are not constructed except in conjunction with major highway improvements. Major highway improvements are not anticipated in conjunction with the Dulles Corridor Rapid Transit Project.

Potential Noise Impacts to Route 123 Area

Public Comment: The Project Team needs to explain how communities near Route 123/Dulles Toll Road would be protected from visual, noise, squeal, and vibration impacts. (0392, 4-01)

Response: *Proposed mitigation measures are identified in Chapters 2, 3 and 4 of the Final EIS..*

Public Comment: The new station will bring unwanted noise to the Rotonda. (0496 01)

Response: *This comment concerned the potential effects of Alignment T4, which was eliminated from further consideration after the public and agency review and comment on the Draft EIS.*

Potential Noise Impacts of Elevated Metrorail Track Sections

State Comment: There is one matter that upon consideration of the likely project description in the vicinity of your community I believe should be addressed by WMATA as they perform their noise assessment: Where the Metrorail right-of-way rises above grade adjacent to your development, the vertical retaining walls and elevated structure will create sound-reflecting surfaces parallel to the existing highway noise barrier. Reflections from the railway structures may degrade the barrier performance in the manner of "parallel barriers." The significance of this should be examined and mitigation incorporated if necessary. Mitigation can be accomplished by various means, the simplest of which is absorptive treatment of the vertical surfaces. (0012, 0012-A –2)

Response: *The Final EIS identifies mitigation in the form of parapet barriers for impacts at receptors adjacent to aerial guideway sections of the Metrorail Extension (see Section 4.7). The potential for noise reflections was not assessed as part of the Draft or Final EIS. As the*

commenter suggests, acoustically absorptive treatment is an excellent method for eliminating barrier degradation due to the "parallel barrier" effect. Absorptive treatment of the retaining walls leading to the aerial track structure will be investigated further during preliminary engineering and final design.

Local Agency Comments

Fairfax County Board of Supervisors Request for Written Response on Concerns Over Noise and Traffic Impacts

Local Comment: At its meeting of July 22, 2002, the Fairfax County Board of Supervisors expressed several concerns about noise and traffic impacts of the Dulles Corridor Rapid Transit Project documented in the Draft Environmental Impact Statement. The Board requested a written response addressing these concerns and plans for appropriate mitigation efforts. Three specific concerns were identified and these are noted below:

1) The first concern is about the impact of 26 additional rail cars at the WMATA Service and Inspection Yard at the West Falls Church Metrorail Station on homes in the Lemon Road community. Rail cars entering and leaving the yard at late night and early morning hours are a source of increased noise, loud horns and squealing brakes. The Project Team has identified this impact, but has not specifically proposed any mitigation strategies. (0121, 0121-A –1)

Local Comment: The public hearing report should include a response to the concerns of the Fairfax County Board of Supervisors regarding noise and traffic impacts conveyed in Chairman Hanley's August 2, 2002 letter to you (copy attached). (0479, 0479-L –8)

Response: *With respect to the concerns of communities on the noise of the Metrorail West Falls Church Yard, the Project Team recommended and the decision-makers approved the enclosure of 1) a portion of the existing loop track at the yard's eastern end and 2) the new yard lead in box structures. These noise mitigation measures by the Project will reduce the wheel squeal noise of the train movements within the Yard. The Project Team notes, however, that new residences have been recently constructed and occupied adjacent to the West Falls Church S&I Yard without any noise mitigation provided by the residential developer. As during the past ten-year effort to address yard noise, there will be coordination among DRPT, WMATA, Fairfax County officials and staff, and representatives of the communities during preliminary engineering and final design.*

The number of additional cars at West Falls Church Yard has increased from 26 in the Draft EIS to 42 in the Supplemental Draft EIS and Final EIS in order to support the Metrorail fleet of the Wiehle Avenue Extension. Wheel squeal from the new yard lead (for Metrorail trains to and from the Dulles Corridor Line) at the east end of the yard was included in the modeling analysis. Based on measured noise levels from the current wheel squeal along a similar radius curve at the yard, exceedances of the FTA impact criteria are predicted at nearby residences. No exceedances are predicted from the Project's aerial guideway in the median of the Dulles Connector Road.

Other sources, such as horns, were not included in the modeling analysis. Brake squeal was not determined to be a major problem. Based on the current operating schedule at the yard, the increase in the overall yard noise due to the cleaning and general operation of 42 additional Metrorail cars needed for the Project is expected to be minimal.

Proposed Parapet Wall Inadequate to Mitigate Noise on Hallcrest Heights

Local Comment: The current noise abatement recommendations for properties near Hallcrest Heights include a three-foot tall parapet along the aerial rail sections next to residential areas. It is clear that this may be insufficient to reduce the noise generated by the meeting of rails and wheels on a curve. (0121, 0121-A –2) (0479, 0479-L –11)

> ***Response:*** *There is a potential for wheel squeal noise based on the 800-foot radius of curvature proposed near the Hallcrest Heights. To better define the onset of wheel squeal, actual source measurements were conducted along an existing Metrorail line near the Ronald Regan Washington National Airport with a radius of 755 feet. Based on the results of the modeling analysis, ambient day-night noise levels from the Metrorail operations are predicted to range from 50 to 54 dBA at the Hallcrest Heights residences. These levels are well below the measured ambient background noise level of 59 dBA recorded at a residence at 7405 Hallcrest Drive. The modeling analysis includes three to four-foot parapets (or barriers along the edge of the track bed) proposed along all sections of aerial guideway (except on Airport property). As a result, no exceedances of the FTA criteria are predicted from Metrorail operations near Hallcrest Heights.*

Respond to Concerns of Noise Impacts on Polo Fields, Westwood Village and Chathams Ford

Local Comment: Respond to neighborhood noise concerns by including noise walls or other mitigation for Polo Fields, Westwood Village and Chatham Fords communities. (0437, 0437-E –7)

> ***Response:*** *No exceedances of the FTA impact criteria are predicted in the Polo Fields or the Chathams Ford communities. As a result, no mitigation measures to reduce future transit noise levels are currently proposed along those areas of the Dulles Corridor. However, as a result of impacts predicted in the Westwood Village) community under the Build Alternatives, proposed mitigation measures will be investigated further during preliminary engineering and final design.*

Impacts from Proposed Park-and-Ride Structure at Tysons West Station

Local Comment: Significant noise and traffic impacts may be caused by the proposed 2000 car parking structure on Route 7 at Tysons Corner. The current proposals do not address the noise impact that could reasonably be expected from increased traffic. (0121, 0121-A –3) (0479, 0479-L –12)

> ***Response:*** *The park-and-ride structure at Tysons West Station has been reduced from 2,000 spaces to 500 spaces, thereby reducing the potential for noise impacts at this location. Noise levels from the park-and-ride facilities proposed along the Dulles Corridor, including the Tysons West Station facility of 500 spaces, were included in the modeling analysis and discussed in the Final EIS using the FTA's General Assessment guidelines. The FTA modeling methodology was adjusted to account for a maximum throughput volume of 500 cars during the early morning peak-hours.*
>
> *Based on these maximum operating conditions (i.e., the facility is filled to capacity), the overall noise levels from the facility at the closest residences in Westwood Village are predicted to be negligible. The predicted day-night noise level from the park-and-ride facility of 40 dBA at a residence in Westwood Village is well below the measured background level of 54 dBA. As a result, no exceedances of the FTA impact criteria are predicted as a result of the proposed Tysons West park-and-ride facility. The current ambient noise at these receptors is generally dominated by traffic along the Dulles Toll Road/DIAAH. However, noise mitigation measures are proposed to eliminate impacts due to the proposed Metrorail operations along Route 7.*

Public Comments

DCRA Recommendation to Mitigate Noise Impacts at West Falls Church and Hallcrest Heights

Public Comment: On behalf of DCRA I offer the following additional comments: We support the concerns of the citizens of McLean who are concerned about increased noise from the rail yards at West Falls Church and the Hallcrest Heights residents whose homes lie below the rail line as it ascends and approaches Tysons Corner. We recommend that the project be engineered to mitigate noise impacts from the rail extension, as well as those from its construction. (0131, 0434-E –1)

> ***Response:*** *Where exceedances of the FTA, WMATA and other Project criteria are predicted, noise mitigation measures are proposed (see Section 4.7 of the Final EIS) and will be investigated further during preliminary engineering, as appropriate. Within the West Falls Church Yard, the Project will enclose of a portion of the loop track at the yard's eastern end and the new yard lead in box structures in order to reduce the wheel squeal of trains in the yard.*

Effects of Construction Noise on Hallcrest Heights Community

Public Comment: Although specifics are not given in the EIS, it is not hard to judge from precedents in other elevated sections of the Metro system, that construction noise will be considerable. Since our community [Hallcrest Heights] lies some 10-12 feet below the level of the roadway in the corridor, the construction of the elevated and curving section of the proposed rail service into Tysons, will involve substantial and sustained construction noise over an extended period of time. Given the FTA's policy of coordinated transportation planning (which I assume would include dealing with such public agencies as MWAA and VDOT), the EIS should sequence significant transportation noise mitigation measures in the corridor (and particularly our adjoining section) ahead of construction activities. Since VDOT has chosen not only to not maintain the existing ineffective barrier, (which is too low and too short anyway), and since MWAA has said they will not retrofit any communities for such abatement, the EIS should address the problem in a comprehensive way if the project's objective to protect adjoining communities has any meaning at all. If the EIS were to include such analysis, then a noise barrier of modern design equivalent to that erected for Wolf Trap and other communities in the corridor should be placed at our section of the corridor. Such a barrier must extend all the way down the off-ramp to the merge with Route 123 if it is to have any effect at all. (0137, 0304-L –3) (0012, 0468-L –7)

> ***Response:*** *Exceedances of the WMATA noise criteria for construction activities were identified in Section 4.7 of the Final EIS. Construction noise and potential mitigation will be further analyzed during preliminary engineering and final design.*
>
> *Currently, sound barriers are not proposed along the property lines adjacent to the Dulles Connector Road or Dulles Toll Road as part of the Project. Four to six-foot parapets or track edge barriers are proposed along all aerial Metrorail sections (except on Airport property). The types and location of the proposed mitigation measures are described in Section 4.7of the Final EIS. Figures 4.7-5a and 4.7-5b are included to help identify the location of the proposed parapet barriers closest to the Hallcrest Heights.*
>
> *Roadside sound barriers are typically evaluated during the design of major highway improvement projects such as widening or new alignment when noise impacts are forecast for adjacent noise-sensitive receptors. Evaluation criteria including effectiveness and cost are typically employed to make decisions on sound barrier location, height, and type. Generally speaking, sound barriers are not constructed except in conjunction with major highway improvements. Major highway improvements are not anticipated in conjunction with the Dulles Corridor Rapid Transit Project.*

Install Concrete Walls Along Aerial guideway Sections

Public Comment: Install concrete walls along elevated sections of the track. They might be quite high in some areas, but I understand that they would be the most effective way to address both sound and visual pollution problems. (0432, 0432-E –6)

> ***Response:*** *Parapets (or track edge barriers) will be installed along all aerial (above-ground) sections of track and will shield new noise from Metrorail train passbys. These parapets will be three to four feet high, except in places exceedances of the FTA criteria are predicted, where the parapets will be five to six feet in height. As stated in the Final EIS, these mitigation measures will be refined during preliminary engineering and/or final design.*

Noise Impacts of West Falls Church Yard and its Improvements

Public Comment: My neighbors and I are living on McKay Street just behind the Metro Maintenance Yard near the West Falls Church Station. There are approximately 20 residential homes on McKay Street and another 10 houses on Eastman Drive. Some of us had the opportunity to attend the Public Hearing at Springhill Elementary School on July 29th. After the meeting we visited the Exhibit Room where we met with acoustical consultants. After studying the aerial maps of the area around our neighborhood and the new Dulles Corridor Rapid Transit Project, we had a lengthy discussion about noise in our neighborhood from the Metro trains and other equipment. We were told that a spur off the main Metro line from Dulles Airport will be constructed in back of our homes on the Dulles Access Highway side, which will connect with the Metro Maintenance Yard in back of us. We are currently living with high-pitched screaming train wheels, blowing horns, blaring loudspeakers, and other irritating noises from the Yard. Metro tried unsuccessfully for several years to mitigate the high decibel noise levels. We in the neighborhood are very concerned and bothered to think that Metro is planning another project into the yard that will only cerate additional bothersome, annoying, disruptive noise in our neighborhood, which frankly, WE DO NOT NEED. (0089, 0089-L –1)

Public Comment: I have been a homeowner and resident at the above address [McKay Street] since 1961, and experienced the problems of the Washington Metropolitan Area Transit Authority's maintenance yard to date. The attached copy of the Arlington Journal article of December 16, 1992 explains much of the problem for local residents. The noise factors (shrieking sounds, train horns, loud speaking, equipment, etc.) are still factors that degrade the quality of living in many ways, particularly during night hours! Last week I had two nights of broken sleep because of the noise. One night noise at about 2:30 AM and 3:30 AM. The other night 3:30 AM-4:00 AM. (0417, 0417-L –1)

Public Comment: We are particularly concerned about squeal at the West Falls Church maintenance yard and at the flyover at I-66, where the transit will take off for Dulles. (0145, 0145-T –8)

Public Comment: We are particularly concerned about squeal at the WFC maintenance yard and noise of all types at the planned flyover of I-66. (0145, 0452-E –5)

Public Comment: The EIS should address the impact on the Lemon Road community of increased use of the maintenance yard (and construction of a lead track) near the West Falls Church station. Similarly the EIS should be revised to address neighborhoods' concerns about the schedule and intensity of nighttime construction of the rail system, possibly by putting needed noise barriers in place before construction begins. (0392, 0392-L –20)

Public Comment: We already have a high level of ambient noise in our [Westhampton] neighborhood. We already listen to the noise that the Orange line trains make as they cross switches into the West Falls Church metro station, as trains are fed into Arlington from that station's rail yard during rush hour, and as they pass by to and from Vienna. We already hear "wheel squeal" at 2:00 AM as trains are moved around in the rail yard adjoining the station. We look out our back windows at the West Falls Church metro station. (0403, 0404- L- 1)

Public Comment: Increased noise volumes and frequency can be expected from the additional, longer trains on the new track; from the steel support as the track crosses I-66; from additional switches; and at the expanded WFC rail storage and maintenance yard. This noise may be exacerbated by a tunnel at the rail yard concentrating and directing noise at the Westhampton neighborhood. (0403, 0403-L-1)

Public Comment: There is already a lot of squealing noise due to train wheels rubbing against the rails in the tight turn of the West Falls Church yard. Additional trains in this yard will make the problem worse. The present problem needs to be addressed by Metro now and designs made to avoid the same problem with any new construction. (0029, 0040-CC-1)

Public Comment: We would like to see improved transportation service for the Dulles Corridor. I travel the Toll Road to work each day. However, there must be minimal impact on the established neighborhood around the West Falls Church station. McKay St. families have already experienced excessive noise from the present setup. (0267, 0267-L –1)

Public Comment: Noise must be a primary concern for any expansion or additional use of the West Falls Church Metro yard. (0065, 0065-CC-1)

Public Comment: Additional noise would be completely unacceptable and inhumane. Please reconsider your plan for above ground storage. The Dulles track encroaching on our yards, and all aspects creating more noise. (0065, 0065-CC-2)

Public Comment: Investigate noise level mitigation measures at the West Falls Church Rail Yard connector to eliminate wheel squeal noise at adjacent residents along McKay St. (0031, 0031-CC-1)

Public Comment: I raised the following concerns about effects around the existing West Falls Church S&I yard. The draft shows expected impact of noise on houses along McKay Street, but does not distinguish whether this will come from the new lead tracks on the north/northeast loop, or the mainline, or both. If it increases the currently unmitigated noise from that tight loop, will the extraordinary measures needed to control it be taken? The two different sources of noise will require two different types of control. Will the additional noise from additional storage tracks be controlled with additional measures? (0424, 0424-E –1)

Public Comment: Increased noise volume, frequency, and duration can be expected from the additional trains on the new track and at the WFC train storage and maintenance yard. This noise may be exacerbated by a tunnel at the train yard concentrating and directing noise at the Westhampton neighborhood. (0398, 0398-L –1) (0386, 0386-E –1) (0399, 0399-L –1) (0412, 0412-L –1) (0415, 0415-L –1) (0416, 0416-L –1) (0430, 0430-E –1) (0431, 0431-E –1) (0438, 0438-E –1) (0442, 0442-L –1) (0465, 0465-L –1) (0466, 0466-L –1) (0467, 0467-L –1) (0469, 0469-L –1) (0474, 0474-L –1) (0473, 0473-L –1) (0471, 0471-L –1) (0470, 0470-L –1)

Public Comment: The increased noise can be expected from the additional trains on the new track and at the WFC train storage and maintenance yard. This noise may be exacerbated by a tunnel at the train yard concentrating and directing noise at the Westhampton neighborhood. It is requested additional sound barriers as well as reinforcement of existing sound barriers be included. (0422, 0422-E –1)

Public Comment: While we recognize the necessity of developing new transportation infrastructure in Northern Virginia, and the appropriateness of extending the Washington Area Metro into the Dulles Corridor toward Reston, we are very concerned that any such project must include significant mitigation of noise pollution, air pollution, water pollution and traffic impacts to the Westhampton neighborhood near the West Falls Church (WFC) Metro Station. Specifically, we are concerned that any and all mitigation strategies must be designed to mitigate peak noise levels from the proposed new WFC train yard rather than mitigate average levels. This should consider noise levels from the train yard in combination with noise from I-66 and the Dulles Access highway. Such mitigation should go beyond short walls around the tracks themselves and include additional sound reduction measures. (0388, 0388-L-1)

Public Comment: Before this project gets final approval in December 2002, we would request further discussion about this added track spur into the Metro Maintenance Yard and the disruptions it will cause in the future to our lifestyles. Few people object about the need of a rapid transit system to Dulles Airport and beyond, but please do not forge ahead without taking local neighborhood considerations such as ours, with high decibel noise levels, into serious consideration (0089, 0089-L –2)

Public Comment: Metro has always told us they want to be a good neighbor. Let's hope they become a better neighbor in alleviating irritating noise levels now and in the future with the new transit project. I'm sure our neighbors would welcome future meetings to discuss this important matter before any approval is given and any new construction begins. (0089, 0089-L –3)

Public Comment: Many problems have been bought to the attention of Metro over the years. Personally I've complained on different occasions and was advised in most cases the message would be passed on. Nothing happens. No return call. No change regarding the problem. My experience in recent years is that Metro does not care, and pays no or little attention to other people's inconvenience, loss of sleep, or proper compliance to local noise limits. (0417, 0417-L –2)

> ***Response:*** *With respect to the concerns of communities on the noise of the Metrorail West Falls Church Yard, the Project Team recommended and the decision-makers approved the enclosure of 1) a portion of the existing loop track at the yard's eastern end and 2) the new yard lead in box structures. These noise mitigation measures by the Project will reduce the wheel squeal noise of the train movements within the Yard. The Project Team notes, however, that new residences have been recently constructed and occupied adjacent to the West Falls Church S&I Yard without any noise mitigation provided by the residential developer. As during the past ten-year effort to address yard noise, there will be coordination among DRPT, WMATA, Fairfax County officials and staff, and representatives of the communities during preliminary engineering and final design.*
>
> *The number of additional cars at West Falls Church Yard has increased from 26 in the Draft EIS to 42 in the Supplemental Draft EIS and Final EIS in order to support the Metrorail fleet of the Wiehle Avenue Extension. Wheel squeal from the new yard lead (for Metrorail trains to and from the Dulles Corridor Line) at the east end of the yard was included in the modeling analysis. Based on measured noise levels from the current wheel squeal along a similar radius curve at the yard, exceedances of the FTA impact criteria are predicted at nearby residences. No exceedances are predicted from the Project's aerial guideway in the median of the Dulles Connector Road.*
>
> *Other noise sources, such as train horns, were not included in the modeling analysis. Brake squeal was not determined to be a major problem. Based on the current operating schedule at the yard, the increase in the overall yard noise due to the cleaning and general operation of 42 additional Metrorail cars needed for the Project is expected to be minimal.*

Construct Loudoun County Rail Yard First to Reduce Impacts at West Falls Church

Public Comment: This is an addition to my first comment page. I think the train yard out in Loudoun County should be built early in the process so the new trains going on the new rail line do not have to use the West Falls Church yard. There already is too much noise from wheel squeal now. We don't want any more. (0029, 0029-CC-1)

> ***Response:*** *Thank you for your comment. Construction of the major Metrorail yard on Airport property is dependent on the construction of the Full LPA of 23.1 miles.*

Analyze Noise Impacts Based on Peak Noise Levels

Public Comment: The noise level from the metrorail yard and the Dulles Connector Road is already intolerably high in our neighborhood [Greenwich Street]. We are skeptical that noise measurements cited

in the EIS reflect the true extent of the problem. Peak noise levels, not 24-hour averages, are needed to reasonably assess the impact of the quality of life in our community. (0389, 0389-E –3)

Response: *The Project Team utilized the guidelines established by the FTA (Transit Noise and Vibration Impact Assessment, 1995)to determine the applicable noise impact criteria in all areas of the proposed corridor. The FTA noise criteria are based on existing noise levels that increase as the background level increases to a point beyond which impact is determined on Project noise alone. The FTA criteria are not used to assess existing background noise but rather, are used to evaluate impacts due to new transit projects. However, in areas such as yours with higher background levels, Project noise limits established by the FTA are more stringent than in quieter areas allowing the ambient levels to remain the same in the future or increase only slightly before an impact is identified.*

As described in Section 4.7 of the Final EIS, the noise analysis was conducted according to the FTA guidelines. Accordingly, the peak-hour equivalent noise level (or Leq) was used to evaluate impacts at non-residential receptors; and the 24-hour day-night noise level (or Ldn) was used to evaluate impacts at residential receptors. Although the FTA criteria are defined in terms of allowable project exposure, the basis for the FTA criteria is actually the increase in the cumulative noise (i.e., when the levels are added to the existing noise). To be conservative (or to determine the "peak cumulative noise output"), the modeling analysis included maximum operating volumes for all time periods under the two Build Alternatives. For example, the Friday-Saturday Metrorail schedule was selected to correspond with the extended operating hours from the then 5:30 AM to 2:00 AM. Furthermore, as described in Section 4.7 (Methodology), the total predicted project Ldn/Leq noise level at receptors includes all sources proposed as part of the Dulles Corridor Rapid Transit Project including Metrorail passbys, auxiliary equipment, wheel squeal, bus idling and typical activities at passenger stations such as public address announcements.

In addition to the FTA cumulative noise criteria, peak or maximum noise levels (or Lmax) from transit operations were also used to evaluate Project impacts using the WMATA Design Criteria for various residential land-uses. The Lmax noise level is independent of the existing background and the number of operations and represents the maximum level observed during a single event, such as a Metrorail or bus passby. The projected levels are shown in Section 4.7 of the Final EIS.

Although newer pre-cast concrete track structures are proposed to minimize excessive noise and vibration levels, the modeling analysis included a 4-decibel penalty to account for potential structural noise due to Metrorail passbys along all elevated sections of slab track. As described in Section 4.7 of the Final EIS, where exceedances of the FTA or the WMATA impact criteria are predicted, mitigation measures are proposed and will be refined during preliminary engineering and final design.

EIS Underestimates Noise Impacts on Homes Along the Dulles Airport Access Road

Public Comment: In terms of the present Environmental Study, the noise assessment is a complex set of self-serving measurements that completely obfuscate the reality that it is impossible to sleep with open windows or carry on a quiet conversation outside of those homes bordering the Access Road. (0087, 0087-L –4) (0087, 0227-E-2)

Public Comment: We will demonstrate that existing noise levels already demonstrate that the neighborhood is already in the 'Red Severe Impact Zone". The noises from the construction and operation of the Dulles Transit Project will create an even more severe impact and hardship for the neighborhood. (0174, 0300-L –1)

Public Comment: Clearly, the current noise problems will only be exacerbated by the proposed project. To show you how bad this is even today, I invite you to call and come to my home, to sit on my deck, and to see and hear for yourself. This situation should not be ignored. (0414, 0414-L –3)

Response: *The Project Team utilized the guidelines established by the FTA (Transit Noise and Vibration Impact Assessment, 1995) to determine the applicable noise impact criteria in all areas of the proposed corridor. As described in Section 4.7of the Final EIS, the FTA noise criteria are based on existing noise levels that increase as the background level increases to a point beyond which impact is determined on Project noise alone. The FTA criteria are not used to assess existing background noise but rather, are used to evaluate impacts due to new transit projects against the background of existing noise levels. Where background noise is already high, as in your area, it takes only a relatively small increase to trigger an impact.*

Noise Analysis Should Consider Impacts of Metrorail Alternative Combined with Existing Background Traffic

Public Comment: To cite only FTA policy guidance on noise mitigation misses the largest point. We believe that FHWA policy and VDOT's own policy should be applied to this coordinated high-rail highway project, especially given the past underestimates of vehicle usage. Density bonuses awarded to those who build within 1600 feet of metro stations will generate even more vehicular traffic. The problem we have with the EIS is that if your estimates and guesses are wrong, we have to live with. The traffic projects were very wrong, and we are living with it, and hearing it. (0137, 0137-T –5)

Public Comment: Our concern is NOISE. The Dulles Corridor, at our location, was projected (in 1982) to have an average vehicle count of 41,600 by the year 2000. By 1995, by VDOT count, that projection was already exceeded by 50%! By this project's projection for 2025, that vehicle average will be 86,000, and could be nearly double that, if you believe VDOT's projection for the segment near the Beltway. Thus, by the time this project is operational, the number of vehicles in our section of this corridor could easily have tripled from the projection made in 1982. When you compare that to the projections for the increase in jobs, population and work trips (all in and around this same corridor), such traffic increases may even be woefully underestimated - Metro or not. All of those 250,000 work trips projected for the corridor will not be able to use Metro. VDOT has said that regionwide use of transit is perhaps no more than 3% of trips. The Draft EIS projects that somewhere between 70% and 80% of corridor work trips will not, or cannot, use Metro. They will use their cars. Now, imagine you are standing on the Dulles Corridor pavement between Old Chain Bridge Road and Route 123. Eighty feet away, you can easily see into the second stories of our homes at eye level. Now add to that idyllic scene 216 tons of speeding high tech metal on 48 wheels as it grinds around the elevated curve into Tysons and screeches to a halt at Tysons East station - some 60 feet in the air! And yet, the Project's Draft EIS states that only the incremental noise due to the addition of rail service is assessed. What happened to the 86,000 to 143,000 average daily vehicles (traveling at 65 mph and including mail trucks, buses and motorcycles)? Luckily I am only a lay citizen, not an engineer. As a citizen, I am questioning and cautious - as an engineer I would be incredulous and terrified! (0137, 0176-L –3)

Public Comment: Our concern is NOISE. The Dulles Corridor, at our location, was projected (in 1982) to have an average vehicle count of 41,600 by the year 2000. By 1995, by VDOT count, that projection was already exceeded by 50 percent! By this project's projection for 2025, that vehicle average will be 86,000, and could be nearly double that, if you believe VDOT's projection for the segment near the Beltway. Thus, by the time this project is operational, the number of vehicles in our section of this corridor could easily have tripled from the projection made in 1982. When you compare that to the projections for the increase in jobs, population and work trips (all in and around this same corridor), such traffic increases may even be woefully underestimated - Metro or not. (0137, 0224-M –2)

Public Comment: The Dulles Corridor at our location was projected in 1982 to have an average daily vehicle count of 41,600 by the year 2000. By 1995, the actual count exceeded that by 50 percent. According to the EIS, that vehicle count is projected to reach 86,000 by 2025 and could be nearly double that if you believe VDOT's figures for the segment near the beltway. Thus, by the time this project is operational, the number of vehicles in our section of this corridor could easily have tripled from the projection made for 2000. When you compare that to your projections for the increase in corridor jobs, population and work trips, such vehicular traffic increases may be even woefully underestimated,

metrorail or not. All of those 250,000 work trips projected for the corridor will not use Metro. Some 70 or 80 percent will use their own cars. Now imagine you are standing on the Dulles Corridor pavement between Old Chain Bridge Road and Route 123. Eighty feet away you can see clearly into the second stories of our homes at Hallcrest Heights at eye level. Now add to that scene 216 tons of speeding high-tech metal on 48 wheels as it grinds around some 25 feet overhead around the elevated curve into Tysons and screeches to a halt at Tysons East. The project's draft EIS states that only the incremental noise due to the addition of rail service is assessed. What happened to the 86,000 to 143,000 average daily vehicles traveling below on the so-called Dulles connector? (0137, 0137-T –2) (0137, 0137-T-2)

Public Comment: The problem with your EIS and Noise Technical Report is that if your estimates and guesses are wrong, we have to live with it. The traffic projections were wrong, and we are living with it! You have our support for your project. Give us rail service…but not an eyesore and an earsore. (0137, 0176-L –9) (0137, 0224-M-9)

> ***Response:*** *The Project Team utilized the guidelines established by the FTA (Transit Noise and Vibration Impact Assessment, 1995) to determine the applicable noise impact criteria in all areas of the proposed corridor. As described in Section 4.7.2 (Evaluation Criteria) of the Final EIS, the FTA noise criteria are based on existing noise levels that increase as the background level increases to a point beyond which impact is determined on Project noise alone. The FTA criteria are not used to assess existing background noise but rather, are used to evaluate impacts due to new transit projects against the background of existing noise levels. Where background noise is already high, as in your area, it takes only a relatively small increase to trigger an impact.*
>
> *There is a potential for wheel squeal noise based on the 800-foot radius of curvature proposed near the Hallcrest Heights. However, to better define the onset of wheel squeal, actual source measurements were conducted along an existing Metrorail line near the Ronald Reagan Washington National Airport with a radius of 755 feet. Based on the results of the modeling analysis, ambient day-night noise levels from the Metrorail operations are predicted to range from 50 to 54 dBA at the Hallcrest Heights residences. These levels are well below the measured ambient background noise level of 59 dBA recorded at a residence at 7405 Hallcrest Drive. The modeling analysis includes three to four-foot parapets (or barriers along the edge of the track bed) proposed along all sections of aerial guideway (except on Airport property). As a result, no exceedances of the FTA criteria are predicted from Metrorail operations near Hallcrest Heights.*
>
> *Additionally, the FTA guidelines were used to evaluate potential impacts due to transit operations. Impacts due to traffic were evaluated using the Federal Highway Administration (FHWA) guidelines only in those areas where the existing roadways would be modified or substantially changed (e.g., near Metrorail pocket tracks that would require a "bubbling" of the roadway). Because no modifications to the roadway are proposed near the identified communities, a future traffic analysis using the FHWA guidelines was not required and therefore, was not conducted.*

Concrete Parapets Inadequate to Mitigate Metrorail Alternative Noise

Public Comment: Our second problem with the analysis as it relates to noise is that you have not suggested adequate mitigation. We hear Metro trains today as they travel at ground level. The EIS would have us believe that you can raise those trains above ground level, above the inadequate and broken old VDOT metal sound barriers, above the wooden barriers that are no longer effective, and mitigate the noise with five-foot concrete parapets next to the tracks. We don't believe it. The parallel barrier, in fact, from such a scheme may well magnify, not mitigate, the noise. Your own engineers have said that those five-foot parapets were used on the elevated rail on the Red Line where it crosses the beltway at Pooks Hill. There an expensive retrofit was necessary. (0145, 0145-T –*7)*

Public Comment: Our second problem with your analysis as it relates to noise is that you have not suggested adequate mitigation. We hear Metro trains today as they travel at ground level. The EIS would have us believe that you can raise those trains above ground level, above the inadequate and broken old VDOT metal sound barriers, above the MWAA wooden barriers that are no longer effective,

and mitigate the noise with three or five-foot concrete parapets next to the tracks. Please provide data that demonstrates the effectiveness of the proposed mitigation strategies. And please take a more careful look at the proposed breaks in the parapets and their heights. We [Ellison Heights-Mt. Daniel] believe there may be a need for the parapets to be continuous and five feet tall from start to end (from the I-66 beginning to the end proposed). (0145, 0452-E –4)

Response: *The effect of noise reflections due to large flat vertical structures will be investigated during preliminary engineering. Acoustically absorptive treatment is typically applied to both sides of parallel barriers to eliminate barrier degradation due to the "parallel barrier" effect.*

Although the potential for additional structural noise was included in the noise assessment, it is highly unlikely due to the newer structural designs proposed along the Dulles Corridor. Pre-cast concrete supports, resiliently-supported ties, and continuously welded rail track included in the proposed track design all combine to greatly minimize overall noise and vibration levels from train passbys along aerial sections.

Additionally, three to four-foot parapets (or track edge barriers) are proposed as part of the design along all aerial Metrorail sections (except on Airport property). Based on the assumed Metrorail source height of two feet above rail combined with the top-of-rail elevation, the three to four-foot parapet height is predicted to effectively shield train passbys at nearby residences.

Using Only FTA Policy on Noise Mitigation is Inadequate

Public Comment: To cite only FTA policy guidance on noise mitigation, because presumably only rail service is being added, is not only short sighted, it misses the larger point. The Draft EIS even makes the point that the Dulles Connector (our section of the corridor) is planned for an additional two lanes. Would that be the case if a lot of new traffic were not envisioned? MWAA has already told us that they will not retrofit our community [Hallcrest Heights] with a more appropriate barrier. We will not wait until the connector is widened to have them tell us that again; this time adding that rail service is not their problem. (0137, 0176-L –7) (0137, 0224-M-7)

Public Comment: To avoid needless repetition in this record, we would like to join wholeheartedly in the position of the Ellison Heights-Mt. Daniel Civic Association submitted orally at the July 29 public hearing number 147, and presumably filed in the docket. Based on the analysis and commentary in the EIS, the noise impacts, both during and on completion of the project are clearly deficient. We, of course, cannot afford to hire experts to disprove your 'studies', but in many respects they just don't make common sense, and in some ways the conclusions contradict each other and past Metro experience. The Ellison Heights-Mt. Daniel testimony speaks directly to the specific items and issues in question. (0126, 0126-E –4) (0126, 0199-M-4)

Response: *The Project Team utilized the guidelines established by the FTA (Transit Noise and Vibration Impact Assessment, 1995) to determine the applicable noise impact criteria in all areas of the proposed corridor. As described in Section 4.7 of the Final EIS, the FTA noise criteria are based on existing noise levels that increase as the background level increases to a point beyond which impact is determined on Project noise alone. The FTA criteria are not used to assess existing background noise but rather, are used to evaluate impacts due to new transit projects against the background of existing noise levels. Where background noise is already high, as in your area, it takes only a relatively small increase to trigger an impact. Mitigations for potential noise impacts are also discussed in Section 4.7of the Final EIS.*

Additionally, the FTA guidelines were used to evaluate potential impacts due to transit operations. Impacts due to traffic were evaluated using the Federal Highway Administration (FHWA) guidelines only in those areas where the existing roadways would be modified or substantially changed (e.g., near Metrorail pocket tracks that would require a "bubbling" of the roadway). Because no modifications to the roadway are proposed near the identified communities, a future traffic analysis using the FHWA guidelines was not required and therefore, was not conducted.

Measuring Noise Impacts at Ground Level

Public Comment: One DOT engineer told us that the sound measurements are made at ground level. It that is true, I am sure that the gophers really appreciate it. The rest of us live 5 to 20 feet above ground level. (0087, 0087-L –10) (0087, 0227-E –8)

> ***Response:*** *All noise measurements conducted along the Project corridor were collected in accordance with good engineering practice and the guidelines and standards set forth in the FTA guidelines (Transit Noise and Vibration Impact Assessment, 1995), the American Society for Testing and Materials (ASTM) Standard Guide for Measurement of Outdoor A-weighted Sound Levels (1984), and the American National Standards Institute (ANSI) Method for the Measurement of Sound Pressure Levels (1981). Accordingly, ambient noise measurements are conducted at ground level with the microphone placed 5 feet above the ground (the approximate average height of human ears). Ground level noise measurements are typically used as a surrogate for all other elevated residences at the monitoring location. At ground level, where maximum noise attenuation and shielding occur (yielding a lower noise level), Project criteria threshold limits are determined to be most stringent based on the FTA impact assessment curves.*

Proposed Three-Foot Sound Barriers Will Increase Ambient Noise Impacts on Neighborhoods

Public Comment: The sound amelioration outlined in the Environmental Study is ridiculous. Putting 3-foot barriers next to the tracks may help reduce the sound experienced by the cars on the Dulles Access road, but will only amplify the ambient sound spilling out into the residential areas higher than your proposed barriers. (0087, 0087-L –12) (0087, 0227-E –10)

> ***Response:*** *As part of the overall track design, three to four-foot parapets (or track edge barriers) are proposed along all aerial Metrorail sections (except on Airport property). Based on the assumed Metrorail source height of two feet above rail combined with the top-of-rail elevation, the three to four-foot parapet height is predicted to effectively shield nearby residences from Project-related train passby noise. Acoustically absorptive treatment along the trackside of the parapets would further improve the shielding benefits of the structural parapets. See Section 4.7 of the Final EIS for more information.*

Noise Analysis Along Miracle Lane and Penguin Place

Public Comment: Although we have neither the time nor the hordes of engineers to unravel the figures provided in section 4 of the Environmental Study, some points even the layman can understand are:1. No measurements were taken along Miracle Lane and Penguin Place, even though both areas directly adjoin the Dulles Access Road and are severely impacted by the road noise. Was this intentional? (0087, 0087-L –5) (0087, 0227-E –3)

> ***Response:*** *Noise measurements were conducted at 30 representative receptor locations to account for the various land use types found along the 23-mile Project corridor. Ambient noise measurements representative of your neighborhood were conducted at a residence at 7103 Norwalk Street approximately 1,500 feet to the south. The noise measurement program conducted along the Project corridor was conducted in accordance with good engineering practice and the guidelines and standards set forth in the FTA Transit Noise and Vibration Impact Assessment (1995), the ASTM Standard Guide for Measurement of Outdoor A-weighted Sound Levels (1984), and the ANSI Method for the Measurement of Sound Pressure Levels (1981).*

EIS Noise Analysis Conflicts with 1982 Study of the Dulles Airport Access Road

Public Comment: The 1982 environmental study for the Dulles Access Road showed that the noise level would be high impact for this area (based on far less traffic than the road now carries). Yet your study purports to show less noise even with more buses and trains! (0087, 0087-L –6) (0087, 0227-E –4)

> ***Response:*** *The Project Team utilized the guidelines included in the FTA Transit Noise and Vibration Impact Assessment (1995) to evaluate impacts from transit operations on nearby receptors. Based on the FTA guidelines, an ambient noise-monitoring program was conducted to establish the Project criteria limits. Future Project noise levels from Metrorail operations and facilities only were compared with the established criteria limits to determine the location and severity of impact as prescribed by the FTA methodology. The FTA criteria are based on cumulative noise levels that vary with the existing background noise level (i.e., louder areas allow less additional Project noise) before impact is identified and thus reflect different land-uses found along a transit corridor. Current ambient noise levels may be lower than the 1982 levels due to the construction of noise barriers since that time.*

Consideration of Fairfax County Noise Level Policies

Public Comment: The Fairfax County acceptable noise level for residential areas is 55 dba. In your scores of pages of definitions why was this fact conveniently omitted? Is it because this factor is exceeded in even less exposed locations than ours? (0087, 0087-L –7) (0087, 0227-E –5)

> ***Response:*** *As described in Section 4.7 of the Final EIS, the Fairfax County noise ordinance (Code of the County of Fairfax, Chapter 108, January 1, 1976) of 55 dBA at residential receptors and 60 dBA at commercial receptors applies to stationary sources and facilities. The Fairfax County noise criteria were used to evaluate noise impacts from Project-related stationary facilities such as passenger stations, park-and-ride facilities, and rail yards. Where exceedances of the Fairfax criteria are predicted, proposed mitigation measures are identified in the Final EIS and will be evaluated further during preliminary engineering and final design.*

Noise Analysis Does Not Adequately Reflect Roadway Noise

Public Comment: Your averaging factor for sound noise does not adequately reflect the impact of the roadway noise. Adding 10 dba to the average figures is a poor substitute for actuality. How often per night do you have to be awakened by buses shifting gears on the curve or high-revving motorcycles before you give up and seal your windows permanently? (0087, 0087-L –8) (0087, 0227-E –6)

> ***Response:*** *The modeling analysis evaluated impacts from future Project operations only. Specifically, the noise assessment utilized the guidelines included in the FTA Transit Noise and Vibration Impact Assessment (1995) to evaluate impacts from transit operations on nearby receptors. According to the FTA guidelines, existing ambient noise due to current traffic levels is represented in the criteria threshold limit selected for each land-use area (e.g., louder areas allow less Project noise). The impact assessment of the Project criteria is based on future 2025 Design Year Project levels only, not existing or future traffic levels. As a result, mitigation generally focuses on Project only impacts related to Project operations.*
>
> *The 24-hour day-night noise level (or Ldn) is adopted as a measure of cumulative noise impact for residential land-uses where sleep is involved for the following reasons:*
>
> - *The Ldn noise level correlates well with residential annoyance surveys;*
> - *The Ldn noise level increases with an event's duration corresponding further with resident's annoyance level;*
> - *The Ldn measure incorporates all events that occur over a 24-hour period;*

- *The Ldn level takes into account people's increased sensitivity to nighttime noise, when most people are asleep, by adding in a 10-decibel penalty for nighttime events between 10 PM and 7 AM; and,*
- *The Ldn is the designated measure of choice of several other federal agencies including the Federal Aviation Administration, the Environmental Protection Agency and the Department of Housing and Urban Development.*

Using Current Noise Levels as Basis for Evaluating Noise Impacts is Flawed

Public Comment: Using the currently unacceptable noise levels as a starting point is self-serving. It buries your additional noise behind the transgressions previously made by the Metropolitan Airports Authority in constructing the Dulles Access Road. Of course it does provide a convenient out in terms of escaping from any responsibility even though the rail would add to the noise level. (0087, 0087-L –9) (0087, 0227-E-7)

Response: *The Project Team utilized the guidelines established by the FTA in Transit Noise and Vibration Impact Assessment (1995) to determine the applicable noise impact criteria in all areas of the proposed corridor. The FTA noise criteria are based on existing noise levels that increase as the background level increases to a point beyond which impact is determined on Project noise alone. The FTA criteria are not used to assess existing background noise but rather, are used to evaluate impacts due to new transit projects against the background of existing noise levels. Where background noise is already high, as in your area, it takes only a relatively small increase to trigger an impact.*

Proposed Five-Foot Parapet Inadequate to Mitigate Noise of Metrorail Alternative

Public Comment: Acoustical engineers and other noise consultants talk in terms of DBA, LEQ, LDN, VdB. In plain English that means din, rumble and squeal. Din is ambient noise level of the whole corridor, which is considerable now. Rumble is what happens whey you add those 216 tons of six-car Metro trains, and squeal is what you get when those 48 steel wheels speed around the elevated curve prior to the brakes being applied. And yet your draft EIS says this will all be perfectly okay if you just add a five-foot parapet to either side of the track. My skepticism is monstrous. Ask anyone who now lives near an elevated Metro line, and we will. (0137, 0137-T –3)

Public Comment: Acoustical engineers and other noise consultants talk in terms of dBA, Leq, Ldn and VdB. In my terms, that means "din," "rumble," and "squeal." "Din" is the ambient noise level of the whole corridor, and it is considerable now. "Rumble" is what happens when you add those 216 tons of 6-car Metro trains. And "squeal" is what you get when those 48 wheels speed around an elevated 750 foot radius curve of steel rails, prior to the brakes being applied. None of that takes into account the effect of constructing this high speed flyover - pilings and all! And yet…under the quaint title of "mitigation," your Draft EIS says that all of this will be perfectly OK if you just add a 5 foot parapet to either side of the railbed. My skepticism exceeds the traffic projections! Metro tried such a solution to the elevated Red Line over the Beltway…and they had to go back and retrofit it with special measures to address the vibration & noise. One non-resident owner at Hallcrest lives near this spot and he tells me he hears every train. And he is a half mile away! (0137, 0224-M –4) (0137, 0176-L –5)

Response: *There is a potential for wheel squeal noise based on the 800-foot radius of curvature proposed near the Hallcrest Heights. To better define the onset of wheel squeal, actual source measurements were conducted along an existing Metrorail line near National Airport with a radius of 755 feet. Based on the results of the modeling analysis, ambient day-night noise levels from the Metrorail operations are predicted to range from 50 to 54 dBA at the Hallcrest Heights residences. These levels are well below the measured ambient background noise level of 59 dBA recorded at a residence at 7405 Hallcrest Drive. The modeling analysis includes three to four-foot parapets (or barriers along the edge of the track bed) proposed along all sections of aerial guideway (except on Airport property). As a result, no exceedances of the FTA criteria are predicted from Metrorail operations near Hallcrest Heights.*

Noise Analysis Should Include Impact of Increased Traffic Using FHWA and VDOT Policies

Public Comment: FHWA policy, Interstate Standards and VDOT's own policy should be applied to this project - especially given the past underestimation of vehicle usage and development. Density bonuses awarded to those who build within 1600 feet of Metro stations, will generate more vehicular traffic as well as Metro ridership. My guess is that Metro's system in downtown DC is size constrained anyway. (0137, 0176-L –8) (0137, 0224-M-8)

> ***Response:*** *The Project Team utilized the guidelines established by the FTA in Transit Noise and Vibration Impact Assessment (1995) to determine the applicable noise impact criteria in all areas of the proposed corridor. The FTA noise criteria are based on existing noise levels that increase as the background level increases to a point beyond which impact is determined on Project noise alone. The FTA criteria are not used to assess existing background noise but rather, are used to evaluate impacts due to new transit projects. However, in areas, such as yours, with higher background levels, Project noise limits established by the FTA are more stringent than in quieter areas allowing the ambient levels to remain the same in the future or increase only slightly before an impact is identified.*
>
> *Additionally, the FTA guidelines were used to evaluate potential impacts due to transit operations. Impacts due to traffic were evaluated using the Federal Highway Administration (FHWA) guidelines only in those areas where the existing roadways would be modified or substantially changed (e.g., near Metrorail pocket tracks that would require a "bubbling" of the roadway). Because no modifications to the roadway are proposed near the identified communities, a future traffic analysis is using the FHWA guidelines was not required and, therefore, was not conducted.*

Construction/Operation Activities from BRT and Metrorail Alternatives will Worsen Noise Levels

Public Comment: Construction activities and operation of either the Bus or Metrorail alternatives will aggravate an already serious noise situation, especially because the buses and/or the Metrorail are major contributors to noise and will operate until midnight during the week and 2 am on weekends. (0174, 0300-L –4)

> ***Response:*** *The noise modeling analysis evaluated impacts due to daytime construction activities only. Changes to the proposed construction schedule will be evaluated in preliminary engineering and appropriate mitigation measures will be proposed if exceedances of the Project nighttime construction criteria are predicted.*
>
> *Additionally, the operating times and vehicle characteristics of both Metrorail were included in the noise modeling analysis. For example, the Friday – Saturday Metrorail schedule was selected to correspond with the extended operating hours from the then 5:30 AM to 2:00 AM. Specifically, the noise assessment utilized the guidelines included in the FTA's Transit Noise and Vibration Impact Assessment (1995) to evaluate impacts from Metrorail on nearby receptors. Accordingly, mitigation measures are proposed in those areas where exceedances of the FTA impact criteria are predicted as described in Section 4.7 of the Final EIS.*

Increased Density will Increase Noise and Traffic Effects on Hallcrest Heights

Public Comment: VDOT's noise criteria were judged not to apply because "no other roadways changes affecting either capacity or elevation are expected…" This is a narrow and not totally accurate viewpoint since both VDOT traffic projections and expectation for increased vehicle usage stemming from density allowances, will substantially increase traffic in the Dulles Connector section that adjoins our community [Hallcrest Heights]. The EIS references plans to widen the Connector [Road], giving further indication of the prospect of vehicular traffic. The EIS should broaden its noise abatement scope to include both MWAA and VDOT policy as well as that of the FTA. (0137, 0304-L –1)

Response: *Except where noted, no other changes to the existing roadways are proposed as part of the Dulles Corridor Rapid Transit Project. Any other roadway changes are part of other projects sponsored by either the VDOT or the MWAA, and are independent of this Project*.

Need Mitigation for Noise Caused by Turnouts (Switches)

Public Comment: Noise -- Noise analysis did not consider the effect of turnouts (switches). Measures to mitigate resulting noise and vibration such as resilient track fasteners, movable frogs or some similar measures, need to be identified. (0387, 0387-L –19)

Response: *As described in Section 4.8 of the Final EIS, potential vibration impacts from Metrorail passbys due to rail discontinuities were evaluated in the modeling analysis. At those locations where exceedances of the project vibration criteria are predicted, mitigation measures are proposed and will be refined during preliminary engineering and/or final design.*

Noise Evaluation Should Include Peak Cumulative Noise Output

Public Comment: Deficiencies in the noise analysis. The analysis is based on average rather than peak noise levels and does not consider the cumulative affect of noise from the train yard, the highway and the metal track support. The peak cumulative noise output (i.e., train on metal track support plus train yard plus highway) after mitigation has not been quantified. (0386, 0386-E –2) (0398, 0398-L –2) (0399, 0399-L –2)(0412, 0412-L –2) (0415, 0415-L –2) (0416, 0416-L –2) (0430, 0430-E –2) (0431, 0431-E –2)(0438, 0438-E –2) (0442, 0442-L –2) (0465, 0465-L –2)(0466, 0466-L –2) (0474, 0474-L –2) (0473, 0473-L –2) (0471, 0471-L –2) (0470, 0470-L –2) (0467, 0467-L –2) (0469, 0469-L –2)

Response: *As described in Section 4.7.2 (Evaluation Criteria) of the Final EIS, the noise analysis was conducted according to the FTA Transit Noise and Vibration Impact Assessment ((1995) guidelines. Accordingly, the peak-hour equivalent noise level (or Leq) was used to evaluate impacts at non-residential receptors; and the 24-hour day-night noise level (or Ldn) was used to evaluate impacts at residential receptors. Although the FTA criteria are defined in terms of allowable Project exposure, the basis for the FTA criteria is actually the increase in the cumulative noise (i.e., when the Project levels are added to the existing noise). To be conservative (or to determine the "peak cumulative noise output"), the modeling analysis included maximum operating volumes for all time periods under both the Metrorail and the BRT Alternatives. For example, the Friday-Saturday Metrorail schedule was selected to correspond with the extended operating hours from the then 5:30 AM to 2:00 AM.*

However, in addition to the FTA cumulative noise criteria, peak or maximum noise levels (or Lmax) from transit operations were also used to evaluate Project impacts using the WMATA Design Criteria for various residential land-uses. The Lmax noise level is independent of the existing background and the number of operations and represents the maximum level observed during a single event, such as a Metrorail or bus passby.

Although newer pre-cast concrete track structures are proposed to minimize excessive noise and vibration levels, the modeling analysis included a 4-decibel penalty to account for potential structural noise due to Metrorail passbys along all elevated sections of slab track. As described in Section 4.7of the Final EIS, where exceedances of the FTA or the WMATA impact criteria are predicted, mitigation measures are proposed and these measures will be refined further during preliminary engineering and final design.

Questions About Noise Impacts on the Rotonda Condo Units

Public Comment: The projected noise levels at International Drive and Westpark Drive (Location R12) do not appear to represent the sound levels within the condominium units resulting from the elevated rail adjacent to the Rotonda. These could exceed FTA guidelines. I doubt if sound buffers could reduce this

sufficiently. Also, it does not appear that the number of living units affected by the noise have been cited, the Rotonda seems to be counted as one receptor. (0429, 0429-E –4)

Public Comment: The issue of intermittent noise intrusion from passing trains and wheel squeal adjacent to the Rotonda is not sufficiently addressed. (0429, 0429-E –5)

> ***Response:*** *These comments concerned the potential effects of Alignment T4, which was eliminated from further consideration after the public and agency review and comment on the Draft EIS. No noise impact is projected in the vicinity of the Rotonda.*

Metrorail Noise Will Adversely Affect Home Value

Public Comment: The value of our home will be adversely affected with any of the current build alternatives. We will have trains flying outside our bedroom windows at 1 1/2 minute intervals at rush hour (3 min./side). Our privacy loss will be tremendous. We don't hear average sounds and yet all analysis is based on averages. I want to know what the cumulative peak sound will be on my deck when you add rush hour freeway, Metro above ground on metal and concrete beds, new feeder buses, extra track, and more yard work. We estimate it will be greater than a jack hammer at 50 feet. Our values are already falling. How will we be compensated? It is unfair to subject us all to a combo of aerial Metro above and sound and visual wall, freeway and rail yard. Plus the train making a 90 degree turn. Take the thing underground for this unusual combo of factors. Nowhere in the system are residents subjected to all three of these huge noise sights at the same time. (0398, 0398-L –13)

> ***Response:*** *The modeling analysis evaluated impacts from future proposed Metrorail operations in accordance with the FTA's Transit Noise and Vibration Impact Assessment (1995) guidelines. The 24-hour day-night noise level (or Ldn) is adopted as a measure of cumulative noise for residential land uses where sleep is involved for the following reasons:*
>
> - *The Ldn noise level correlates well with residential annoyance surveys;*
> - *The Ldn noise level increases with an event's duration corresponding further with resident's annoyance level;*
> - *The Ldn measure incorporates all events that occur over a 24-hour period;*
> - *The Ldn level takes into account people's increased sensitivity to nighttime noise, when most people are asleep, by adding in a 10-decibel penalty for nighttime events between 10 PM and 7 AM; and,*
> - *The Ldn is the designated measure of choice of several other federal agencies including the FAA, the EPA, and the Department of Housing and Urban Development.*
>
> *Historically, property values have risen in areas where greater access to Metrorail has been provided.*

Need More Consideration of Noise Impacts on Neighborhoods Near East and West Falls Church Metrorail Stations

Public Comment: There needs to be more consideration given to the noise and traffic impact to all neighborhoods around East and West Falls Church metro stations. Too many neighborhoods were left out of this study area. (0179, 0179-T –10)

Public Comment: My neighborhood's concerns revolve around noise, vibration and traffic. My community borders I-66, rail and the West Falls Church transit station. Ironically, my community was not listed as an impacted neighborhood, nor was the Villages condominium complex right next to the Pavilion, nor were the three neighborhoods bordered by I-66, Haycock Road and Great Falls Street, a triangle of land where residents already suffer significant noise impacts from I-66 and the connector split. You didn't include the Lemon Road community, one that already suffers from the noise from your maintenance yard. (0145, 0145-T –3)

Response: *Neighborhood impacts were assessed in Section 3.2 of the Final EIS. Neighborhoods within 300 feet of the centerline of the Build Alternatives alignments and within one half-mile of the proposed station areas were identified for evaluation. This area was reviewed after the noise, vibration, air quality, and visual effects analyses were completed and several additional neighborhoods and community facilities were added to the study area. For each of these neighborhoods evaluations for changes to community cohesion, isolation effects, displacements, noise and vibration, access changes, and safety were conducted. For example, the Pavilion and Hallcrest Heights were added to the study due to projected noise effects. Neighborhoods that are located between the East Falls Church and West Falls Church stations and that are already in close proximity to rail were not included in the analysis, since there were no projected changes in service due to the Project in this section of the corridor.*

The comment references several neighborhoods, including a community that borders I-66, Metrorail and the West Falls Church Station; the Village condominium complex, three neighborhoods bordered by I-66, Haycock Road, and Great Falls Street; and the Lemon Road community. Three neighborhoods were evaluated within the Project boundaries in the vicinity of I-66 and the West Falls Church Station: Idylwood (which would include all residences south of the Dulles Connector Road and north of I-66 in close proximity to the station) that would experience noise impacts; the Pavilion (which has a direct view of the West Falls Church station and would experience visual effects during construction); and the Westhampton neighborhood (which includes all residences between Great Falls Street, Haycock Road and northeast of the Dulles Connector and which would experience noise impacts).

The first area referenced in the comment would (most likely) be located in the Idylwood neighborhood or Westhampton neighborhood. The Village condominium complex was not included because no impacts were projected. The three neighborhoods bordered by I-66, Haycock Road, and Great Falls Street, and the Lemon Road communities are located outside of the study area boundaries, but would have been included in the analysis of traffic and noise effects if any effects were identified in these neighborhoods.

Section 6.2 of the Final EIS and Chapter 8.0 of the Traffic Analysis and Station Access Technical Report (June 2002) both state that large increases in vehicle trips are not anticipated for the West Falls Church Station area for the two Build Alternatives.

Revise EIS to Discuss Mitigation of Cumulative Highway and Train Noise on McLean Communities

Public Comment: Noise: The EIS does not consider the impacts of noise from additional vehicular traffic that will result from density increased that can be granted to landowners when rail is built. This additional vehicular noise is additive with the noise generated by trains in the rail alternatives. For the rail alternatives, the EIS should be revised to analyze the cumulative noise impacts of increased vehicular traffic together with noise from the passing trains. The impact analysis for McLean should focus on the Dulles Airport Access Road connector between I-66 and Dolley Madison Boulevard and the Dulles Toll Road between Route 7 and Hunter Mil Road. The EIS should be revised to discuss the noise abatement measures that would be implemented to mitigate this cumulative highway and train noise impact. (0392, 0392-L –18)

Response: *The FTA* Transit *Noise and Vibration Impact Assessment* (1995) *guidelines were used to evaluate potential impacts due to transit operations. Impacts due to traffic were evaluated using the FHWA guidelines only in those areas where the existing roadways would be modified or substantial changed (e.g., near Metrorail pocket tracks that would require a "bubbling" of the roadway). Because no modifications to the roadway near Hallcrest Heights are proposed, a future traffic analysis using the FHWA guidelines was not conducted.*

As described in Section 4.7of the Final EIS, future traffic noise levels under the Metrorail Alternative are predicted to approach or exceed the FHWA impact criteria along the Dulles Corridor just west of Fairfax County Parkway. However, because no roadway changes are

proposed as part of the Dulles Corridor Rapid Transit Project between I-66 and Dolley Madison Boulevard or between Route 7 and Hunter Mill Road, a FHWA traffic analysis was not performed in these areas.

Public Comment: Be it further resolved that the EIS should be substantively revised to address a number of stated concerns of McLean communities detailed in the attached comments and summarized below: Assess and mitigate the total corridor noise both from rail service and elevated trackage as well as from vehicular traffic generated by densities related to rail service. (0392, 0392-L –2)

Response: *As described in Section 4.7of the Final EIS, the FTA noise criteria are based on existing noise levels that increase as the background level increases to a point beyond which impact is determined on Project noise alone. The FTA criteria are not used to assess existing background noise but rather, are used to evaluate impacts due to new transit projects. However, in areas, such as yours, with higher background levels, Project noise limits established by the FTA are more stringent than in quieter areas allowing the ambient levels to remain the same in the future or increase only slightly before an impact is identified.*

Additionally, the FTA guidelines were used to evaluate potential impacts due to transit operations only. Impacts due to traffic were evaluated using the FHWA guidelines only in those areas where the existing roadways would be modified or substantially changed as a result of the Project. Because no modifications to the roadway along the Dulles Airport Connector Road are proposed, a FHWA traffic analysis was not performed in these areas.

Along elevated sections of track, the aerial structure may exhibit additional noise as a result of train passbys. Although the potential for additional structural noise was included in the noise assessment, it is highly unlikely due to the newer structural designs proposed along the Dulles Corridor. Pre-cast concrete supports, resiliently-supported ties, and continuously welded rail (CWR) track included in the proposed track design all combine to greatly minimize overall noise and vibration levels from train passbys along aerial sections. Additionally, three to four-foot parapets are proposed as part of the design along all sections of aerial guideway (except on Airport property) to further reduce train noise at nearby receptors.

Mitigation measures are identified in Section 4.7 of the Final EIS to eliminate exceedances of the impact criteria predicted along the Project corridor. No new noise barriers are proposed along the Dulles Toll Road property line with the adjacent residences to replace or augment the existing barriers.

Locations and Adequacy of Noise Level Readings

Public Comment: It was noted that increasing train frequency and length will unquestionably result in a net increase in noise levels, but it seems there has been only a limited attempt to determine how much. Also, the decibel levels on the record are the averages of high and low readings. This is not very useful because only the high levels cause noise problems. In addition, there were questions about the locations where noise level readings were taken and at what times of day. (0432, 0432-E –11)

Response: *Cumulative future noise levels are a function of the magnitude of both the ambient background level as well as the noise from transit operations. Although the FTA criteria allow the ambient noise levels to increase 1 to 3 decibels (depending on the current background level), Project noise levels are predicted to increase the ambient level by less than 2 decibels. Where exceedances of the FTA criteria are predicted, mitigation measures are proposed that would reduce the transit noise level below the background. The future noise levels are a logarithmic sum of the predicted Project noise levels and the measured background levels.*

As described in Section 4.7 of the Final EIS, the noise analysis was conducted according to the FTA Transit Noise and Vibration Impact Assessment (1995) *guidelines. Accordingly, the peak-hour equivalent noise level (or Leq) was used to evaluate impacts at non-residential receptors;*

and the 24-hour day-night noise level (or Ldn) was used to evaluate impacts at residential receptors. Although the FTA criteria are defined in terms of allowable Project exposure, the basis for the FTA criteria is actually the increase in the cumulative noise (i.e., when the Project levels are added to the existing noise). To be conservative (or to determine the "peak cumulative noise output"), the modeling analysis included maximum operating volumes for all time periods under two Build Alternatives of the Final EIS. For example, the Friday-Saturday Metrorail schedule was selected to correspond with the extended operating hours from the then 5:30 AM to 2:00 AM. Furthermore, as described in Section 4.7.3 (Modeling Methodology and Assumptions), the total predicted Project Ldn/Leq noise level at receptors includes all sources proposed as part of the Dulles Corridor Rapid Transit Project including Metrorail passbys, auxiliary equipment, wheel squeal, bus idling and typical activities at passenger stations such as public address announcements.

However, in addition to the FTA cumulative noise criteria, peak or maximum noise levels (or Lmax) from transit operations were also used to evaluate Project impacts using the WMATA Design Criteria for various residential land-uses. The Lmax noise level is independent of the existing background and the number of operations and represents the maximum level observed during a single event, such as a Metrorail or bus passby.

Although newer pre-cast concrete track structures are proposed to minimize excessive noise and vibration levels, the modeling analysis included a 4-decibel penalty to account for potential structural noise due to Metrorail passbys along all elevated sections of slab track. As described in Section 4.7 of the Final EIS, where exceedances of the FTA or the WMATA impact criteria are predicted, mitigation measures are proposed and will be refined further during preliminary engineering and final design.

Noise measurements were conducted at 30 representative receptor locations to account for the various land-use types found along the 23.1-mile Project corridor. Ambient noise measurements representative of the commenter's neighborhood were conducted at a residence at 7103 Norwalk Street approximately 1,500 feet to the south. The noise measurement program conducted along the Project corridor was conducted in accordance with good engineering practice and the guidelines and standards set forth in the FTA guidelines, the ASTM Standard Guide for Measurement of Outdoor A-weighted Sound Levels (1984), and the ANSI Method for the Measurement of Sound Pressure Levels (1981).

Need More Attention on Need for Noise Mitigation

Public Comment: I feel that insufficient attention has been given to the need for noise mitigation. (0432, 0432-E-2)

Response: *Where exceedances of the Project criteria are predicted, proposed mitigation measures have been identified (see Section 4.7 of the Final EIS) and will be further refined during preliminary engineering and final design.*

Need to Consider Weather Conditions During Noise Survey

Public Comment: Existing Conditions--The quantification of the existing ambient sound levels apparently was limited to one 24-hr interval on 23 January 2001. While the controlling highway noise source at Hallcrest Heights is likely to be very consistent, substantial variations can occur due to weather conditions. No documentation was given for the weather during the noise survey. (0137, 0176-L –10)

Response: *The noise measurement program conducted along the Project corridor was conducted in accordance with good engineering practice and the guidelines and standards set forth in the FTA guidelines, the ASTM Standard Guide for Measurement of Outdoor A-weighted Sound Levels (1984), and the ANSI Method for the Measurement of Sound Pressure Levels (1981).*

The 24-hour continuous noise measurement was conducted at a residence at 7405 Hallcrest Drive beginning Tuesday, January 23, 2001 at 2:43 PM. Based on the field measurement notes, the weather conditions (clear and calm with an ambient temperature of approximately 40 degrees Fahrenheit) were appropriate for determining the current background level at this receptor location.

Need for Sound Abatement Walls

Public Comment: Sound abatement walls for both the rail system and the Toll/Access Road on both the south and north sides of the roadway. (0075, 0075-CC-4)

Response: *Proposed mitigation measures are identified in Section 4.7 of the Final EIS to eliminate exceedances of the Project impact criteria predicted along the Project corridor. No new noise barriers are proposed along the Dulles Toll Road property line with the adjacent residences to replace or augment the existing barriers.*

Previous Promises to Build Adequate Sound Walls

Public Comment: Broken Promises: The officials made several promises (after an editorial was published in the Washington Post) that a 15-20 foot wall would be constructed on a five-foot berm. The actual wall constructed is 8-10 feet tall and doesn't even block the view of the traffic, much less the noise. Millions of dollars were saved by the re-routing of the road closer to residential property, yet the engineers said it would be too expensive to build a higher soundwall. (0087, 0087-L –3)

Response: *Noise barriers are typically designed to incorporate and benefit from all of the nearby terrain features. Although barriers are designed to shield noise and other unwanted sounds, they are also designed to handle environmental effects including wind sheer, erosion, traffic accidents, and visual or other visibility restrictions. These factors influence the height of the walls. The evaluation of noise impacts conducted for the Dulles Corridor Rapid Transit Project focused on new impacts associated with potential Project implementation in accordance with the FTA transit noise assessment procedures. Section 4.7 of the Final EIS includes a discussion of noise impacts and mitigation measures related to this Project.*

The Project Team did recommend that, with respect to the concerns of communities on the noise of the Dulles Connector Road, the Commonwealth of Virginia would seek to address the existing noise effects upon the residential communities with noise abatement measures. If the Commonwealth decides to proceed with noise abatement measures, it would bear most of the cost of the abatement, since this is an existing condition due mainly to traffic to and from the Dulles Toll Road. The Project itself would share in the cost of abatement proportional to the Project's contribution to the future levels of noise and to its visual effects. DRPT has been identified as the lead agency for the coordination among VDOT, MWAA, WMATA, FTA, Fairfax County officials and staff, and representatives of the affected communities

Upgrade Noise Barriers in Area of Hunting Avenue

Public Comment: The noise barriers existing along the northwestern end of the Dulles Corridor should be upgraded. As a resident of Hunting Avenue, which is parallel to and adjacent to the Dulles Connector Road, I can say that those barriers are too short and thin to prevent high levels of noise even for the current traffic conditions. It is easy to anticipate the noise consequences of the future above-ground metrorail. (0118, 0118-E –2)

Public Comment: I recommend that the construction of metrorail to Tysons Corner include the removal of the existing noise barriers and the construction of new barriers consistent with the current standards of noise protection. (0118, 0118-E –3)

Response: *Parapets (or track edge barriers) are proposed to shield new noise from Metrorail train passbys along all aerial (above-ground) sections of track. At those locations where exceedances of the FTA criteria are still predicted along Hunting Avenue, additional parapet heights (six-feet) are proposed to minimize the predicted Project-related impacts. Changes to the existing highway property line noise barriers along the Dulles Connector Road are not considered part of the Project.*

Recommend a Sound Barrier Constructed Between Beulah and Trapp Roads

Public Comment: We will show that the existing noise levels already put the neighborhood in the red severe impact zone. The noises from construction and operation of the Dulles transit project will create an even more severe impact and hardship for the neighborhood. Our recommendation is that a sound barrier be constructed between Beulah Road and Trapp Road. The Chathams Ford neighborhood is the only residential neighborhood along the Toll Road up to Dulles Airport which does not have a sound barrier. (0174, 0174-T –2)

Response: *The Project Team utilized the guidelines established by the FTA (Transit Noise and Vibration Impact Assessment, Month 1995) to determine the applicable noise impact criteria in all areas of the proposed corridor. As described in Section 4.7 of the Final EIS, the FTA noise criteria are based on existing noise levels that increase as the background level increases to a point beyond which impact is determined on Project noise alone. The FTA criteria are not used to assess existing background noise but rather, are used to evaluate impacts due to new transit projects against the background of existing noise levels. Where background noise is already high, as in your area, it takes only a relatively small increase to trigger an impact.*

Currently, sound barriers are not proposed along the property lines adjacent to the Dulles Connector Road or Dulles Toll Road as part of the Project. Parapets or track edge barriers are proposed along all aerial Metrorail sections (except on Airport property). Figures 4.7-5a and 4.7-5b in the Final EIS are included to help identify the location of the proposed five to six-foot parapet barriers closest to your street.

Roadside sound barriers are typically evaluated during the design of major highway improvement projects such as widening or new alignment when noise impacts are forecast for adjacent noise-sensitive receptors. Evaluation criteria including effectiveness and cost are typically employed to make decisions on sound barrier location, height, and type. Generally speaking, sound barriers are not constructed except in conjunction with major highway improvements. Major highway improvements are not anticipated in conjunction with the Dulles Corridor Rapid Transit Project.

Requests for Noise Abatement and Sound Barriers

Public Comment: As part of this Rapid Transit Project I am checking to see if there are plans for a sound wall to be put up on our street. If there is no plan for a sound wall to be put up what do we have to do to get one? (0111, 0111-E –1)

Public Comment: Additional noise wall is needed at the north and south ends of Greenwich Street where the track is near grade. Potential usefulness of noise wall along the middle of Greenwich Street, given the topography of the site and plan for elevated track, should be assessed. (0389, 0389-E –2)

Public Comment: Construct a sound barrier between Beulah Road and Trap Road. (0174, 0300-L –2)

Public Comment: This document is submitted to register our strong opposition to the inadequate plans for sound suppression in the area south of the Dulles Access Road between West Falls Church Metro Station and Magarity Road. Despite a history of sham meetings and broken promises, this letter is submitted (if for no other reason than to be on record). (0087, 0227- E –1) (0087, 0087-L-1)

Public Comment: We understand the need for light rail and think it offers the best alternative, but be assured that this citizen and business owner as well as many others will do everything legally possible to delay the assignment of Federal, State, or Country funds until the noise suppression issue west of the West Falls Church Metro Center is addressed adequately. (0087, 0227-E –11)

Public Comment: Therefore, we call for the construction of a large sound barrier along the east side of the Access Road from the bridge that takes Great Falls Road over the Access Road to the bridge that takes Haycock Road over the Access Road. While we would support the construction of additional sound barriers, we believe that we have requested the minimum amount of construction necessary for the protection of our neighborhood. We would expect that any sound barrier constructed be of substantial size and scale to be effective. Ideally, the barrier should include in addition to a concrete wall, the planting of a substantial number of evergreen trees to increase the effectiveness of the barrier. (0435, 0435-E –4)

Public Comment: Noise - Residential neighborhoods must be adequately protected from heavy rail noise, such as from passing trains, wheel squeal from trains rounding curves, etc. (0402, 0402-L –12)

Public Comment: Additional noise mitigation features, such as additional sound barriers and reinforcement of existing sound barriers [Westhampton]. (0386, 0386-E-7) (0398, 0398-L-7) (0399, 0399-L-7) (0412, 0412-L-7) (0415, 0415-L-7) (0416, 0416-L-7) (0430, 0430-E-7) (0431, 0431-E-7) (0438, 0438-E-6) (0442, 0442-L-6) (0465, 0465-L-7) (0466, 0466-L-6) (0467, 0467-L-6) (0469, 0469-L-6) (0470, 0470-L-7) (0471, 0471-L-6) (0473, 0473-L-7) (0474, 0474-L-7)

Public Comment: Additional noise mitigation features, such as additional sound barriers extending along the Dulles Connector Road behind the Westhampton subdivision and reinforcement of existing sound barriers. (0403, 0403-L-6)

> ***Response:*** *Currently, sound barriers are not proposed along the property lines adjacent to the Dulles Connector Road or the Dulles Toll Road as part of the Project. Three to four-foot parapets or track edge barriers are proposed along all aerial Metrorail sections (except on Airport property). The locations of the proposed mitigation measures are described in Section 4.7 of the Final EIS. Figures 4.7-5a and 4.7-5b in the Final EIS are included to help identify the location of the proposed five to six-foot parapet barriers closest to your street.*
>
> *Roadside sound barriers are typically evaluated during the design of major highway improvement projects such as widening or new alignment when noise impacts are forecast for adjacent noise-sensitive receptors. Evaluation criteria including effectiveness and cost are typically employed to make decisions on sound barrier location, height, and type. Generally speaking, sound barriers are not constructed except in conjunction with major highway improvements. Major highway improvements are not anticipated in conjunction with the Dulles Corridor Rapid Transit Project.*

Concern Over Noise Impacts on the West Falls Village Development

Public Comment: The West Falls Village Homeowners Association represents the citizens living in the West Falls Village development. The West Falls Village development consists of homes along the 6600 block of Moly Drive and along Great Falls Road. The homes of West Falls Village are separated from Interstate 66 at the intersection of the Dulles Toll / Access Road (Access Road) by a small and inadequate barrier of trees. Since the homes were built after the highway and Metro lines were in place no sound barrier of any kind has been constructed to protect our neighborhoods from the noise generated by the highway and the Metro. Since this noise already adversely affects our neighborhood, we are greatly concerned about any increase in noise resulting from increased car and/or train traffic along the Access Road. (0435, 0435-E –1)

> ***Response:*** *Currently, sound barriers are not proposed along the property lines adjacent to the Dulles Connector Road or Dulles Toll Road as part of the Project. Three to four-foot parapets or track edge barriers are proposed along all aerial Metrorail sections (except on Airport property). The locations of the proposed mitigation measures are described in Section 4.7 of the Final EIS.*

Figures 4.7-5a and 4.7-5b are included in the Final EIS to help identify the location of the proposed five to six-foot parapet barriers closest to your street.

Roadside sound barriers are typically evaluated during the design of major highway improvement projects such as widening or new alignment when noise impacts are forecast for adjacent noise-sensitive receptors. Evaluation criteria including effectiveness and cost are typically employed to make decisions on sound barrier location, height, and type. Generally speaking, sound barriers are not constructed except in conjunction with major highway improvements. Major highway improvements are not anticipated in conjunction with the Dulles Corridor Rapid Transit Project.

Additionally, no exceedances of the FTA or the WMATA noise impact criteria are predicted along the Moly Drive area of Great Falls Road. However, as shown in the Noise and Vibration Technical Report Appendix (June 2002), exceedances of the FTA and the WMATA impact criteria are predicted at residences along the triangle bounded by Haycock Road, Westwood Place and Great Falls Road. Mitigation measures have been identified to minimize these impacts and are contained in Section 4.7of the Final EIS. These measures will be refined during preliminary engineering and/or final design.

Question About Parapet for Aerial guideway Section Over I-66 Near West Falls Church

Public Comment: The parapet for the elevated section of track that goes over I-66 near the West Falls Church station is designed to be only 3 feet (light blue color on Figure 5). On either end of that elevated section where the track is lower the parapet is designed to be 5 ft. high. Why is the parapet lower where the track is higher in elevation and sound will spread out more? (0029, 0293-L –1)

Response: *While three to four-foot parapets are proposed along all sections of aerial guideway (except on Airport property), five to six-foot parapets are proposed in areas where exceedances of the FTA impact criteria are predicted. Additionally, higher track elevations do not necessarily equate to more spreading of sound. Higher track elevations, combined with track edge parapets, are predicted to block the line-of-sight of the Metrorail wheel-rail noise and thereby provide more shielding than at grade level.*

Concern Over Adequate Noise Barriers for Neighborhoods Along Dulles Toll Road

Public Comment: Regarding the evaluation of highway noise barrier performance, such analyses should be based upon best-available future traffic projections. From data recently provided by VDOT, 2020 traffic sound levels may be as much as 6-7 dBA greater than those for which the noise barriers around the Hallcrest Heights development originally were designed (considering only the increase in traffic volume - ignoring the presence of any trucks or buses and ignoring any increase in vehicle speeds). (0137, 0224-M –11) (0137, 0176- L-14)

Public Comment: Should such a [noise] barrier be constructed we could support this project. If the Dulles Corridor Rapid Transit Project is unwilling to include this minimal effort to protect the citizens of our neighborhood [West Falls Village], we would regretfully have no choice but to oppose this project by all lawful means at our disposal including the potential for legal action. (0435, 0435-E –5)

Public Comment: Our Association recognizes the potential of this project to increase use of mass transit in Fairfax County and thereby reduce congestion and pollution overall in the County. However, we believe that in accordance with the values of Fairfax County and the Commonwealth of Virginia and in light of the commitment from the Dulles Corridor Rapid Transit Project to work with surrounding communities to mitigate the effects of the project that the project must include measures to ensure that our quality of life and property values are not severely damaged as a result of this project. It is wrong for this project, which has the potential to benefit so many, to be built at the detriment to the few people who live directly next to it. We, therefore, are concerned and dismayed that there are no current plans to build noise barriers as part of this project (Dulles Transit web site FAQ number 19). We believe that this failure is inconsistent with the spirit of continued cooperation with the public that the project claims in the draft Environmental

Impact Statement (DEIS). We also believe that the failure to provide a detailed analysis of both the detrimental health impacts of the noise from increased rail traffic to citizens living near the rail lines without sufficient noise protection and the effect of the noise on property values in those communities is a fatal flaw of the DEIS. (0435, 0435-E –3)

Public Comment: Almost every other similar community along the Dulles Corridor between the Beltway and Dulles Airport has gotten a 25-35 foot high cast concrete noise wall, with the latest absorptive coating…and extending all the way down nearby off-ramps. This is exactly what Maryland has now added along their portion of the Beltway. This is what we insist on being added to our location. From Old Chain Bridge Road along the corridor and all the way down the off-ramp to the merge with Route 123. (0137, 0224-M –6)

Public Comment: We are presently bordered by a low tech, 6-8 foot rotting wooden barrier (see attached pictures) which does not even extend down the off-ramp that wraps around our community. Our engineer tells us that the proposed parapet would set up a "parallel barrier" effect which would magnify, not mitigate, the noise. On page 4-130 of your Draft EIS, there is this pithy sentence: "The effectiveness of the shielding currently provided by the existing berms and barrier walls along the DAAR and Dulles Connector Road would be diminished in those areas where elevated Metrorail tracks are proposed." Our barrier has already been "diminished" by the ten auto accidents that have plowed into it, awaiting non-existent maintenance by VDOT. (0137, 0224-M –5)

Public Comment: Chathams Ford Drive is currently not protected by a sound barrier from the already excessive noise along this very short stretch of the Toll Road. This neighborhood is the only "residential" neighborhood along the Toll Road which has no sound barrier. Moreover, the noise levels are even more severe because road noise "bounces off" the sound barrier on the west-bound Toll Road. (0174, 0300-L –3)

Public Comment: We recommend that an effective sound barrier be built to correct an already intolerable noise situation. There is no justification for making Chathams Ford Drive and Chathams Ford Place the only residential community along the Toll Road to be unprotected from the thunderous noise of the car, bus, and 18-wheeler truck traffic. This issue should have been addressed by the Commonwealth of Virginia and Airport Authority at the time when homes were constructed in the Chathams Ford area. (0174, 0300-L –11)

> ***Response:*** *The Project Team utilized the guidelines established by the (Transit Noise and Vibration Impact Assessment, 1995) to determine the applicable noise impact criteria in all areas of the proposed corridor. The FTA noise criteria are based on existing noise levels that increase as the background level increases to a point beyond which impact is determined on Project noise alone. The FTA criteria are not used to assess existing background noise but rather, are used to evaluate impacts due to new transit projects. However, in areas, such as yours, with higher background levels, Project noise limits established by the FTA are more stringent than in quieter areas allowing the ambient levels to remain the same in the future or increase only slightly before an impact is identified.*
>
> *There is a potential for wheel squeal noise based on the 800-foot radius of curvature proposed near the Hallcrest Heights. However, to better define the onset of wheel squeal, actual source measurements were conducted along an existing Metrorail line near the Ronald Regan Washington National Airport with a radius of 755 feet. Based on the results of the modeling analysis, ambient day-night noise levels from the Metrorail operations are predicted to range from 50 to 54 dBA at the Hallcrest Heights residences. The modeling analysis includes three to four-foot parapets (or barriers along the edge of the track bed) proposed along all sections of aerial guideway (except on Airport property). These levels are well below the measured ambient background noise level of 59 dBA recorded at a residence at 7405 Hallcrest Drive. As a result, no exceedances of the FTA criteria are predicted from Metrorail operations near Hallcrest Heights.*

Currently, sound barriers are not proposed along the property lines adjacent to the Dulles Connector Road or Dulles Toll Road as part of the Project. Three to four-foot parapets or track edge barriers are proposed along all aerial Metrorail sections (except on Airport property). The locations of the proposed mitigation measures are described in Section 4.7of the Final EIS. Figures 4.7-5a and 4.7-5b are included to help identify the location of the proposed five to six-foot parapet barriers closest to your street.

Roadside sound barriers are typically evaluated during the design of major highway improvement projects such as widening or new alignment when noise impacts are forecast for adjacent noise-sensitive receptors. Evaluation criteria including effectiveness and cost are typically employed to make decisions on sound barrier location, height, and type. Generally speaking, roadside sound barriers are not constructed except in conjunction with major highway improvements. Major highway improvements are not anticipated in conjunction with the Dulles Corridor Rapid Transit Project.

Public Comment: Hallcrest Heights Association retained the services of a highly experienced and qualified acoustical engineer. His report is attached to this statement, which I hope will be part of your record of decision. My own comments on this subject were submitted earlier at the Scoping session in July 2000 and the Update session in January of 2001. Your March 2001 Alternatives Analysis referenced our concerns, but did not specifically respond to them…nor does your Draft EIS. (0137, 0176-L –4)

Response: *The Project Team received these reports and considered them during the preparation of the Public Scoping Report and preparation of the Draft EIS. In addition, the Project Team has met several times with members of the Hallcrest Heights Association. The comments from your acoustical engineer have been considered as part of the Project planning process.*

Request for Sound Walls at Station and Repair Yards

Public Comment: Additional recommendations: ask for the application of sound walls where appropriate at the station and repair yards where the VDOT traffic noise model (TNM) indicates problems such as Westwood Village where there are potential small increases over the existing background levels. (0287, 0287-T –5)

Response: *Where exceedances of the FTA criteria are predicted, mitigation measures are proposed. Because no roadway changes are predicted as part of the Dulles Corridor Project near Westwood Village, a FHWA noise analysis using the Traffic Noise Model (TNM) was not required at this location.*

Need Improved Concrete Noise Walls for Hallcrest Heights

Public Comment: We are presently bordered by a low-tech, six to eight-foot rotting wooden fence which does not even extend down the offramp that wraps around our community. Our engineer tells us that your proposed parapet would set up a parallel barrier effect which would magnify, not mitigate, the noise. On page 4-130 of the draft EIS, there is this sentence: "The effectiveness of the shielding currently provided by the existing berms and barrier walls along the access road in Dulles connector would be diminished in those areas where elevator metrorail tracks are proposed." Almost every other similar community along the Dulles Corridor between the Beltway and Dulles airport has gotten a 25 to 35-foot high cast concrete noise wall with the latest absorptive coating and extending all the way down the nearby off ramps." This is what we insist on being added to our location. (0137, 0137-T –4)

Public Comment: We [Hallcrest Heights] are presently bordered by a low tech, 6-8 foot rotting wooden barrier (see attached pictures) which does not even extend down the off-ramp that wraps around our community. Our engineer tells us that the proposed parapet would set up a "parallel barrier" effect which would magnify, not mitigate, the noise. On page 4-130 of your Draft EIS, there is this pithy sentence: "The effectiveness of the shielding currently provided by the existing berms and barrier walls along the DAAR and Dulles Connector Road would be diminished in those areas where elevated Metrorail tracks are

proposed." Our barrier has already been "diminished" by the ten auto accidents that have plowed into it, awaiting non-existent maintenance by VDOT. Almost every other similar community along the Dulles Corridor between the Beltway and Dulles Airport has gotten a 25-35 foot high cast concrete noise wall, with the latest absorptive coating…and extending all the way down nearby off-ramps. This is exactly what Maryland has now added along their portion of the Beltway. This is what we insist on being added to our location. From Old Chain Bridge Road along the corridor and all the way down the off-ramp to the merge with Route 123. (0137, 0176-L –6)

Public Comment: In addition, please consider providing cast concrete sound walls for adequate noise abatement in neighborhoods such as Hallcrest Heights, which will be directly affected by the construction and train noise. (0394, 0394-L-3)

Response: *The Project Team utilized the guidelines established by the FTA (Transit Noise and Vibration Impact Assessment, 1995)to determine the applicable noise impact criteria in all areas of the proposed corridor. As described in Section 4.7.2 of the Final EIS, the FTA noise criteria are based on existing noise levels that increase as the background level increases to a point beyond which impact is determined on Project noise alone. The FTA criteria are not used to assess existing background noise but rather, are used to evaluate impacts due to new transit projects against the background of existing noise levels. Where background noise is already high, as in your area, it takes only a relatively small increase to trigger an impact.*

There is a potential for wheel squeal noise based on the 800-foot radius of curvature proposed near the Hallcrest Heights. However, to better define the onset of wheel squeal, actual source measurements were conducted along an existing Metrorail line near the Ronald Regan Washington National Airport with a radius of 755 feet. Based on the results of the modeling analysis, ambient day-night noise levels from the Metrorail operations are predicted to range from 50 to 54 dBA at the Hallcrest Heights residences. The modeling analysis includes three to four-foot parapets (or barriers along the edge of the track bed) proposed along all sections of aerial guideway (except on Airport property). These levels are well below the measured ambient background noise level of 59 dBA recorded at a residence at 7405 Hallcrest Drive. As a result, no exceedances of the FTA criteria are predicted from Metrorail operations near Hallcrest Heights.

Currently, sound barriers are not proposed along the property lines adjacent to the Dulles Connector Road or Dulles Toll Road as part of the Project. Three to four-foot parapets or track edge barriers are proposed along all aerial Metrorail sections (except on Airport property). The locations of the proposed mitigation measures are described in Section 4.7 of the Final EIS. Figures 4.7-5a and 4.7-5b are included to help identify the location of the proposed five to six-foot parapet barriers closest to your street.

The commenter quotes from the Noise and Vibration Technical Report (June 2002) that the effectiveness of existing barriers would be diminished in areas where elevated Metrorail tracks are proposed. The statement in the Technical Report is intended to indicate that the source of transit noise in the area would be above the existing sound barriers and berms. Trackside parapet barriers are proposed along all sections of aerial Metrorail alignment to mitigate the effects of transit noise on adjacent receptors. Further analysis of the effectiveness of the proposed mitigation will occur during preliminary engineering.

Current Noise Levels in Chathams Ford Drive

Public Comment: According to the FTA (Federal Transit Authority) findings, measurements were taken at one location only along Chathams Ford Drive. The result of these existing noise levels was 63 db at a distance of 481 feet from the center of the Dulles Toll Road. Using the table 4-7.2 -FTA Noise Impact Criteria for Transit Projects, Chathams Ford Drive is already in the Yellow Impact Zone even before the project has started. However, we believe that the situation is already in the Red Severe Impact Zone. (0174, 0300-L –5)

Public Comment: In preparation for this hearing, residents purchased a sound level meter and conducted tests on Chathams Ford Drive at various locations--not just one-- and at various times of the day to measure noise levels. We then compared this information to the findings of the Dulles Task Force, which are included in the Draft Environmental Impact Statement. These comparative results are presented in a table that will be submitted for the written record, but I will summarize them verbally for purposes of this hearing: The average reading was between 70 and 71db for the 4 homes where measurements were taken. This far exceeds the 63db measured at one home by the Task Force. The maximum levels that could be measured by our instrument were 80 db, and we recorded sound at that level at all 4 homes.

These sound levels put Chathams Ford Drive in the severe impact zone even before construction begins or the bus or metro system begins to operate. (0174, 0300-L –7)

Public Comment: According to FTA findings, noise measurements were taken at one residence along Chathams Ford Drive, and the result of these measurements was an average of 60 decibels noise level at a distance of about 481 feet from the center of the Dulles access road. We believe that the situation is already worse than that, and in preparation for the hearing residents purchased a sound level meter and conducted a series of tests, and the full results will be presented in writing before the 28th, but we did it at four different locations at different times during the day. We then compared this information to the findings of the task force which were included in the draft EIS. These comparative results indicate that the average reading, the findings of the EIS were 63 decibels. Our readings were 70 to 71 decibels for the four homes where measurements were taken. This far exceeds the 63 decibels taken. The maximum levels that could be measured by our instrument were 80 decibels, and we did reach that on a number of occasions. (0174, 0174-T –4)

Public Comment: These sound levels put Chathams Ford Drive in the severe impact zone, even before construction activities begin. Thus we recommend an effective sound barrier be built to correct an already intolerable noise situation. There is no justification for making Chathams Ford Drive or Chathams Ford Place the only residential community without a sound barrier. The Commonwealth and the Airport Authority should have addressed this issue when the homes were constructed several years ago. We intend to pursue this issue through the task force and through other means, if necessary. If we have to resort to the use of legal action, it will inevitably delay the Dulles transit project. We are firm in our resolve to have adequate sound protection to ensure the quality of life along the street. (0174, 0174-T –5)

> ***Response:*** *The Project Team utilized the guidelines established by the FTA (Transit Noise and Vibration Impact Assessment, 1995) to determine the applicable noise impact criteria in all areas of the proposed corridor. As described in Section 4.7 of the Final EIS, the FTA noise criteria are based on existing noise levels that increase as the background level increases to a point beyond which impact is determined on Project noise alone. The FTA criteria are not used to assess existing background noise but rather, are used to evaluate impacts due to new transit projects. However, in areas, such as yours, with higher background levels, Project noise limits established by the FTA are more stringent than in quieter areas allowing the ambient levels to remain the same in the future or increase only slightly before an impact is identified.*
>
> *Although maximum passby noise levels (or Lmax) from individual vehicles may approach 80 dBA (e.g., such as from heavy-duty trucks), cumulative day-night noise levels (or Ldn) averaged over a 24-hour period are represented by the measured background level of 63 dBA as reported in the Final EIS. This ambient background level is fairly typical of residential land-uses along highway corridors without intervening noise barriers.*

Comments on the June 2002 <u>Dulles Corridor Rapid Transit Project Noise and Vibration Technical Report</u>

Public Comment: I have reviewed the June 2002 Dulles Corridor Rapid Transit Project - Noise and Vibration Technical Report prepared by the Virginia Department of Transportation (VDOT) and the

Washington Metropolitan Area Transit Authority (WMATA). I have two significant concerns regarding the Metrorail alternatives: The introduction of wheel squeal in the vicinity of your development - most significantly - and the performance degradation of the existing highway noise barriers at your development. My specific comments follow:

- § Existing Conditions - The quantification of the existing ambient sound levels apparently was limited to one 24-hr interval on 23 January 2001. While the controlling highway noise source at Hallcrest Heights is likely to be very consistent, substantial variations can occur due to weather conditions. No documentation was given for the weather during the noise survey.
- § Predicted Noise Exposures - At Hallcrest Heights, a 5-dBA range in magnitude was reported for sound levels predicted for the Metrorail Alignment Alternatives (T1, T6, T9 and T4). I was unable to identify the differences in those alternatives that could produce such variation at your development.
- § Expected Wheel Squeal - The Technical Report accurately describes track wheel squeal as "the annoying high-pitched, pure tone noise due to steel wheels rubbing against steel rails" and reports 8-dBA higher overall train sound levels for a curve at National Airport with radius similar to that proposed within 700 ft of Hallcrest Heights. The proposed mitigation, parapet noise barriers, will lower squeal sound levels but will not change their highly annoying tonal character; thus, barriers are unlikely to result in acceptable residential noise exposures. I strongly urge mitigation which eliminates squeal, such as sufficient curve radius or track lubrication.
- § Degraded Highway Barrier Performance - The Technical Report reasonably notes: "The effectiveness of the shielding currently provided by the existing berms and barrier walls along the DAAR and Dulles Connector Road would be diminished in those areas where elevated Metrorail tracks are proposed." The consequence of this is that highway noise will be increased as a result of rail alternatives: therefore, the increased highway traffic sound levels should be included in the computation of the impacts from Metrorail alternatives. There did not appear to be any effort in the Technical Report to quantify the barrier degradation or include it in the impact assessment, or to evaluate mitigation. (0137, 0224-M –10)

Public Comment: Degraded Highway Barrier Performance--The Technical Report reasonably notes: "The effectiveness of the shielding currently provided by the existing berms and barrier walls along the DAAR and Dulles Connector Road would be diminished in those areas where elevated Metrorail tracks are proposed." The consequence of this is that highway noise will be increased as a result of rail alternatives; therefore, the increased highway traffic sound levels should be included in the computation of the impacts from Metrorail alternatives. There did not appear to be any effort in the Technical Report to quantify the barrier degradation or include it in the impact assessment, or to evaluate mitigation. (0137, 0176-L –13)

Public Comment: Expected Wheel Squeal - The Technical Report accurately describes curved-track wheel squeal as "the annoying high-pitched, pure tone noise due to steel wheels rubbing against steel rails" and reports 8-dBA higher overall train sound levels (note that overall sound levels do not assess the highly objectionable tonal character of wheel squeal) for a curve at National Airport with radius similar to that proposed within 700 ft of Hallcrest Heights. The proposed mitigation, parapet noise barriers, will lower squeal sound levels but will not change their highly annoying tonal character; thus, barriers are unlikely to result in acceptable residential noise exposures. I strongly urge mitigation with eliminates squeal, such as sufficient curve radius or track lubrication. (0137, 0176-L –12)

Public Comment: Predicted Noise Exposures--At Hallcrest Heights, a 5-dBA range in magnitude was reported for sound levels predicted for the Metrorail Alignment Alternatives (T1, T6, T9 and T4). I was unable to identify the differences in those alternatives that could produce such variation at your development. (0137, 0176-L –11)

> ***Response:*** *<u>Existing Conditions</u> – Noise measurements were conducted at 30 representative receptor locations to account for the various land use types found along the 23.1-mile Project corridor. Ambient noise measurements representative of your neighborhood were conducted at a residence at 7103 Norwalk Street approximately 1,500 feet to the south. The noise measurement program conducted along the Project corridor was conducted in accordance with good*

engineering practice and the guidelines and standards set forth in the FTA Transit Noise and Vibration Impact Assessment (1995), the ASTM Standard Guide for Measurement of Outdoor A-weighted Sound Levels (1984), and the ANSI Method for the Measurement of Sound Pressure Levels (1981).

As a result, 24-hour continuous noise measurements were conducted at a residence at 7405 Hallcrest Drive beginning Tuesday, January 23, 2001 at 2:43 PM. Based on the field measurement notes, the weather conditions (clear and calm with an ambient temperature of approximately 40°F) were ideal for determining the current background level at this receptor location.

Predicted Noise Exposures – The difference in the predicted day-night noise levels (or Ldn) from Metrorail operations at discrete Receptor R5 (a residence at 7405 Hallcrest Drive, McLean) is due to both alignment and operational changes between alignments. For example, Alignment T9 has a higher operating speed, lower Metrorail track elevation, and lower Metrorail track separation than the other alignments. These factors all combine to result in a higher noise level at receptor R5 under Alignment T9 than for all other alignment options.

Expected Wheel Squeal - There is a potential for wheel squeal noise based on the 800-foot radius of curvature proposed near the Hallcrest Heights. However, to better define the onset of wheel squeal, actual source measurements were conducted along an existing Metrorail line near National Airport with a radius of 755 feet. Based on the results of the modeling analysis, ambient day-night noise levels from the Metrorail operations are predicted to range from 50 to 54 dBA at the Hallcrest Heights residences. The modeling analysis includes three to four-foot parapets (or barriers along the edge of the track bed) proposed along all sections of aerial guideway (except on Airport property). These levels are well below the measured ambient background noise level of 59 dBA recorded at a residence at 7405 Hallcrest Drive. As a result, no exceedances of the FTA criteria are predicted from Metrorail operations near Hallcrest Heights.

The three to four-foot parapets, proposed as part of the overall track design near the Hallcrest Heights community, will certainly lower wheel squeal sound levels. However, by reducing the overall noise level, the parapets will also, as a result, change the "highly annoying tonal character" of wheel squeal. The dominant observed frequency range of wheel squeal occurs above 2,000 Hertz with wavelengths between 3 and 7 inches. As a result, the parapets are not only expected to effectively reduce the overall noise level, but also eliminate the dominant and most annoying component of the wheel squeal noise spectrum by absorbing the smaller wavelength (i.e., higher frequency) levels. The shielding provided by the parapets is predicted to result in "acceptable residential noise exposures" from the proposed transit operations.

Degraded Highway Barrier Performance – The commenter quotes from the Noise and Vibration Technical Report (June 2002) that the effectiveness of existing barriers would be diminished in areas where elevated Metrorail tracks are proposed. The statement in the Technical Report is intended to indicate that the source of transit noise in the area would be above the existing sound barriers and berms. Trackside parapet barriers are proposed along all sections of aerial Metrorail alignment to mitigate the effects of transit noise on adjacent receptors. Further analysis of the effectiveness of the proposed mitigation will occur during preliminary engineering.

Need Additional Noise Mitigation for the Hallcrest Heights Community

Public Comment: The EIS' Noise and Vibration Technical Report states: "The effectiveness of the shielding currently provided by the existing berms and barrier walls along the DAAR and Dulles Connector Road would be diminished in those areas where elevated Metrorail tracks are proposed." For McLean communities thus affected, such as Hallcrest heights, the EIS should incorporate mitigation measures used for similar corridor communities between the Beltway and Dulles Airport. The mitigation measures proposed in the EIS are actually counter productive according to engineering comment provided to the project team: "the Metrorail facilities impair the ability of existing barrier walls to serve

their design purpose and create new noise impacts in the form of higher road traffic sound levels in addition to the noise produced by the rail operations themselves." There did not appear to be any effort in the Technical Report to quantify barrier degradation or include it in the impact assessment, or to evaluate mitigation. To counter the several varying kinds of noise (vehicular, rail, vibration and wheel squeal), plus the obvious visual problems, the EIS should employ FHWA and VDOT mitigation guidelines as well as those of the FTA. The EIS should consider depressing the tracks in a cut and cover method (similar to the lead track from the Falls Church maintenance yard) as an alternative to elevated flyovers. This was done on Metro's Blue Line at Addison Road, near Centennial Village. (0392, 0392-L –19)

> ***Response:*** *The text in the Draft EIS referenced in the comment refers to aerial structures without parapets (or track edge barriers). Unmitigated aerial structures would be expected to diminish the shielding effectiveness of the existing property line barriers. However, the Build Alternative designs will include three to four-foot track edge barriers, or parapets, along all sections of aerial track including all proposed curved flyovers and tangent track.*
>
> *The Draft EIS and Final EIS identify proposed mitigation in the form of parapet barriers for impacts at receptors adjacent to aerial guideway sections under the Metrorail Build Alternatives. The potential for noise reflections was not assessed as part of the Draft EIS or Final EIS. Acoustically absorptive treatment along the residential side of the structures is an excellent method for eliminating barrier degradation due to the "parallel barrier" effect. Absorptive treatment of the retaining walls leading to the aerial track structure will be investigated further as part of preliminary engineering.*
>
> *There is a potential for wheel squeal noise (caused by the meeting of rails and wheels on a curve) based on the 800-foot radius of curvature proposed near the Hallcrest Heights. However, to better define the onset of wheel squeal, actual source measurements were conducted along an existing Metrorail line near National Airport with a radius of 755 feet. Based on the results of the modeling analysis, ambient day-night noise levels from the Metrorail operations are predicted to range from 50 to 54 dBA at the Hallcrest Heights residences. The modeling analysis includes three to four-foot parapets (or barriers along the edge of the track bed) proposed along all sections of aerial guideway (except on Airport property). These levels are below the measured ambient background noise level of 59 dBA recorded at a residence at 7405 Hallcrest Drive. As a result, with the three to four-foot parapets, no exceedances of the FTA criteria are predicted from Metrorail operations near Hallcrest Heights.*
>
> *Because no exceedances of the FTA impact criteria are predicted under the Metrorail Alternative using parapets along all sections of aerial guideway (except on Airport property), other mitigation measures (such as depressing the tracks in a cut and cover method) are not currently proposed.*

Effectiveness of Proposed Noise Walls

Public Comment: What is the expected barrier effect that will be created from noise walls or fencing? (0147, 0459-L –11)

Public Comment: Plans are to install 3- to 5-foot parapets at tracksides, simply because they have been used before…and not necessarily because they have been proven effective. In fact, Mr. Dittmeier described an unsuccessful attempt to make the parapets "work" by spraying them with a sound-absorbing material. (0432, 0432-E –8)

> ***Response:*** *Three to four-foot parapet barriers are planned for all aerial Metrorail track sections in accordance with WMATA design criteria. Five to six-foot parapets are proposed in areas adjacent to noise receptors that were forecast to exceed FTA noise criteria under Metrorail operations. The recommendation for five to six-foot parapets was based on the projected need for additional noise reductions to bring levels below the FTA impact criteria.*

EIS Map Shows Gaps in Proposed Parapet Installation

Public Comment: Mr. Dittmeier expressed surprise that Figure 5 of the map series shows several gaps in the proposed parapet installation along sections of track where the need for sound mitigation would appear to be beyond question. (0432, 0432-E –9)

> ***Response:*** *The commenter references a figure presented at a coordination meeting conducted for concerned citizens. Figures 4.7-5a and 4.7-5b in the Final EIS illustrate locations where five to six-foot parapets are proposed as additional mitigation over and above the three to four-foot parapets planned for all aerial track under the Metrorail Extension.*
>
> *As currently planned, gaps will not exist in parapets along the aerial sections, however, sections will vary between three to four-foot and five to six-foot parapets depending on the locations of adjacent receptors which are forecast to exceed FTA noise criteria.*

Potential Metrorail Alternative Noise Impacts on the Westhampton Neighborhood

Public Comment: We [Westhampton] recently learned that rapid transit in the Dulles Corridor will subject us to increased traffic congestion and additional noise from the following sources: 8-car trains running every three minutes during rush hour in each direction; an increase in the rail yard capacity; an additional spur from the rail yard into the Dulles Connector Road behind our home; increased cut-through traffic resulting from the new parking garage and increased use of the West Falls Church metro station; the sight of an elevated train passing about 300 feet from our windows every six minutes; placement of steel beams (at night), which we understand are good transmitters of sound, to carry trains over I-66. While the projections of the Environmental Impact Statement indicate that passing trains along the Dulles Corridor will produce significant additional noise, we have no information on the combined impact of all of the new noise sources listed above. We also do not know what the overall ambient noise level will be when the new sources of noise are combined with the existing noise level. Furthermore, we are concerned that the projections of the Environmental Impact Statement will soon prove to be far too low as use of the new metro and the Dulles Connector Road increases over time. (0403, 0404- L- 3)

Public Comment: We have lived in this [Westhampton] community for 15 years. Some of our neighbors are new residents while others are the original owners of homes that are more than 40 years old. We enjoy the conveniences of living in the inner suburbs. We use metro on a daily basis. However, we feel that placing rapid transit in the median of the Dulles Connector Road will raise the noise level in this neighborhood to an unacceptable level and make our streets unsafe for our children, resulting in a dramatic decline in the quality of life we experience. For all of these reasons, we feel that traffic amelioration and a sound barrier behind our home, along the Dulles Connector Road, gives us the best chance to maintain our quality of life. (0403, 0404- L-4)

Public Comment: Having lived in the Westhampton neighborhood on Greenwich Street for more than twelve years, I can tell you first hand that the noise levels and traffic have risen significantly at the interchange where the Dulles Access Road connects with I-66 at the West Falls Church Metro Station - particularly, since the addition of the Dulles Toll Road traffic. The two levels of traffic already create such significant noise for our neighborhood that noise abatement structures are warranted today, even before the Transit Project was to commence. (0414, 0414-L –1)

Public Comment: Figure 3 in the map series shows that the Westhampton area next to the right of way and between what appears to be 745+00 and 785+00 will be below track level. There seemed to be no understanding of sound transmission…that is…whether track noise will be greater for residents above or below track level…or whether the tunnel exit from the West Falls Church Storage and Inspection yard might concentrate and "focus" noise at residential areas in line with the exit. (0432, 0432-E –10)

Public Comment: Here again [Westhampton], it would seem that concrete walls are the appropriate solution to noise pollution as well as to visual pollution. (0432, 0432-E-13)

Response: *The Project Team utilized the guidelines established by the FTA (Transit Noise and Vibration Impact Assessment, 1995)) to determine the applicable noise impact criteria in all areas of the proposed corridor. As described in Section 4.7 of the Final EIS, the FTA noise criteria are based on existing noise levels that increase as the background level increases to a point beyond which impact is determined on Project noise alone. The FTA criteria are not used to assess existing background noise but rather, are used to evaluate impacts due to new transit projects against the background of existing noise levels. Where background noise is already high, as in your area, it takes only a relatively small increase to trigger an impact.*

Currently, sound barriers are not proposed along the property lines adjacent to the Dulles Connector Road or Dulles Toll Road as part of the Project. Three to four-foot parapets or track edge barriers are proposed along all aerial Metrorail sections (except on Airport property). Figures 4.7-5a and 4.7-5b are included to help identify the location of the proposed five to six-foot parapet barriers closest to your street.

Roadside sound barriers are typically evaluated during the design of major highway improvement projects such as widening or new alignment when noise impacts are forecast for adjacent noise-sensitive receptors. Evaluation criteria including effectiveness and cost are typically employed to make decisions on sound barrier location, height, and type. Generally speaking, sound barriers are not constructed except in conjunction with major highway improvements. Major highway improvements are not anticipated in conjunction with the Dulles Corridor Rapid Transit Project.

Need to Mitigate Switch Noise

Public Comment: The problem of switch noise which occurs when a steel wheel bridges and bumps across the gap between rail ends is inevitable, so is wheel squeal on tight turns like the one into the WFC S&I Yard. Surely something can be done to muffle and mitigate this problem. (0432, 0432-E –12)

Response: *Although the proposed Metrorail Extension consists of continuously welded rail (CWR) track, switches are proposed at several locations along the Dulles Corridor. Based on noise measurements conducted at Discrete Receptor R1 (The Pavilion townhouses on Falls Church Drive) along the existing Orange Line near West Falls Church station, Metrorail passbys over single switches or crossovers will be audible; but are not expected to lead to an exceedance of the Project noise criteria.*

Wheel squeal was included in the noise analysis for tight radius turns such as the one at the West Falls Church S&I Yard site. The Final EIS includes mitigation measures (see Section 4.7) to enclose a portion of the existing loop track and the proposed yard lead in box structures to reduce noise impacts.

Deficiencies in the Proposed Noise Mitigation Strategies

Public Comment: Deficiencies in the proposed noise mitigation strategy. The proposed noise mitigation strategy is using short walls close to the track to sound-proof the train wheels. The plans show gaps in the sound-proofing walls at the section of track along the Westhampton neighborhood. There is no data to demonstrate that the proposed mitigation strategy (i.e., sound-proofing walls) will be effective in maintaining the noise below federal standards if peak cumulative noise levels are considered and for this particular (and unique) situation, i.e., high speed rail in close proximity to homes on sharply curved aerial track on metal supports. (0386, 0386-E –3) (0398, 0398-L-3) (0399 0399-L-3) (0412, 0412-L-3) (0415, 0415-L-3) (0416, 0416-L-3) (0430, 0430-E-3) (0466, 0466-L-3) (0467, 0467-L-3) (0431, 0431-E-3) (0473, 0473-L-3) (0469, 0469-L-3) (0471, 0471-L-3) (0465, 0465-L-3) (0470, 0470-L-3) (0438, 0438-E-3) (0442, 0442-L-3) (0474, 0474-L-3)

Public Comment: Deficiencies in the proposed noise mitigation strategies. The proposed noise mitigation strategy is using short walls close to the track to sound-proof the train wheels. The plans show gaps in the sound-proofing walls at the section of track along the Westhampton neighborhood. There is

also no data to quantify the final derivative noise output after mitigation and no data to demonstrate that the proposed mitigation strategy (i.e., sound-proofing walls) will be effective in maintaining the noise below federal standards. Plans also appear to be insufficient to address the other additional noise sources from switches and the rail yard. (0403, 0403-L –2)

Response: *The Metrorail Extension at the junction with the existing Orange Line in West Falls Church is expected to have a gradual curve with a turning radius of 1,000 feet. Based on the FTA guidelines as well as measurements made at other existing Metrorail curves, wheel squeal is not expected to occur at locations with this curvature. Tangential noise that typically occurs along straight sections of track is expected along this segment of the Dulles Corridor.*

Due to structural vibrations, aerial track may exhibit additional structural noise as a result of train passbys along aerial guideway sections. Although the potential for additional structural noise was included in the noise assessment, it is highly unlikely due to the newer structural designs proposed along the Dulles Corridor. Pre-cast concrete supports, resiliently-supported ties, and continuously welded rail (CWR) track included in the proposed track design all combine to greatly minimize overall noise and vibration levels from train passbys along aerial sections.

Additionally, three to four-foot parapets (or track edge barriers) are proposed as part of the design along all aerial sections of the Metrorail Extension. Based on the assumed Metrorail source height of two feet above rail combined with the top-of-rail elevation, the three to four-foot parapet height is predicted to effectively shield train passbys at nearby residences. As a result, aerial tunnels in the sky are not required. For example, based on a profile view of the 2-foot train source height with and intervening three to four-foot parapet wall on an elevated structure above a five-foot receptor, the line-of-sight between the train and the receptor is broken by the parapet. The degree of this path length difference (i.e., between the direct line-of-sight and the path over the parapet) relates to the overall shielding effect of the barrier.

Acoustically absorptive treatment along the trackside of the parapets further improves the shielding benefits of the structural parapets. The 2-foot train source height is a combination of the steel wheel on steel rail noise, the aerodynamic noise, as well as other onboard auxiliary equipment such as brake and air conditioning compressors.

As described in Section 4.7 of the Final EIS, the noise analysis was conducted according to the FTA Transit Noise and Vibration Impact Assessment (1995) guidelines. Accordingly, the peak-hour equivalent noise level (or Leq) was used to evaluate impacts at non-residential receptors; and the 24-hour day-night noise level (or Ldn) was used to evaluate impacts at residential receptors. Although the FTA criteria are defined in terms of allowable project exposure, the basis for the FTA criteria is actually the increase in the cumulative noise (i.e., when the Project levels are added to the existing noise).

In addition to the FTA cumulative noise criteria, peak or maximum noise levels (or Lmax) from transit operations were also used to evaluate Project impacts using the WMATA Design Criteria for various residential land-uses. The Lmax noise level is independent of the existing background and the number of operations and represents the maximum level observed during a single event, such as a Metrorail or bus passby.

Finally, Figures 4.7-5a and 4.7-5b in the Final EIS show the proposed locations of five to six-foot parapets (or track edge barriers) along both aerial and at-grade sections of track that were proposed to eliminate noise impacts predicted under the Metrorail Alternative. All other sections of aerial track, including the flyover near I-66 and in Tysons Corner, for example, include three to four-foot parapets as part of the proposed track design. If no exceedances of the FTA or the WMATA impact criteria are predicted along other at-grade sections of track under the Metrorail Extension (such as along the Westhampton neighborhood), no additional mitigation measures are proposed.

Quantify Noise Output After Mitigation Measures

Public Comment: Additional study of the noise impact at peak cumulative noise levels on the surrounding communities, including: 1) precisely quantifying the expected peak noise output after mitigation features, including a consideration of cumulative affects from the enlarged rail yard, its tunnel and curved feeder tracks, the highway, and the metal train track support; and 2) examining and documenting the effectiveness of the proposed mitigation strategy (i.e., sound-proofing walls) for mitigating peak cumulative noise levels. (0386, 0386-E –6) (0471, 0471-L-5) (0399, 0399 L-6) (0412, 0412-L-6) (0415, 0415-L-6) (0416, 0416-L-6) (0430, 0430-E-6) (0431, 0431-E-6) (0466, 0466-L-5) (0473, 0473-L-6) (0474, 0474-L-6) (0465, 0465-L-6) (0469, 0469-L-5) (0438, 0438-E-5) (0398, 0398-L-6) (0470, 0470-L-6) (0467, 0467-L-5) (0442, 0442-L-5)

Public Comment: Additional study of the noise impact on the neighborhood [Westhampton] to: 1) precisely quantify the expected noise output after mitigation features, including a consideration of how the rail yard tunnel might exacerbate noise levels; 2) support the contention that the proposed mitigation strategy (I.e., sound-proofing walls) will be effective; and 3) consider the probable total noise level by combining the current level with all new sources of Metro-related noise. (0403, 0403-L –5)

Response: *With respect to the concerns of communities on the noise of the Metrorail West Falls Church Yard, the Project Team recommended and the decision-makers approved the enclosure of 1) a portion of the existing loop track at the yard's eastern end and 2) the new yard lead in box structures. These noise mitigation measures by the Project will reduce the wheel squeal noise of the train movements within the Yard. The Project Team notes, however, that new residences have been recently constructed and occupied adjacent to the West Falls Church S&I Yard without any noise mitigation provided by the residential developer. As during the past ten-year effort to address yard noise, there will be coordination among DRPT, WMATA, Fairfax County officials and staff, and representatives of the communities during preliminary engineering and final design.*

The number of additional cars at West Falls Church Yard has increased from 26 in the Draft EIS to 42 in the Supplemental Draft EIS and Final EIS in order to support the Metrorail fleet of the Wiehle Avenue Extension.

Wheel squeal from the new yard lead (for Metrorail trains to and from the Dulles Corridor Line) at the east end of the yard was included in the modeling analysis. Based on measured noise levels from the current wheel squeal along a similar radius curve at the yard, exceedances of the FTA impact criteria are predicted at nearby residences. No exceedances are predicted from the Project's aerial guideway in the median of the Dulles Connector Road.

Other noise sources, such as train horns, were not included in the modeling analysis. Brake squeal was not determined to be a major problem. Based on the current operating schedule at the yard, the increase in the overall yard noise due to the cleaning and general operation of 42 additional Metrorail cars needed for the Project is expected to be minimal.

No noise impacts are predicted at nearby residences from the new rail yard tunnel portal in the median of the Dulles Airport Connector Road. This is due to several reasons including the location of the curve deep inside the tunnel, the use of acoustical treatments along the tunnel walls, and the directionality of the tunnel portal and the nearby residences.

As described in Section 4.7 of the Final EIS, the noise analysis was conducted according to the FTA Transit Noise and Vibration Impact Assessment (1995) guidelines. Accordingly, the peak-hour equivalent noise level (or Leq) was used to evaluate impacts at non-residential receptors; and the 24-hour day-night noise level (or Ldn) was used to evaluate impacts at residential receptors. Although the FTA criteria are defined in terms of allowable project exposure, the basis for the FTA criteria is actually the increase in the cumulative noise (i.e., when the project levels are added to the existing noise).

In addition to the FTA cumulative noise criteria, peak or maximum noise levels (or Lmax) from transit operations were also used to evaluate Project impacts using the WMATA Design Criteria for various residential land-uses. The Lmax noise level is independent of the existing background and the number of operations and represents the maximum level observed during a single event, such as a Metrorail or bus passby.

Furthermore, although newer pre-cast concrete track structures are proposed to minimize excessive noise and vibration levels, the modeling analysis included a 4-decibel penalty to account for potential structural noise due to Metrorail passbys along all elevated sections of slab track. As described in Section 4.7 of the Final EIS, where exceedances of the FTA or the WMATA impact criteria are predicted, mitigation measures are proposed. All proposed mitigation measures are predicted to eliminate exceedances of the FTA (cumulative) and the WMATA (peak) impact criteria. Quantification of the anticipated noise reductions associated with proposed noise mitigation will occur during preliminary engineering or the final design.

Comparison of Noise Levels of an Aerial Bridge Versus a Tunnel

Public Comment: Has any noise analysis been done to compare the sound impact on my house and my neighbors of an aerial bridge versus a tunnel? I am not an engineer, but it strikes me that elevating a train to a level equal to the height of the sound barriers gives the sound a more direct angle to our houses. Will better and higher barrier walls need to built to protect our houses and their values? (0117, 0117-E –7)

Response: *Noise measurements and analyses were originally conducted at 30 discrete noise-sensitive receptor locations along the corridor during the peak travel, mid-day, off-peak, and late night hours. After the selection of the LPA, the total number of receptors measured in the Final EIS was 21. See Section 4.7 of the Final EIS for specific monitoring locations.*

Under the Metrorail Extension, which is the selected Locally Preferred Alternative, three to four-foot parapets (or track edge barriers) are proposed along all aerial sections of the alignments. Based on the assumed Metrorail source height of two feet above rail combined with the top-of-rail elevation, the three to four-foot parapet height is predicted to effectively shield train passbys at nearby residences. Additionally, acoustically absorptive treatment along the trackside of the parapets could further improve the shielding benefits of the structural parapets.

Noise Impacts on Homes Located Near Dulles Airport Access Road and West Falls Church Metrorail Station

Public Comment: I sent this email to you on 7-15-02: I live at 2050 Greenwich Street. My house backs up to the Dulles Access Road several blocks after the Dulles Access Road branches off of I-66. How much noise will the train add to my backyard? Although there is a 20 (approx.) foot barrier fence, we already get some sound from cars on the access road. Will having the train as my neighbor increase the noise and by how much? (0117, 0117-E –5)

Public Comment: I was shocked to learn at the hearing last night at Springhill Elementary School that you are planning to take the train into the air near the West Falls Church Metro. I had always assumed that you would make the turn underground. What additional sounds will be generated for the homes and high occupancy condos on both sides of 66 and the Dulles Access Road around the WFC metro? (0117, 0117-E –1)

Response: *Due to structural vibrations, aerial track may exhibit additional structural noise as a result of train passbys along aerial guideway sections. Although the potential for additional structural noise was included in the noise assessment, it is highly unlikely due to the newer structural designs proposed along the Dulles Corridor. Pre-cast concrete supports, resiliently-supported ties, and continuously welded rail (CWR) track included in the proposed track design all combine to greatly minimize overall noise and vibration levels from train passbys along aerial*

sections. Additionally, three to four-foot parapets are proposed as part of the design along all sections of aerial guideway (except on Airport property) to further reduce train noise at nearby receptors.

The Metrorail Extension at the junction with the existing Orange Line in West Falls Church is expected to have a gradual curve with a turning radius of 1,000 feet. Based on the FTA guidelines as well as measurements made at other existing Metrorail curves, wheel squeal is not expected to occur at locations with this curvature. Tangential noise that typically occurs along straight sections of track is expected along this segment of the Dulles Corridor.

Estimated Ldn noise levels from Metrorail operations along Greenwich Street are predicted to range from 55 to 59 dBA. These levels are well below the measured background of 62 to 65 dBA. Based on current traffic levels, the ambient noise level in 2025 with Metrorail service would increase approximately 1 decibel to range from 63 to 66 dBA. As a result, no exceedances of the FTA noise criteria are predicted from Metrorail passbys at receptors along the Greenwich Street neighborhood.

Metrorail Extension will Create Noise in Neighborhoods

Public Comment: I am not an environmental sound specialist, but I ride the train a lot and it seems to me this means you are planning to put a lot of noise in my neighborhood. Putting loud rapidly moving and turning trains in direct earshot of lots of people's residences seems very inconsiderate. How about our property values? Specifically, how much new noise will be created and how frequently? (0117, 0117-E – 3)

Response: *The Metrorail Extension at the junction with the existing Orange Line in West Falls Church is expected to have a gradual curve with a turning radius of 1,000 feet. Based on the FTA guidelines as well as measurements made at other existing Metrorail curves, wheel squeal is not expected to occur at locations with this curvature. Tangential noise that typically occurs along straight sections of track is expected along this segment of the Dulles Corridor.*

Estimated Ldn noise levels from Metrorail operations along Greenwich Street are predicted to range from 55 to 59 dBA. These levels are well below the measured background of 62 to 65 dBA. Based on current traffic levels, the ambient noise level in 2025 with Metrorail service would increase approximately 1 decibel to range from 63 to 66 dBA. As a result, no exceedances of the FTA noise criteria are predicted from Metrorail passbys at receptors along the Greenwich Street neighborhood.

Studies on the impacts of transit systems have found that the availability of transit typically increases the value of property in the vicinity.

Impacts of Night-Time Construction Noise

Public Comment: Another frightening aspect of your study is the statement that heavy rail construction at the Orange Line Dulles connection would take place at night. The only impact I could find was the suggestion that fewer travelers would be inconvenienced. What about those of us who must sleep at night in surrounding neighborhoods? Will you address the health impacts of long-term of Ambien? (0145, 0145-T –9)

Public Comment: The first point is that the construction activities along the Toll Road will aggravate a serious noise situation especially because the buses and metrorail are major contributors to noise and will operate until midnight during the week and 2 a.m. on the weekends. (0174, 0174-T –3)

Response: *During construction, DRPT would comply with noise limits established by FTA and WMATA guidelines, federal law (for Wolf Trap Farm Park), and time-of-day restrictions specified*

in local noise ordinances. If necessary, temporary mitigation measures will be employed during construction.

A study of the health impacts of long-term use of Ambien (a prescription drug that is used as a sleeping aid) is beyond the scope of the EIS.

Metrorail Extension Noise Impacts on Rotonda Community

Public Comment: Added to the cost would be the loss in quality of life to the Rotonda residents. Though my condo is located so I'd experience little additional noise, numbers of residents would experience so much they would find it intolerable. (0051, 0051-CC-2)

Public Comment: As residents of the Rotonda we object to the above ground Metrorail (T-4 loop) which would border our properties as the appearance, noise and vibrations would be offensive. (0037, 0309-L –1) (0310, 0310-L –1) (0311, 0311-L –1) (0312, 0312-L –1) (0313, 0313-L –1) (0314, 0314-L –1) (0315, 0315-L –1) (0316, 0316-L –1) (0317, 0317-L –1) (0318, 0318-L –1) (0319, 0319-L –1) (0320, 0320-L –1) (0321, 0321-L –1) (0322, 0322-L –1) (0323, 0323- L-1) (0324, 0324-L –1) (0325, 0325-L –1) (0326, 0326-L –1) (0327, 0327-L –1) (0328, 0328-L –1) (0329, 0329-L –1) (0330, 0330-L –1) (0331, 0331-L –1) (0332, 0332-L –1) (0333, 0333-L –1) (0334, 0334-L –1) (0335, 0335-L –1) (0336, 0336-L –1) (0337, 0337-L –1) (0338, 0338-L –1) (0339, 0339-L –1) (0340, 0340-L –1) (0341, 0341-L –1) (0342, 0342-L –1) (0343, 0343-L –1) (0344, 0344-L –1) (0345, 0345-L –1) (0346, 0346-L –1) (0347, 0347-L –1) (0348, 0348-L –1) (0349, 0349-L –1) (0350, 0350-L –1) (0351, 0351-L –1) (0352, 0352-L –1) (0353, 0353-L –1) (0354, 0354-L –1) (0355, 0355-L –1) (0356, 0356-L –1) (0357, 0357-L –1) (0358, 0358-L –1) (0359, 0359-L –1) (0360, 0360-L –1) (0059, 0361-L –1) (0362, 0362-L –1) (0363, 0363-L –1) (0364, 0364-L –1) (0365, 0365-L –1) (0366, 0366-L –1) (0367, 0367-L –1) (0368, 0368-L –1) (0369, 0369-L –1) (0370, 0370-L –1) (0371, 0371-L –1) (0372, 0372-L –1) (0373, 0373-L –1) (0374, 0374-L –1) (0375, 0375-L –1) (0376, 0376-L –1) (0377, 0377-L –1) (0378, 0378-L –1) (0379, 0379-L –1) (0380, 0380-L –1) (0302, 0302-L –1) (0305, 0305-L –1)

Response: *These comments concerned the potential effects of Alignment T4, which was eliminated from further consideration after the public and agency review and comment on the Draft EIS. No noise impact is projected in the vicinity of the Rotonda.*

Additional Noise is Hazardous to Children

Public Comment: Finally, the excessive noise is a health and safety hazard for children who because of the noise cannot hear oncoming cars. This hazard affects both children and adults whether they walk on the shoulders of the street or on the street itself. (0174, 0300-L –10)

Response: *The FTA criteria allow the ambient noise levels to increase 1 to 3 decibels (depending on the current background level). The ambient noise level currently experienced by this neighborhood is from traffic on I-66 and the Dulles Connector Road. This existing ambient noise level is not anticipated to be significantly increased by the Project. Under the Metrorail Extension, which is the LPA, Project noise levels are predicted to increase the ambient level by less than 2 decibels. As described in Section 4.7 of the Final EIS, where exceedances of the FTA criteria are predicted, mitigation measures are propose.*

Buses are a Major Contributor to Noise

Public Comment: Thus, the deployment of the bus, metro or combination system would only increase an already serious noise problem. And because buses are a major contributor to noise, the level of increase will not be tolerable. (0174, 0300-L –6)

Response: *Based on the FTA impact criteria, Project noise levels are allowed to increase the ambient background levels only slightly (i.e., 1-3 decibels) or not at all based on the decibel level*

measured as the existing ambient condition. Where exceedances of the FTA criteria are predicted, mitigation measures are proposed. (See Section 4.7.7 of the Final EIS)

Support Metrorail Extension but Concerned Over Noise Impacts

Public Comment: I support rail along the Dulles Corridor. However, the draft environmental impact statement has left me with concern as to the implementation. As with other individuals, I am worried about the impact on residential neighborhoods of heavy rail-generated noise, particularly from the elevated track. (0178, 0178-T –1)

Response: *Rail generated noise was assessed according to FTA guidelines and the results of the analysis are presented in Section 4.7 of the Final EIS. In areas where the Metrorail Extension would have aerial guideway, three to four-foot parapet barriers are planned on the structure. These barriers would result in a reduction of noise from the wheel/rail interaction. Where the noise analysis identified the potential for exceedance of the FTA noise criteria at adjacent receptors, mitigation was considered to minimize impacts. Five to six-foot parapet barriers have been proposed in some locations in order to reduce impacts below FTA criteria. The locations where five to six-foot parapets are proposed are illustrated on Figures 4.7-5a and 4.7-5b of the Final EIS.*

Aerial Structures Should Be Required To Be Concrete

Public Comment: Aerial Structures -- WMATA should be required to make a commitment during its approval process (included in the resolution the Board of Directors adopts to approve the Dulles Line) to require that the aerial structures be concrete. Concrete structures are the basis of the noise analysis. The option, a composite steel and concrete structure with a concrete deck atop a steel box beam as used in the vicinity of the Eisenhower Avenue and Huntington Stations and outbound of the Stadium-Armory Station. These composite structures are inherently much noisier and thus, unacceptable. The commitment in the resolution is necessary to preclude WMATA from shifting from the concrete to the composite structure during the design phase despite promises to the community as occurred on the Blue Line Extension in Prince George's County where a composite structure was substituted for the promised concrete structure for the structure crossing the Beltway. (0387, 0387-L –12)

Response: *Although newer pre-cast concrete track structures are proposed to minimize excessive noise and vibration levels, the modeling analysis included a 4-decibel penalty to account for potential structural noise due to Metrorail passbys along all elevated sections of slab track. This noise assessment is based on the FTA guidelines and is independent of the type of aerial structure proposed as part of the Dulles Corridor Rapid Transit Project.*

Need Cast Concrete Sound Barrier Walls for Hallcrest Heights

Public Comment: The project needs to include additional measures to provide adequate noise mitigation to the affected neighborhoods, particularly those of Hallcrest Heights, at the time of construction. The measures proposed in the DRAFT EIS are insufficient. Cast concrete walls with sound absorptive coating would be more likely to provide adequate mitigation. (0418, 0418-L –3)

Response: *Exceedances of the WMATA noise criteria for construction activities were identified in Section 4.7 of the Final EIS. During construction, DRPT would comply with noise limits established by FTA and WMATA guidelines, federal law (for Wolf Trap Farm Park), and time-of-day restrictions specified in local noise ordinances. If necessary, temporary mitigation measures will be employed during construction.*

Currently, sound barriers are not proposed along the property lines adjacent to the Dulles Connector Road or Dulles Toll Road as part of the Project. Three to four-foot parapets or track edge barriers are proposed along all aerial Metrorail sections (except on Airport property). The locations of the proposed mitigation measures are described in Section 4.7 of the Final EIS.

Figures 4.7-5a and 4.7-5b are included to help identify the location of the proposed five to six-foot parapet barriers closest to your street.

Roadside sound barriers are typically evaluated during the design of major highway improvement projects such as widening or new alignment when noise impacts are forecast for adjacent noise-sensitive receptors. Evaluation criteria including effectiveness and cost are typically employed to make decisions on sound barrier location, height, and type. Generally speaking, sound barriers are not constructed except in conjunction with major highway improvements. Major highway improvements are not anticipated in conjunction with the Dulles Corridor Rapid Transit Project.

Increased Train Traffic Will Increase Noise Impacts on West Falls Village Community

Public Comment: Clearly the construction and operation of a new rail line to Dulles Airport will result in increased use of the tracks that run by our community [West Falls Village]. The level of train traffic could be substantial, resulting in as much as a doubling of the train traffic on the current Orange Line tracks. In fact, if a line is built which includes train service to Tysons Corner, we can easily foresee a future in which the increased demands for service to Tysons results in more than a doubling of train traffic. Any increase in train traffic represents a major noise increase and is of great concern to our community. Currently, even in periods of peak car traffic noise, a train moving by our neighborhood results in a significant, noticeable and unpleasant increase in noise levels. The threat of a significant increase in train traffic would be a major impact on our community negatively affecting our health and well being. In addition, we also are threatened by the noise resulting from the substantial construction needed for this project. (0435, 0435-E –2)

Response: *The impacts associated with the Dulles Corridor Rapid Transit Project are identified in Section 4.7 of the Final EIS and include the number of proposed future transit operations. Based on the noise modeling assessment using the FTA Transit Noise and Vibration Impact Assessment (1995) guidelines, no exceedances of the FTA impact criteria are predicted at the West Falls Village community. Therefore, although no mitigation is proposed specifically for the West Falls Village community, this area should benefit from mitigation measures to eliminate impacts predicted along Haycock Road and Westwood Place.*

Additional Mitigation of Construction-Related Noise Impacts on Hallcrest Heights

Public Comment: Additional measures to provide adequate noise abatement in neighborhoods that will be affected by construction, such as Hallcrest Heights, must be included in the project. (0393, 0393-L –4)

Response: *Exceedances of the WMATA criteria for construction activities are identified in Section 4.7 of the Final EIS. During construction, DRPT would comply with noise limits established by FTA and WMATA guidelines, federal law (for Wolf Trap Farm Park), and time-of-day restrictions specified in local noise ordinances. If necessary, temporary mitigation measures would be employed.*

Metrorail Extension May Reduce Bus and Vehicle Noise

Public Comment: I live adjacent to the Dulles Access Rd. as it approaches "66" - and I am intimately acquainted with the problems of noise especially. Maybe rapid transit will cut down bus and vehicle noise - a thought - but it can't be worse than it already is. (0467, 0467-L –10)

Response: *Thank you for your comment.*

Monetary Compensation for Noise Impacts

Public Comment: What about monetary compensation for reduced quality of life? With the noise level, we will only be able to sleep between 2:00 AM - 5 AM. Property values will be drastically reduced! (0058, 0058-CC-1)

Response: *Noise impacts are assessed in Section 4.7 of the Final EIS. Mitigation measures are proposed to minimize impacts. In general, property values along transit corridors, and especially near transit stations, increase over time due to the benefits of improved mobility.*

Aggressively Address Noise Impacts on Homes Near Greenwich Street

Public Comment: Additional noise generated from construction and metro operations needs to be aggressively addressed. Partial track enclosure or 5 foot track parapet should be considered [near Greenwich Street]. In addition, there should be limits on construction noise during the overnight hours while the project is underway. (0389, 0389-E –4)

Response: *Three to four-foot parapets (or track edge barriers) are proposed along all aerial Metrorail sections (except on Airport property). The types and location of the proposed mitigation measures are described in Section 4.7of the Final EIS. Figures 4.7-5a and 4.7-5b are included to help identify the location of the proposed five to six-foot parapet barriers closest to your street.*

During construction, DRPT would comply with noise limits established by FTA and WMATA guidelines, federal law (for Wolf Trap Farm Park), and time-of-day restrictions specified in local noise ordinances. If necessary, temporary mitigation measures will be employed during construction.

Need to Reduce Construction Noise Through Sequencing

Public Comment: Although specifics are not given in the EIS, it is not hard to judge from precedents in other elevated sections of the Metro system, that construction noise will be considerable. Since our community [Hallcrest Heights] lies some 10-12 feet below the level of the roadway in the corridor, the construction of the elevated and curving section of the proposed rail service into Tysons, will involve substantial and sustained construction noise over an extended period of time. Given the FTA's policy of coordinated transportation planning (which I assume would include dealing with such public agencies as MWAA and VDOT), the EIS should sequence significant transportation noise mitigation measures in the corridor (and particularly our adjoining section) ahead of construction activities. Since VDOT has chosen not only to not maintain the existing ineffective barrier, (which is too low and too short anyway), and since MWAA has said they will not retrofit any communities for such abatement, the EIS should address the problem in a comprehensive way if the project's objective to protect adjoining communities has any meaning at all. If the EIS were to include such analysis, then a noise barrier of modern design equivalent to that erected for Wolf Trap and other communities in the corridor should be placed at our section of the corridor. Such a barrier must extend all the way down the off-ramp to the merge with Route 123 if it is to have any effect at all. (0137, 0304-L –3)

Response: *Exceedances of the WMATA noise criteria for construction activities are identified in Section 4.7 of the Final EIS. During construction, DRPT would comply with noise limits established by FTA and WMATA guidelines, federal law (for Wolf Trap Farm Park), and time of day restrictions specified in local noise ordinances. If necessary, temporary mitigation measures will be employed.*

Currently, sound barriers are not proposed along the property lines adjacent to the Dulles Connector Road or Dulles Toll Road as part of the Project. Three to four-foot parapets or track edge barriers are proposed along all aerial Metrorail sections (except on Airport property). The types and location of the proposed mitigation measures are described in Section 4.7 of the Final EIS. Figures 4.7-5a and 4.7-5b are included to help identify the location of the proposed five to six-foot parapet barriers closest to your street.

Roadside sound barriers are typically evaluated during the design of major highway improvement projects such as widening or new alignment when noise impacts are forecast for adjacent noise-sensitive receptors. Evaluation criteria including effectiveness and cost are typically employed to

make decisions on sound barrier location, height, and type. Generally speaking, sound barriers are not constructed except in conjunction with major highway improvements. Major highway improvements are not anticipated in conjunction with the Dulles Corridor Rapid Transit Project.

Concern Over Nighttime Construction Activities

Public Comment: Another frightening aspect of your study is the statement that heavy rail construction at the Orange Line/Dulles connection would take place at night! The only impact I could find was the suggestion that fewer travelers would be inconvenienced. What about those of us who must sleep at night in the surrounding neighborhoods? (0145, 0452-E –6)

Response: *The short-term construction effects and noise generated by that construction were included in the noise analysis and any adverse effects on neighborhoods were identified. Certain construction work must be completed during Metrorail non-revenue hours.*

Concrete Aerial Structures Are Better Than Composite Steel Beam

Public Comment: Design of aerial structures is critical. Aesthetics and acoustical impacts should not be objectionable to pedestrians or nearby residents. Concrete structures are quieter and more flexible than composite steel beam structures with the concrete deck, as has been used near the Grosvenor-Stadium Armory and Huntington stations. Designers should strive to provide the quietest environment possible. (0387 4-01)

Response: *The materials used to construct the aerial structures will be finalized during preliminary engineering.*

Noise Impacts on Westhampton Neighborhood

Public Comment: Believes that the Westhampton neighborhood is subject to disproportionate share of impacts of noise, traffic, air, and visual pollution. States that nowhere else on the Metrorail system are a park-and-ride facility, freeway (Dulles Connector Road), rail yard, and an aerial track simultaneously located near residences. (0117, 4-02)

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Public Comment: States that the Westhampton neighborhood is the starting point for the project, so how will they not be affected by noise, traffic, air, and visual impacts of the project, as stated in the Draft EIS and *Public Hearings Report*. (0520, 4-01)

Response: *The Project Team is aware of Westhampton's concerns. The Project Team will continue to coordinate with the neighborhood and Fairfax County on these issues during preliminary engineering.*

Public Comment: Requests that the Project Team adopt a more aggressive mitigation strategy such as an underground track bed in the area near the West Falls Church Metrorail Station and rail yard. (0117, 4-03)

Response: *The planning for the Orange Line Junction of the Metrorail Extension has always incorporated the use of at-grade and aerial methods of construction for connecting the flyover from the median of I-66 to the median of the Dulles Connector Road. Provisions for this connection were made with the original construction of the Orange Line in the early 1980s, including the construction of a pier and foundation in between the Orange Line tracks to facilitate such an aerial structure to minimize eventual disruption to the Orange Line during construction.*

The impacts and costs for underground construction of this connection were not evaluated as part of any current alternative. Making this connection would present extremely complex construction challenges to keep the Orange Line fully operational and not impact both directions of I-66, a major interstate highway. Due to its complexity, the cost of this underground construction for this segment would be significantly greater than typical cut and cover construction, and many times greater than the planned at-grade and aerial construction.

Public Comment: Encourages the Project Team to visit the neighborhood and perform acoustical readings when the trains are actively entering and existing the West Falls Church S&I Yard. Suggests that if the Project Team cannot find a way to mitigate or lessen the noise, then the design of the rail yard should be modified before construction of the Dulles Line begins. States that residents are not against the project, but they are against the increased noise. The Project Team needs to start a dialogue with the neighbors of the West Falls Church rail yard. (0089, 4-02)

Response: *The Project Team is aware these concerns. As mitigation for the potential noise impacts, it is proposed that the new lead track and portions of the existing loop track at the West Falls Church Yard be fully enclosed to reduce wheel squeal noise impacts from yard operations.*

Use of Lubricants to Address Wheel Squeal

Public Comment: Concerned that the mitigation measures proposed for wheel squeal (on page 220 of the *Public Hearings Report*) will never get implemented. Commenter inquired with a Metrorail engineer and was told that lubricants are only used on tracks when there are complaints from neighbors. (0137, 4-02)

Response: *The use of lubricants is one of the measures identified in the Draft EIS as possible mitigation for train wheel squeal. In addition is proposed that the new lead track and portions of the existing loop track at the West Falls Church Yard be enclosed to reduce wheel squeal noise impacts from yard operations.*

Cutting Down Trees for Stormwater Pond Will Increase Noise Impacts

Public Comment: Concerned that the noise is presently so severe that it is a public safety hazard that will be made worse by the construction of Metrorail without the construction of sound walls between the Dulles Toll Road and their neighborhood. Concerned that noise levels are currently above FTA accepted limits, and the commenters feel that if the current mature forestation is torn down for the construction of a stormwater pond, then WMATA is directly responsible for the resulting noise impacts. Commenters recommend the development of a noise abatement plan between WMATA, VDOT, and affected individuals. (0383, 4-01)

Response: *The proposed pond location in question currently is a natural depression with a culvert outfall. If a pond were constructed in this location, little or no grading would be required to convert existing depression into a stormwater management facility. It is unlikely that many of the trees would need to be removed. A discussion of the Project's noise effects and proposed mitigation measures is presented in Section 4.7 of the Final EIS.*

Project Will Add to Existing Noise

Public Comment: The project will exacerbate existing noise and traffic problems. (0430 4-01) (0388, 4-01)

Response: *The Project Team utilized the guidelines established by the FTA (Transit Noise and Vibration Impact Assessment, 1995)to determine the applicable noise impact criteria in all areas of the proposed corridor. The FTA noise criteria are based on existing noise levels that increase as the background level increases to a point beyond which impact is determined on Project noise alone. The FTA criteria are not used to assess existing background noise but rather, are used to*

evaluate impacts due to new transit projects against the background of existing noise levels. Where background noise is already high, as in your area, it takes only a relatively small increase to trigger an impact. Section 4.7of the Final EIS contains proposed mitigation measures for predicted noise impacts.

Concern over Existing and Proposed Noise Mitigation

Public Comment: Inadequate noise mitigation- unconvinced of the effectiveness of the parapet walls for aerial track. Existing walls are too short, ineffective, and have not been maintained by VDOT. No sound wall exists between the DAAR and some of the residences in the community. (0388, 4-02) (0430, 4-02)

Response: *The Project is not responsible for the mitigation of existing noise issues. Currently, sound barriers are not proposed along the property lines adjacent to the Dulles Connector Road or Dulles Toll Road as part of the Project. Three to four-foot parapets or track edge barriers are proposed along all aerial Metrorail sections (except on Airport property). The types and location of the proposed mitigation measures are described in Section 4.7 of the Final EIS. Figures 4.7-5a and 4.7-5b in the Draft EIS are included to help identify the location of the proposed five to six-foot parapet barriers closest to your street.*

Roadside sound barriers are typically evaluated during the design of major highway improvement projects such as widening or new alignment when noise impacts are forecast for adjacent noise-sensitive receptors. Evaluation criteria including effectiveness and cost are typically employed to make decisions on sound barrier location, height, and type. Generally speaking, sound barriers are not constructed except in conjunction with major highway improvements. Major highway improvements are not anticipated in conjunction with the Dulles Corridor Rapid Transit Project.

Noise Impacts at West Falls Church

Public Comment; Increased noise volume, frequency, and duration from additional trains at the West Falls Church Service and Inspection (S&I) Yard. (0483, 4-04) (0501, 4-01), (0499, 4-01), (0500, 4-01)

Public Comment: Concerned that the noise impacts will be louder than expected since the new Metrorail line will shoot up out of the West Falls Church Station, and since accelerating up hill will take more power, thereby creating more noise. The Project Team stated that the only impact will be wheel squeal noise. (0520, 4-02)

Public Comment: Suggests that the Project Team needs to conduct a neighborhood study around McKay, Eastman, Norwalk, and Idylwood Streets. States that the high-pitched wheel squeal from trains sounded like a piece of chalk or fingernails scraping a blackboard. The noise levels are intolerable. (0089, 4-01)

Public Comment: And be it further resolved that, with the increase in storage tracks in the West Falls Church S&I Yard from the 26 storage tracks proposed previously to 42 to accommodate the lack of storage at Dulles during the first phase, and given increased maintenance operations, and given the conjunction of this yard with aerial rail track and a ninety-degree turn near residences as well as a new multi-story parking structure at the West Falls Church station, there is an increased need to take strong efforts to mitigate noise that impacts the surrounding residential neighborhoods and analyze traffic effects. (0034 0035-3)

Public Comment: They may point out that there is a broader area problem that involves not just the yards in the narrow sense, but proximity to the station whether it's new structure parking being built and to the projected new rail line which will be rising to an aerial level and making a 90-degree turn all within a very short distance of the yard. There has to be a careful treatment of all the noise in that entire area. (0034 0143-6)

Public Comment: We are pleased that you have expressed a desire to deal with the noise abatement problems; the introduction of structures are certainly very desirable. (0034 0143-5)

> ***Response****: With respect to the concerns of communities on the noise of the Metrorail West Falls Church Yard, the Project Team recommended and the decision-makers approved the enclosure of 1) a portion of the existing loop track at the yard's eastern end and 2) the new yard lead in box structures. These noise mitigation measures by the Project will reduce the wheel squeal noise of the train movements within the Yard. The Project Team notes, however, that new residences have been recently constructed and occupied adjacent to the West Falls Church S&I Yard without any noise mitigation provided by the residential developer. As during the past ten-year effort to address yard noise, there will be coordination among DRPT, WMATA, Fairfax County officials and staff, and representatives of the communities during preliminary engineering and final design.*
>
> *The number of additional cars at West Falls Church Yard has increased from 26 in the Draft EIS to 42 in the Supplemental Draft EIS and Final EIS in order to support the Metrorail fleet of the Wiehle Avenue Extension.*
>
> *Wheel squeal from the new yard lead (for Metrorail trains to and from the Dulles Corridor Line) at the east end of the yard was included in the modeling analysis. Based on measured noise levels from the current wheel squeal along a similar radius curve at the yard, exceedances of the FTA impact criteria are predicted at nearby residences. No exceedances are predicted from the Project's aerial guideway in the median of the Dulles Connector Road.*
>
> *Other noise sources, such as train horns, were not included in the modeling analysis. Brake squeal was not determined to be a major problem. Based on the current operating schedule at the yard, the increase in the overall yard noise due to the cleaning and general operation of 42 additional Metrorail cars needed for the Project is expected to be minimal.*

Inadequacies of Noise Analysis

Public Comment: Deficiencies in the noise analysis. (0483, 4-02), (0499, 4-02), (0500, 4-02), (0501, 4-02)

Public Comment: Additional study of the noise impact at peak cumulative noise levels on the surrounding communities from the enlarged rail yard, its tunnel and curved feeder tracks, the highway, and metal train support. (0483, 4-01), (0499, 4-03), (0500, 4-04), (0501, 4-03)

Public Comment: The Project Team's reliance on noise level averages over a 24-hour period seem to disregard the "annoyance factor" caused by rush hour service, tonal disparities in wheel squeal, vibration, curving rails, as well as increased vehicular traffic. (0137, 4-03)

Public Comment: The statement made in the *Public Hearings Report* that mitigation will be more closely examined once an Locally Preferred Alternative has been selected is premature at best, since a response on page 235 of the report states that no new noise barriers are proposed along the Dulles Toll Road to fix or replace existing barriers. States that the Project Team has underestimated project noise levels since MWAA and VDOT have both underestimated traffic volumes in the past. (0137, 4-04)

> ***Response:*** *As described in Section 4.7of the Final EIS, the noise analysis was conducted according to the FTA Transit Noise and Vibration Impact Assessment (1995) guidelines. Accordingly, the peak-hour equivalent noise level (or Leq) was used to evaluate impacts at non-residential receptors; and the 24-hour day-night noise level (or Ldn) was used to evaluate impacts at residential receptors. Although the FTA criteria are defined in terms of allowable project exposure, the basis for the FTA criteria is actually the increase in the cumulative noise (i.e., when the Project levels are added to the existing noise). To be conservative (or to determine the "peak cumulative noise output"), the modeling analysis included maximum operating volumes for all time periods under both the Metrorail and the BRT Alternatives. For example, the Friday-*

Saturday Metrorail schedule was selected to correspond with the extended operating hours from the then 5:30 AM to 2:00 AM.

In addition to the FTA cumulative noise criteria, peak or maximum noise levels (or Lmax) from transit operations were also used to evaluate Project impacts using the WMATA Design Criteria for various residential land uses. The Lmax noise level is independent of the existing background and the number of operations and represents the maximum level observed during a single event, such as a Metrorail or bus passby.

Although newer pre-cast concrete track structures are proposed to minimize excessive noise and vibration levels, the modeling analysis included a 4-decibel penalty to account for potential structural noise due to Metrorail passbys along all elevated sections of slab track. As described in Section 4.7 of the Final EIS, where exceedances of the FTA or the WMATA impact criteria are predicted, mitigation measures are proposed.

Concerns over Proposed Noise Mitigation Strategies

Public Comment: Draft EIS does not adequately address traffic and visual impacts on Westhampton and proposed mitigation measures for noise do not address neighborhood concerns. (0430, 4-03)

Public Comment: Deficiencies in the proposed noise mitigation strategy with regards to the proposed noise barriers near the track along sections of the Westhampton neighborhood. Additional noise mitigation features such as additional sound barriers and reinforcement of existing sound barriers are needed. (0483, 4-03), (0499, 4-04), (0500, 4-03), (0501, 4-04)

Public Comment: Concerned about the impacts the project will have on his neighborhood specifically, noise, cut-through traffic, speeding, overflow parking, and the lack of sidewalks/curbs. Recommends speed humps and the construction of an adequate sound barrier on the spur of the Dulles Toll Road/I-66 exit. (0423, 4-01)

Response: *Currently, sound barriers are not proposed along the property lines adjacent to the Dulles Connector Road or Dulles Toll Road as part of the Project. Three to four-foot parapets or track edge barriers are proposed along all aerial Metrorail sections (except on Airport property). The locations of the proposed mitigation measures are described in Section 4.7 of the Final EIS. Figures 4.7-5a and 4.7-5b in the Final EIS are included to help identify the location of the proposed five to six-foot parapet barriers closest to your street.*

Roadside sound barriers are typically evaluated during the design of major highway improvement projects such as widening or new alignment when noise impacts are forecast for adjacent noise-sensitive receptors. Evaluation criteria including effectiveness and cost are typically employed to make decisions on sound barrier location, height, and type. Generally speaking, sound barriers are not constructed except in conjunction with major highway improvements. Major highway improvements are not anticipated in conjunction with the Dulles Corridor Rapid Transit Project.

The Metrorail Extension at the junction with the existing Orange Line in West Falls Church is expected to have a gradual curve with a turning radius of 1,000 feet. Based on the FTA guidelines as well as measurements made at other existing Metrorail curves, wheel squeal is not expected to occur at locations with this curvature. Tangential noise that typically occurs along straight sections of track is expected along this segment of the Dulles Corridor.

Due to structural vibrations, aerial track may exhibit additional structural noise as a result of train passbys along aerial guideway sections. Although the potential for additional structural noise was included in the noise assessment, it is highly unlikely due to the newer structural designs proposed along the Dulles Corridor. Pre-cast concrete supports, resiliently-supported ties, and continuously welded rail (CWR) track included in the proposed track design all combine to greatly minimize overall noise and vibration levels from train passbys along aerial sections.

Consider Non-Transit Noise Impacts and Standards

Public Comment: The discussion of noise pollution in Chapter 4 dismisses the noise impacts based on selective monitoring in only a few neighborhoods. The Mid-Corridor neighborhoods, particularly Chathams Ford (which lacks a sound barrier), already experience major noise pollution. The sound from Metrorail would be deafening and the Draft EIS reliance exclusively on FTA and WMATA criteria to assess the impact unduly minimizes the adverse effects on such neighborhoods. (0510, 4-01)

Public Comment: The Project Team should revise the Draft EIS to meet objectives of intermodal planning in relation to noise from increased vehicle traffic. (0392, 4-01).

Public Comment: Requests that the Project Team more carefully measure and project the cumulative sound levels at many more sites in the area using federal and VDOT standards. Peak sound levels should be studied as well. (0117, 4-01)

> ***Response:*** *The Project Team utilized the guidelines established by FTA (Transit Noise and Vibration Impact Assessment, 1995) to determine the applicable noise impact criteria in all areas of the proposed corridor. FTA noise criteria are based on existing noise levels that increase as the background level increases to a point beyond which impact is determined on Project noise alone. The FTA criteria are not used to assess existing background noise but rather, are used to evaluate impacts due to new transit projects. However, in areas, such as yours, with higher background levels, Project noise limits established by the FTA are more stringent than in quieter areas allowing the ambient levels to remain the same in the future or increase only slightly before an impact is identified.*
>
> *Additionally, the FTA guidelines were used to evaluate potential impacts due to transit operations. Impacts due to traffic were evaluated using the FHWA guidelines only in those areas where the existing roadways would be modified or substantially changed (e.g., near Metrorail pocket tracks that would require a "bubbling" of the roadway).*

B. Supplemental Draft EIS Comments

State Agency Comments

Noise Analysis and Impacts Should Conform with CEQ Requirements

State Comment: In the PHR, it is stated that the noise methodology for this project followed FTA guidelines appropriate to transit projects. In light of the current Council of Environmental Quality's (CEQ's) NEPA regulations, the project must include a comparative analysis of all alternatives (including the No Build Alternative). Therefore, VDOT interprets that any and all environmental impacts (including noise) will be addressed as part of the Project and conform with CEQ's current requirements. (0091 4-01)

> ***Response:*** *The Draft EIS, Supplemental Draft EIS, and Final EIS have been and will continue to be in compliance with the FTA rule and guidance on environmental impact and related procedures and, thus, are in conformance with CEQ regulations. All environmental impacts, their minimization and avoidance, and their mitigation have been and will be addressed by the project.*

No Build Noise Assessment

State Comment: The SDEIS does not provide a noise assessment for the No-Build Alternative (Section 4.7). (0091 0106-24)

> ***Response:*** *The Dulles Corridor Rapid Transit Project followed FTA noise and vibration methodology appropriate for transit projects. This methodology does not require an assessment of the future No Build noise condition.*

Local Agency Comments

Noise Related to Yard and Service Tracks

Local Comment: The SDEIS commits to the enclosure of this curve [West Falls Church Service and Inspection Yard] as well as the enclosure of a new portal that would connect the main line of the tracks along the Dulles Connector Road with the S & I yard. The proposal to enclose the tracks should be commended; however, it would be helpful if the EIS would note what the noise reduction benefits of the enclosures will be as they relate to event-specific noise impacts - what will be the decibel reduction for individual events that would result from the enclosures? Will wheel squeal from the enclosed tracks be audible? If so, what will the event specific decibel levels be on nearby residential properties? Will any residences still be exposed to noise levels from wheel squeal in excess of 55 dBA? (0093 0109-21)

Local Comment: Section 4.7.1.2 This section notes that additional storage tracks will be needed at the West Falls Church S & I yard "in order to increase the storage capacity from 26 rail vehicles under the Draft DEIS Metrorail Alternative to 42 rail vehicles for the proposed LPA." The new tracks would be located closer to residences than the existing tracks. No information is provided regarding the noise level increases that would be associated with the additional storage, although it is noted that the overall change in noise, when considering both the increased storage and the noise reductions associated with the proposed track enclosures, would be a reduction of seven decibels. It is not clear if this seven decibels reflects an overall average noise level reduction or if it is meant to apply to a hypothetical single event. In any case, more guidance should be provided regarding the nature of the increased noise impacts associated with the additional vehicles (e.g., train movements; horns), and whether there will still be any residential receptors exposed to single event impacts of 55 dBA or more. (0093 0109-22)

Local Comment: The County requests technical back-up information quantifying the benefits of the noise mitigation measures proposed for the West Falls Church S & I Yard ….. (0083 0098-5)

> ***Response:*** *Detailed analysis of the effects of enclosing tracks in the West Falls Church S&I Yard has not been conducted. However an estimated overall reduction of approximately seven decibels (7 L_{dn}) would result for the residents closest to the yard.*

Local Comment: The County requests technical back-up information quantifying the benefits of the noise mitigation measures proposed for the West Falls Church S & I Yard and the efficacy of the noise mitigation measures for aerial sections of track. (0083 0098-5)

> ***Response:*** *Benefits associated with the proposed mitigation measures at the West Falls Church S&I Yard have not been quantified at this time. Quantification of the anticipated noise reductions associated with this proposed mitigation will occur during the preliminary engineering or final design phases of the Project. Technical information regarding the anticipated effectiveness of proposed noise mitigation for sections of aerial guideway (except on Airport property) is provided in the* Noise and Vibration Technical Report (June 2002) *prepared for the Project.*

Public Comments

Need Sound Barriers Along the Dulles Connector Road

Public Comment: Also, we are disappointed that no sound barriers are planned along the Dulles Connector road. They should be, in my opinion, and frankly I am surprised that federal noise pollution guidelines are not already exceeded even without the Metro. (0124 4-01)

> ***Response:*** *Three to four-foot parapets, or sound barriers, are planned along aerial sections of track (except on Airport property) and five to six-foot sound barriers (three-feet above top of rail) are proposed along at-grade sections of track where noise receptors are forecast to exceed FTA criteria under Metrorail operations.*

Need to Upgrade Existing Wooden Noise Barrier Along Dulles Connector

Public Comment: We must have a noise barrier of the latest design. The wooden wall that currently separates my property from the traffic feed was never, I understand, designed to protect against noise. It most certainly does not today.

Section 6.16.3 of the report deals with available mitigation, and does not appear to treat the expected problem specifically.

However, in 6.16.2 the report deals directly with noise barriers. It is necessary, as the report states, that "*effective sound walls be erected before construction begins* (ital mine)." There are additional comments on the subsequent necessity of proper barriers. A coordinated agency effort is vital and needs not simply consideration but absolute insistence**.** (0005, 4-01)

Public Comment: I continue to be troubled by the project's "one-mitigation-fits-all" approach, not only to the widespread concern about noise, vibration, wheel squeal and construction, but to the assumption that this is all of a piece with the project's visual impact. The point has been well made at every hearing that the Dulles Connector has considerable noise problems even without the addition of Metro Rail service.

The project team's fixated response about railside coated concrete parapets as an answer to adjacent homeowner and community fears, does not meet the legitimate concerns of those of us who look at the multi-modal impact of all traffic in the corridor - especially given the woeful underestimation of daily traffic volumes projected when the connector was planned. Analysts' estimates of increasing traffic volumes, even with the addition of rail service, should be a red flag to planners and a spur to a fully coordinated response.

Quite frankly, your team's responses to the public comment in the Feb. 11 report all seem to be directed to a single mitigation measure. Those of us who have labored in the field of government project planning and construction are acutely aware of the stark reality that once something is designed and built, there is not the slightest chance of a "retrofit," no matter how egregious the miscalculation. MWAA's original response to Supervisor Stu Mendelsohn's request in behalf of our community (letter of Sept. 10, 1999) is a case in point. (0036, 4-01)

Public Comment: The wooden fence/noise barrier that was put up when the feeder to Route 66 was built was never intended to mitigate noise level. Rather, it was chosen because it was attractive and blended into the environment. With the increase of traffic over the years, the noise level from the feeder road has increased dramatically, to the point where I cannot be outside and enjoy my patio.

When the project to extended the Metro to Tysons is built, it must include a better, more effective barrier against the noise that is bound to result. Please ensure that this is included in your project plans. (0137, 4-01s)

Public Comment: I am writing to express my agreement with my neighbor's (Mr. Robert Lincoln) comments that are enclosed. (0138, 4-01)

Public Comment: I would like to support Mr. Robert Lincoln as he express his concerns in his letter dated February 20, 2004 as per copy attached. (0139, 4-01)

> ***Response:*** *Highway noise walls are not proposed for the properties along the Dulles Connector Road or the Dulles Toll Road as part of this Project. Three to four-foot parapets or sound barriers are planned along aerial sections of track (except on Airport property) and five to six-foot sound barriers (three to four-foot above top of rail) are proposed along at-grade sections of track where noise receptors are forecast to exceed FTA criteria under Metrorail operations. The types and locations of these noise barriers are described in Section 4.7 of the Final EIS.*
>
> *With respect to the concerns of communities on the noise of the Dulles Connector Road, the*

Commonwealth of Virginia will seek to address the existing noise effects upon the residential communities with noise abatement measures. If the Commonwealth decides to proceed with noise abatement measures, it would bear most of the cost of the abatement, since this is an existing condition due mainly to traffic to and from the Dulles Toll Road. The Project itself would share in the cost of abatement proportional to the Project's contribution to the future levels of noise and to its visual effects. DRPT has been identified as the lead agency for the coordination among VDOT, MMAA, WMATA, FTA, Fairfax County officials and staff, and representatives of the affected communities.

Provide Noise Barrier of Latest Design Before Construction Begins

Public Comment: It is imperative that a noise barrier of the latest design be constructed to keep out both noise and vermin that are bound to encroach. And, as stated in 6.16.2 of the report, "effective sound walls be erected before construction begins."

Lengthy construction and the din of the metro itself will make our community undesirable for those who currently live there as well as perspective buyers unless adequate barriers are erected. (0140, 4-01)

Response*: There is a potential for wheel squeal noise based on the 800-foot radius of curvature proposed near Hallcrest Heights. However, to better define the onset of wheel squeal, actual source measurements were conducted along an existing Metrorail line near Ronald Regan Washington National Airport with a radius of 755 feet. Based on the results of the modeling analysis, ambient day-night noise levels from the Metrorail operations are predicted to range from 50 to 54 dBA at the Hallcrest Heights residences. The modeling analysis includes three foot parapets (or barriers along the edge of the track bed) proposed along all sections of aerial guideway (except on Airport property). These levels are well below the measured ambient background noise level of 59 dBA recorded at a residence at 7405 Hallcrest Drive. As a result, no exceedances of the FTA criteria are predicted from Metrorail operations near Hallcrest Heights.*

Many Complaints About Noise Are Not Serious

Public Comment: The many complaints about noise are not that serious. Most of them are about highway noise that they want Metrorail to mitigate for them. (0013, 4-01)

Response: *Thank you for your comment.*

Concern over Noise Impacts in Hallcrest Heights

Public Comment: Hallcrest Heights faces the possibility of being left in an interagency crossfire of non-responsibility because neither VDOT, Fairfax County, nor MWAA will construct adequate noise barriers near the neighborhood. DRPT, WMATA, MWAA and Fairfax County need to coordinate their efforts, as set forth in the Memorandum of Understanding (July 17, 2001). (0137, 4-05)

Public Comment: The Hallcrest Heights neighborhood will need a noise barrier equivalent to that erected at Wolf Trap. It would need to be cast concrete with absorptive coating, that would extend all the way down the off ramp to the merge with Route 123. The noise barrier would need to be installed prior to construction. (0137, 4-06)

Response: *The Project Team utilized the guidelines established by the FTA (Transit Noise and Vibration Impact Assessment, 1995) to determine the applicable noise impact criteria in all areas of the proposed corridor. FTA noise criteria are based on existing noise levels that increase as the background level increases to a point beyond which impact is determined on Project noise alone. The FTA criteria are not used to assess existing background noise but rather, are used to evaluate impacts due to new transit projects. However, in areas, such as yours, with higher background levels, Project noise limits established by the FTA are more stringent than in quieter*

areas allowing the ambient levels to remain the same in the future or increase only slightly before an impact is identified.

There is a potential for wheel squeal noise based on the 800-foot radius of curvature proposed near the Hallcrest Heights. However, to better define the onset of wheel squeal, actual source measurements were conducted along an existing Metrorail line near National Airport with a radius of 755 feet. Based on the results of the modeling analysis, ambient day-night noise levels from the Metrorail operations are predicted to range from 50 to 54 dBA at the Hallcrest Heights residences. The modeling analysis includes three to four-foot parapets (or barriers along the edge of the track bed) proposed along all sections of aerial guideway (except on Airport property). These levels are well below the measured ambient background noise level of 59 dBA recorded at a residence at 7405 Hallcrest Drive. As a result, no exceedances of the FTA criteria are predicted from Metrorail operations near Hallcrest Heights.

Currently, sound barriers are not proposed along the property lines adjacent to the Dulles Connector Road or Dulles Toll Road as part of the Project. Three to four-foot parapets or track edge barriers are proposed along all aerial Metrorail sections (except on Airport property). The locations of the proposed mitigation measures are described in Section 4.7 of the Final EIS. Figures 4.7-5a and 4.7-5b are included to help identify the location of the proposed five to six-foot parapet barriers closest to your street.

Roadside sound barriers are typically evaluated during the design of major highway improvement projects such as widening or new alignment when noise impacts are forecast for adjacent noise-sensitive receptors. Evaluation criteria including effectiveness and cost are typically employed to make decisions on sound barrier location, height, and type. Generally speaking, roadside sound barriers are not constructed except in conjunction with major highway improvements. Major highway improvements are not anticipated in conjunction with the Dulles Corridor Rapid Transit Project.

Noise Related to Cross Over

Public Comment: The location of the proposed double cross over directly in the middle of the Cleveland Building redevelopment (potentially PRM 3.0 FAR high-rise residential mix use) creates the potential for a crossover "clack" in close proximity to high rise, high density residential development. What assurances do we have that the corridor noise technology or design has improved to avoid this potential nuisance sound. (0123 0158-20)

Public Comment: We are very concerned about location, noise, and set backs of cross over (the breaker station) on the Cleveland site. Please provide specific details so that we may evaluate these issues. (0123 0158-24)

Response: *In response to this comment and others of WEST*GROUP, the Project Team shifted the double crossover approximately 170 feet inbound towards the Dulles Connector Road interchange. Its location is now near the ramp terminal of the interchange and the east property line of the Cleveland Building parcel. The parapet walls that are part of the standard WMATA aerial guideway would provide significant sound attenuation for trains passing through the switches at the proposed double crossover. The size of the double crossover is the standard size shown for 14' (narrow) track centers, which is significantly less than the size of a double crossover for 40.5' (wide) track centers that were previously examined.*

Noise in Neighborhoods and Affecting Specific Properties

Public Comment: I live at 2134 Greenwich Street. My property is right where the Dulles Road swings off of Rt. 66, and the noise has been unbearable. No sound barrier has ever been constructed and we never received an acceptable answer as to why. Please speak to the noise issue. I am very concerned about additional noises, both during and after the building is completed. I believe I shall now be forced to move because of the noise. As it is now I cannot enjoy my yard because the noise is so stressful. (0011 0011-1)

> ***Response:*** *Estimated L_{dn} noise levels from Metrorail operations along Greenwich Street are predicted to range from 55 to 59 dBA. These levels are below the measured background of 62 to 65 dBA. Based on current traffic levels, the ambient noise level in 2025 with Metrorail service would increase approximately 1 decibel to range from 63 to 66 dBA. As a result, no exceedances of the FTA noise criteria are predicted from Metrorail passbys at receptors along the Greenwich Street neighborhood.*

Public Comment: Currently, no sound wall or barrier exists in our neighborhood [Chathams Court] nor is there a plan for the construction of a wall in the EIS draft or supplement. At present time, there is a sever noise problem in our neighborhood where sound levels exceed the accepted limits. (0116 0141-1)

Public Comment: We live in the Westhampton neighborhood and are very much affected by the new projects (garage, etc.) Our community needs soundbarrier, (0121 0155-1)

Public Comment: Our family lives at 1552 Hunting Avenue in McLean, VA, which will be located in close proximity to the newly proposed Metrorail route through Tysons Corner. Our house is adjacent to the Dulles Access Road, near Route 123. The proposed Metrorail would become aerial at this location. There have been no provisions in the impact statement to address increased noise caused to my community. Specifically, I believe that installation of sound barriers, at a minimum, should be included in the plans to protect the community. (0122 0156-1)

> ***Response:*** *Three to four-foot parapet barriers are planned for all aerial Metrorail track sections in accordance with WMATA design criteria. Five to six-foot parapets are proposed in areas adjacent to noise receptors that were forecast to exceed FTA noise criteria under Metrorail operations. The recommendation for five to six-foot parapets was based on the projected need for additional noise reductions, which would bring levels below the FTA impact criteria.*

Public Comment: My home and residential property back on the 25-foot wooded area (which I believe is managed by the Virginia Department of Transportation) next to an aerial portion of the proposed Dulles Corridor Rapid Transit line. This particular aerial portion is to be sharply curved to go from the Route 66 access road into Tysons Corner. The aerial curve obviously will result in tremendous wheel squealing, deceleration, and other attendant loud noise from trains on the Dulles line. This is to urgently request inclusion of a proper noise-protective wall at the aerial curve under Phase 1 of the new proposal. The existing aged wooden wall on the property here is not a noise-protective wall and is quite different from the noise-protective walls erected on various other parts of the Rapid Transit System. I understand that U.S. and Virginia legislators, and state and local authorities, have been fully informed about the noise problem and consider vital the erection of a noise-protective wall at the aerial curve. (0005 0005-1)

> ***Response:*** *There is a potential for wheel squeal noise based on the 800-foot radius of curvature proposed near the Hallcrest Heights. However, to better define the onset of wheel squeal, actual source measurements were conducted along an existing Metrorail line near Ronald Regan Washington National Airport with a radius of 755 feet. Based on the results of the modeling analysis, ambient day-night noise levels from the Metrorail operations are predicted to range from 50 to 54 dBA at the Hallcrest Heights residences. The modeling analysis includes three to four-foot parapets (or barriers along the edge of the track bed) proposed along all sections of aerial guideway (except on Airport property). These levels are well below the measured ambient background noise level of 59 dBA recorded at a residence at 7405 Hallcrest Drive. As a result, no exceedances of the FTA criteria are predicted from Metrorail operations near Hallcrest Heights.*

Currently, sound barriers are not proposed for properties along the Dulles Connector Road or Dulles Toll Road as part of the Project. Three to four-foot parapets or track edge barriers are proposed along all aerial Metrorail sections (except on Airport property), although five to six-foot parapets are used in some areas. The locations of the proposed mitigation measures are described in Section 4.7 of the Final EIS. Figures 4.7- 5a and 4.7-5b are included to help identify the location of the proposed five to six-foot parapet barriers closest to your street. Generally speaking, roadside sound barriers are not constructed except in conjunction with major highway improvements. Major highway improvements are not anticipated in conjunction with the Dulles Corridor Rapid Transit Project.

Public Comment: My house was built in 1972, which pre-dates the Connector Road. On behalf of the Virginia Department of Rail and Public Transportation (VRail), WMATA will dismantle the wooden sound wall to create a staging area for the construction of the Tie Breaker Station. This raises the following question: Does the governing law allow VRail to restore the wall to its original (i.e., non-conforming) condition or must VRail meet the VDOT standard of abating noise up to the top of the first floor of a residence? (0025 0026-6)

Response: *Currently, new and taller highway noise walls are not proposed for properties adjacent to the Dulles Connector Road or Dulles Toll Road as part of the Project. The Project Team recommended and the decision-makers approved that a new wooden noise wall surround the TBS-2 for its security, for enhanced community safety and for the aesthetics of the neighborhood. Since TBS-2 would not be visible from the Baldwin Drive neighborhood, it would not receive any architectural treatment. The new wooden noise wall would have doors at the location of the doors of the TBS-2 and the remote train control room. The height of the new wooden noise wall would be sufficient to screen the TBS-2, which has a height of 13 feet above its concrete slab foundation.*

Public Comment: We request the following additional study and mitigation: More analysis of the adequacy of the proposed noise mitigation measures at additional test points in our neighborhood. (0026 0027-5)

Response: *The Project Team utilized the guidelines established by (Transit Noise and Vibration Impact Assessment, 1995) to determine the applicable noise impact criteria in all areas of the proposed corridor. FTA noise criteria are based on existing noise levels that increase as the background level increases to a point beyond which impact is determined on Project noise alone. The FTA criteria are not used to assess existing background noise but rather, are used to evaluate impacts due to new transit projects against the background of existing noise levels. Where background noise is already high, as in your area, it takes only a relatively small increase to trigger an impact.*

Currently, sound barriers are not proposed for properties along the Dulles Connector Road or Dulles Toll Road as part of the Project. Three to four-foot parapets or track edge barriers are proposed along all aerial Metrorail sections (except on Airport property), although five to six-foot parapets are used in some areas. The types and location of the proposed mitigation measures are described in Section 4.7of the Final EIS. Figures 4.7- 5a and 4.7-5b are included to help identify the location of the proposed five to six-foot parapet barriers closest to your street.

Future efforts during preliminary engineering and final design will refine the analysis and include coordination among DRPT, VDOT, WMATA, MWAA, FAA, and Fairfax County to determine the need for application of any additional mitigation measures to address existing traffic noise conditions.

Duration of Noise Impacts

Public Comment: Project officials have informed us that: During peak hours, a train will run every seven (7 minutes), and during off-peak hours, a train will run every 12 minutes; Sunday through Thursday, hours of service will be from 5:30 am until midnight, and during Fridays and Saturdays, from 5:30 am until 2:00 am or possibly 3:00 am; and Non-service activities will occur when there is no passenger activity. Thus, we have the possibility of experiencing "rail activity" (a euphemism for NOISE) all day and all night, every day and every night, or in the words of our young people: "24/7." The rail switches behind my house will add additional noise to the neighborhood. Project officials have stated that they will install noise abatement measures at grade level. But rail activity and noise will be constant. (0025 0026-3)

> ***Response:*** *Cumulative future noise levels are a function of the magnitude of both the ambient background level as well as the noise from transit operations. FTA criteria allow the ambient noise levels to increase 1 to 3 decibels (depending on the current background level). Project noise levels are predicted to increase the ambient level by less than 2 decibels. Where exceedances of the FTA criteria are predicted, mitigation measures are proposed that would reduce the transit noise level below the background. The future noise levels are a logarithmic sum of the predicted Project noise levels and the measured background levels.*

Public Comment: [We request] Commitment from the appropriate agencies that nighttime (11pm to 6am) noise during construction will not exceed levels deemed acceptable for post-construction daytime noise, as measured from stakeholder properties. (0088 0103-1)

> ***Response:*** *During construction, DRPT would comply with noise limits established by FTA and WMATA guidelines, federal law (for Wolf Trap Farm Park), and time-of-day restrictions specified in local noise ordinances. If necessary, temporary mitigation measures will also be employed.*

Sound Abatement Walls and Other Mitigation Treatments

Public Comment: Please take note that we stand in agreement re noise abatement with our many neighbors on both sides of the current Dulles connecting route, between the West Falls Church Metro station and Tysons Corner. While no one in our household or employ will have cause to use or benefit by the Dulles Rail, we support the need for mass transit. Nonetheless, we are concerned about adding to the already constantly increasing noise in our own backyard, and to the many nearby neighborhoods along the proposed route – And we sincerely hope that effective sound walls will be erected before construction begins. You are also no doubt aware that Dominion Power began last summer with a plan to institute increasingly extreme tree cutting within its easements, thereby further decreasing any natural barrier to the sound and sight problems of adding the rail line to the existing roadway. (0017 0018-1)

Public Comment: We are property owners on Baldwin Drive the proposed metro line will literally run behind our house. We would like to know if you plan to put walls up to block some of the noise or if you do not know do you know who I can contact to find out about the walls? (0024 0025-1)

> ***Response:*** *Parapets (or track edge barriers) would assist in shielding new noise from Metrorail trains along aerial (above-ground) sections of track. At those locations where exceedances of the FTA criteria are predicted, higher parapets (five to six-feet) are proposed to minimize the predicted Project-related impacts. Changes to the existing highway noise barriers along the Dulles Connector Road are not included as part of the Project.*

Public Comment: It is my understanding that under VDOT standards, a sound wall is required to reach the top of the first floor of a residence. There are at least three residences in the Great Falls Manor neighborhood- including my house- where the sound wall does not meet this standard. Thus, all of the residents in the Great Falls Manor neighborhood who live adjacent to the Connector Road incur significant noise pollution- both inside the house and outside- when we engage in any activity above the level of the sound wall. (0025 0026-4)

Response: *Since capacity improvements are not proposed for area roadways as part of the Project, traffic noise evaluations were not conducted near the Great Falls Manor neighborhood. Changes to existing roadway noise barriers are not proposed as part of the Dulles Corridor Rapid Transit Project. Parapets (or track edge barriers) would assist in shielding new noise from Metrorail trains along aerial (aboveground) sections of track. At those locations where exceedances of FTA criteria are predicted, higher parapets (five to six-feet) are proposed to minimize the predicted Project-related impacts.*

Public Comment: The residents of Great Falls Manor will incur rail switches, a Tie Breaker Station and an access roadway. The existing wooden sound wall will be dismantled to create a staging area for construction of the Station. All we ask is that the wooden sound wall be replaced with a similar sound wall that is taller and more effective in shielding the residents from the increased noise and light pollution. (0025 0026-5)

Public Comment: They say that "fences make the best neighbors," but in our case, "sound walls make the best neighbors." We need a taller sound wall. If a taller sound wall were constructed, then any future increase in vehicular traffic, rail activity, noise, lights, etc., will have been obviated in advance. We urge the project personnel to consider what they would want for themselves or their loved ones, if they lived on Baldwin Drive. All we ask is that you do the "right thing" by the residents of the Great Falls Manor neighborhood. (0025 0026-8)

Public Comment: Additional noise and visual mitigation with concrete sound walls at the roadside, vegetative plantings and additional sound muffling for the aerial portion of the revenue tracks. (0026 0027-6)

Response: *Parapets (or track edge barriers) would shield new noise from Metrorail train passbys along all aerial (above-ground) sections of track. At those locations where exceedances of FTA criteria are predicted, additional parapet heights (five to six-feet) are proposed to minimize the predicted Project-related impacts. Changes to existing roadway noise barriers are not proposed as part of the Dulles Corridor Rapid Transit Project.*

Public Comment: The new lower rail alignment will still run above existing sound walls at the roadside. Existing sound walls are ineffective and too short, and there is no sound wall at all between the Dulles Connector Road and some homes in our community. (0026 0027-8)

Public Comment: A higher and more extensive concrete sound wall at the roadside, vegetative plantings and additional sound muffling for the tracks because the rail line will run above the existing barrier and some homes have no barrier. (0087 0102-6) (0089 0104-6) (0099 0115-6) (0104 0121-4)

Response: *Three to four-foot parapet barriers are planned for all aerial Metrorail track sections in accordance with WMATA design criteria. Five to six-foot parapets are proposed in areas adjacent to noise receptors that were forecast to exceed FTA noise criteria under Metrorail operations. The recommendation for five to six-foot parapets was based on the projected need for additional noise reductions, which would bring levels below the FTA impact criteria.*

Public Comment: A sound barrier similar to that adjoining Wolf Trap is what is clearly justified. Such a barrier (aimed at both visual and noise mitigation) should extend all the way down the off-ramp through the merge with Route 123. (0036 0037-3)

Public Comment: While your report (in Section 4.7.3) speaks of "temporary noise barriers" being erected during construction, I would urge that a coordinated agency mitigation effort result in a significant barrier before construction to mitigate construction noise, operating noise and the visual impact all at once. (0036 0037-5)

Public Comment: Third, a sound barrier similar to that adjoining Wolf Trap is what we feel is justified. Such a barrier aimed at both visual and noise mitigation should extend all the way down the off-ramp through the merge with Route 123 which is our northern border. (0036 0062-3)

Public Comment: The wooden sound wall that was put up in 1980 is clearly inadequate even as things stand right now. Since part of it is going to have to be dismantled for purposes of constructing the tie-breaker station, we would like encourage the project officials to consider putting up a taller sound wall. (0025 0065-3)

> ***Response:*** *Currently, sound barriers are not proposed for the properties along the Dulles Connector or the Toll Road as part of the Project. Three to four-foot parapets barriers are planned for all aerial Metrorail track sections and five to six-foot parapets are proposed in areas where noise receptors are forecast to exceed FTA criteria under Metrorail operations. The locations of the proposed mitigation measures are described in Section 4.7 of the Final EIS and shown in Figures 4.7-5a and 4.7-5b.*
>
> *During construction, DRPT would comply with noise limits established by FTA and WMATA guidelines, federal law (for Wolf Trap Farm Park), and time-of-day restrictions specified in local noise ordinances. If necessary, temporary mitigation measures will also be employed.*

Public Comment: As stated in the DEIS, WMATA may construct low sound walls along track level. This may reduce some of the rail noise, however, regardless of the sound absorptive materials added to the walls, the current impact highway noise will be reverberated off the walls into our neighborhood thus worsening the already severe impact. This statement was confirmed at our meeting with the WMATA managers. (0116 0141-6)

> ***Response:*** *Absorptive treatment of the proposed parapet barriers could help to reduce the amount of highway noise reflected from these structures. Further analysis of the effectiveness of proposed mitigation measures will be conducted during preliminary engineering or final design.*

Public Comment: WEST*GROUP is concerned that the change in radius location of 100 feet and increase in curve length from 800 feet to 1000 feet to mitigate noise levels on a rail line 67 feet above grade has been offset by the cross over and its related “clack.” We are pleased that the pocket track at the Tysons East Station has been removed but remain concerned that the noise may need further mitigation to allow the development at the new station to be successful. (0113 0132-8)

Public Comment: WEST*GROUP is concerned that the change in radius location of 100 feet and increase in curve length from 800 feet to 1000 feet to mitigate noise levels on a rail line 67 feet above grade has been offset by the cross over and its related "clack". We are pleased that the pocket track at the Tysons East Station has been removed but remain concerned that the noise may need further mitigation to allow the development at the new station to be successful. We suggest that additional studies be completed as a part of the future design efforts to ensure that all appropriate noise mitigation techniques are included in the final design. (0123 0158-10)

> ***Response:*** *The Project Team evaluated the potential for noise and vibration impacts and provided recommendations on potential mitigation strategies to avoid significant impacts. Proposed mitigations are presented Section 4.7 of the Final EIS. Parapets (or track edge barriers) would assist in shielding new noise from Metrorail trains along aerial (above-ground) sections of track. At those locations where exceedances of the FTA criteria are predicted, higher parapets (five to six-feet) are proposed to minimize the predicted Project-related impacts.*

Cumulative Noise Generated by Auto Traffic and Rail

Public Comment: The other issue that I hope can be addressed is the need for a real sound barrier wall along the areas in our neighborhood that now have some of the highest road noise, dirt and carbon monoxide levels along the corridor. I know that the amount of bus and commuter traffic noise has

constantly increased over the last few years along the hours when traffic is heavy. The 24 hour rail schedule and maintenance will significantly add to the problem. (0003 0013-2)

Public Comment: My community has an already existing and growing noise issue associated with escalating traffic since the construction of the airport connector segment. Since purchasing my lot in 1984, I have witnessed traffic noise increasing from a mild nuisance level to levels that at times preclude meaningful outdoor conversation…and it continues to get worse. There is no doubt that the traffic noise has been compounded by the enhanced connectivity of the highway originally intended to serve just as an airport connection but now linked to both the Dulles toll-road (with all ancillary traffic feeds) and the Greenway. Such broadened connectivity has unquestionable served to materially alter the utility scope of the highway. (0014 0015-1)

Public Comment: I am writing to express my concern regarding Metrorail being extended down the Dulles Access Road. The access road is my backyard "neighbor" and as a Realtor I have already experienced difficulty in selling homes backed up to Rt. 66. We live daily with the roar of traffic. Trains passing by our bedroom windows every 15 minutes for most of the day would be unbearable. At this point there isn't even a soundwall, what would it be like with trains? What do you say, let's forget Metrorail on the access road, and spend less money putting up a sound-wall. (0022 0023-1)

> ***Response:*** *Parapets (or track edge barriers) would assist in shielding new noise from Metrorail trains along aerial (above-ground) sections of track. At those locations where exceedances of the FTA criteria are predicted, higher parapets (five to six-feet) are proposed to minimize the predicted Project-related impacts. Changes to the existing highway noise barriers along the Dulles Connector Road are not included as part of the Project.*

Public Comment: Total corridor noise from multiple sources (be it from rubber tires, metal wheels, diesel engines or traction motors) must be addressed. (0036 0037-1)

Public Comment: I urge the Project team to look beyond the application of FTA criteria and to work with the other agencies to mitigate total corridor noise. Given the woeful underestimation of traffic volumes projected in the 1981 EIS for the Dulles Connector, such a joint agency coordination of mitigation is surely justified. Most analysts predict a substantial increase in vehicular traffic, even with the addition of Metrorail. (0036 0037-4)

Public Comment: The total Corridor noise from multiple sources, be it rubber tires, metal wheels, diesel engines or traction motors, must be addressed. (0036 0062-1)

> ***Response:*** *Since the Dulles Corridor Rapid Transit Project proposes only transit improvements, FTA transit noise criteria were used in order to determine the potential for noise impacts.*

Funding for Noise Abatement

Public Comment: I believe the construction of what I would call the Hallcrest Barrier can be achieved within the excess revenues generated each year by the tolls on the Dulles Toll Road, which I understand are about $12 million. (0036 0062-5)

> ***Response:*** *Currently, sound barriers are not proposed for the properties along the Dulles Connector Road or Dulles Toll Road as part of the Project. Three to four-foot parapets barriers are planned for all aerial Metrorail track sections and five to six-foot parapets are proposed in areas where noise receptors are forecast to exceed FTA criteria under Metrorail operations. The types and location of the proposed mitigation measures are described in Section 4.7 of the Final EIS.*

Public Comment: While I understand the constraints of your project budget and available funding for what you propose, I believe that construction of the Hallcrest Barrier can be achieved within the excess revenues generated each year by the tolls from the Dulles Toll Road. Even after including debt service

and operations and maintenance, these annual excess revenues amount to more than $12 million. (0036 0037-6)

> ***Response:*** *On behalf of the Commonwealth of Virginia, DRPT has the lead in addressing the existing noise effects of the Dulles Connector Road. With respect to the concerns of communities on the noise of the Dulles Connector Road, the Commonwealth of Virginia will seek to address the existing noise effects upon the residential communities with noise abatement measures. If the Commonwealth decides to proceed with noise abatement measures, it would bear most of the cost of the abatement, since this is an existing condition due mainly to traffic to and from the Dulles Toll Road. The project itself would share in the cost of abatement proportional to the project's contribution to the future levels of noise and to its visual effects. There will be coordination among DRPT, VDOT, WMATA, MWAA, FAA, Fairfax County officials and staff, and representatives of the affected communities.*

Multiple Benefits from Sound Abatement Walls

Public Comment: While your report (in Section 4.7.3) speaks of "temporary noise barriers" being erected during construction, I would urge that a coordinated agency mitigation effort result in a significant barrier before construction to mitigate construction noise, operating noise and the visual impact all at once. (0036 0037-5)

Public Comment: We do not oppose the construction of the Rapid Transit Project, but we do to the increased burden it's construction will place on those of us who are directly adjacent to the project, that the WMATA should place a high priority on protecting homeowners from adverse environmental impacts both during the construction of the Rapid Transit Project and after the construction has been completed and the trains are running. In our opinion an environmental wall would be a the major solution to our concerns. Such a wall would alleviate three of our major concerns, noise, light and visual impact. (0081 0096-1)

> ***Response:*** *Currently, sound barriers are not proposed for the properties along the Dulles Connector Road or Dulles Toll Road as part of the Project. Three to four-foot parapets barriers are planned for all aerial Metrorail track sections and five to six-foot parapets are proposed in areas where noise receptors are forecast to exceed FTA criteria under Metrorail operations. The types and location of the proposed mitigation measures are described in Section 4.7 of the Final EIS.*

Public Comment: In our opinion an environmental wall would be the major solution to our concerns. Such a wall would alleviate three of our major concerns, noise, light, and visual impact. (0081 0107-2) (0100 0116-2) (0101 0118-2) (0127 0162-2)

Public Comment: In our opinion an environmental wall would be the major solution to our concerns. Such a wall would alleviate three of our major concerns, noise, light, and visual impact. (0124 0159-2) (0125 0160-2) (0126 0161-2) (0128 0163-2) (0129 0164-2) (0133 0172-2)

> ***Response:*** *Three to four-foot parapet barriers are planned for all aerial Metrorail guideway sections. Five to six-foot parapets are proposed in areas adjacent to noise receptors that were forecast to exceed FTA noise criteria under Metrorail operations. The recommendation for five to six-foot parapets was based on the projected need for additional noise reductions, which would bring levels below the FTA impact criteria.*

Noise Abatement not Necessary

Public Comment: Sound barriers are a negative idea. People offended by present highway noise must not be allowed to load up MetroRail with sound barriers that will reflect noise back into the cars full of people. This argument came up at West Falls Church on Highway I-66. There was noise allright, but it was highway noise. I went out there one night at midnight when civic noise is low and listened. I never

heard a train go by in the median. I am not referring to the yard tracks. I could not hear most automobiles either, but illegal trucks and souped up cars were very noisy. If traffic were heavier, traffic would make more noise. Electric rail transit on welded rail should not be heard. On a curve, perhaps a sound barrier four feet high may be necessary, but no higher. It reflects noise back into the car close by. If the highway needs sound barriers, so be it. Put them at the edge of the right-of-way. Do not box the trains in. That will not attenuate highway noise, the source of the complaint. (0054 0090-2)

> ***Response:*** *Currently, sound barriers are not proposed for the properties along the Dulles Connector or the Toll Road as part of the Project. Three to four-foot parapets barriers are planned for all aerial Metrorail track sections and five to six-foot parapets are proposed in areas where noise receptors are forecast to exceed FTA criteria under Metrorail operations. The types and location of the proposed mitigation measures are described in Section 4.7 of the Final EIS.*

Alternative Methods of Sound Abatement

Public Comment: To remain positive and helpful, let me call your attention to a recent Washington Post article of the Koolhas design for the Green Line of the Chicago Transit Authority's elevated track section through the Illinois Institute of Technology. In a giant leap forward in noise mitigation, they propose putting the elevated service in an imaginative steel and concrete tube. (0036 0037-7)

> ***Response:*** *The Dulles Corridor Rapid Transit Project will utilize parapet barriers to reduce noise impacts on aerial guideway sections. Noise mitigation features such as those described by the commenter are proposed for the West Falls Church Yard.*

Public Comment: Metro might be responsible for the impact it creates if our current forestation were demolished, as will be required for the construction of the storm water best management practice pond. This individual did state that WMATA engineers would do their best to minimize the size of the storm water retention pond; however current plans and drawings still call for approximately one acre of my property to be acquired. If the present-day mature forestation is torn down, in my opinion Metro has to be responsible for the noises. The trees are the only sound and visual barrier at this time. (0116 0141-3)

> ***Response:*** *The Final EIS does not project any Project-related noise impacts associated with development of storm water ponds.*

Construction Related Noise

Public Comment: We are very concerned about potential noise levels relating to construction, should the above referenced project go forward. We are a residential community that would suffer adversely from both construction noise (especially if it were to occur during off-hours) and the compounding of already significant traffic noise. (0014 0015-3)

> ***Response:*** *During construction, DRPT would comply with noise limits established by FTA and WMATA guidelines, federal law (for Wolf Trap Farm Park), and time-of-day restrictions specified in local noise ordinances. If necessary, temporary mitigation measures will also be employed.*

More Study and Analysis Needed

Public Comment: Mr. Dittmeier we have lived here for 30 years and went through this process before, during and after the Dulles Corridor was constructed. The planners and those that worked out the detailed projections of impact on our community are no longer around to answer for their errors or miss calculations. I hope we can do a better job with this project. It might help to understand our concern if the present noise/pollution data were compared with the earlier data collected when the original corridor was being proposed and constructed. (0003 0013-3)

> ***Response:*** *The Project Team has reviewed the earlier studies as part of the background research for our analysis.*

Public Comment: We request the following additional study and mitigation: More study of the adequacy of proposed noise mitigation measures. (0087 0102-5) (0089 0104-5) (0099 0115-5) (0104 0121-3)

> ***Response:*** *The Project Team evaluated the potential for noise and vibration impacts and provided recommendations on potential mitigation strategies to avoid significant impacts. Proposed mitigation is presented Section 4.7 of the Final EIS. Parapets (or track edge barriers) would assist in shielding new noise from Metrorail trains along aerial (above-ground) sections of track. At those locations where exceedances of the FTA criteria are predicted, higher parapets (five to six-feet) are proposed to minimize the predicted Project-related impacts.*

Public Comment: Our neighborhood conducted an independent study, sound study, in July 2002. Our findings did differ greatly from the 63 decibels measured at a single home by the initial task force. The average of 70 to 71 decibels of which we obtained in our neighborhoods is in the severe impact zone already established by the FTA. Sustained decibel readings greater than 80 decibels were obtained both in the morning and evening rush hour times. These data did not make it into the draft EIS. (0116 0141-2)

> ***Response:*** *Based on the FTA methodology for analysis of noise associated with transit projects, the existing day-night (24-hour Ldn) noise level is used to determine what additional noise can be added before an impact is predicted in association with the proposed Project. Using an existing level of 63 decibels (which is what the Project Team measured as the 24-hour day-night noise level) was appropriate for this methodology. The existing level is used in order to determine what additional noise can be added before impact criteria are exceeded and mitigation is considered.*

Joint Agreement on Noise Abatement

Public Comment: This project should not be permitted to move forward without a mutually agree upon noise abatement plan between WMATA, VDOT, and our neighborhood. How can WMATA and VDOT continue to dodge responsibility for the highway noise problem and at the same time allow this project to move forward? (0116 0141-4)

> ***Response:*** *On behalf of the Commonwealth of Virginia, DRPT has the lead in addressing the existing noise effects of the Dulles Connector Road. With respect to the concerns of communities on the noise of the Dulles Connector Road, the Commonwealth of Virginia will seek to address the existing noise effects upon the residential communities with noise abatement measures. If the Commonwealth decides to proceed with noise abatement measures, it would bear most of the cost of the abatement, since this is an existing condition due mainly to traffic to and from the Dulles Toll Road. The Project itself would share in the cost of abatement proportional to the Project's contribution to the future levels of noise and to its visual effects. There will be coordination among DRPT, VDOT, WMATA, MWAA, FAA, Fairfax County officials and staff, and representatives of the affected communities.*

4.8 Vibration

A. Draft EIS Comments

State Agency Comments

Locations and Methods for Mitigating Vibration Impacts from Metrorail Extension

State Comment: The first sentence on page 93 [of the Noise and Vibration Technical Report] incorrectly states, "While vibration criteria are generally used to assess annoyance from transit sources at the exterior façade of receptors, ground-borne noise, or the rumbling sound due to vibration room surfaces, is typically assessed indoors." In fact, both ground-borne vibration and noise effects are assessed indoors.
* Section 4.8.2 should be more specific with regard to the locations and proposed methods for mitigating

vibration impacts from Metro rail operations. In addition to the potential measure listed, the use of spring rail or moveable point frogs at crossover locations should also be considered. (0421, 0421-A -12)

> ***Response**: To clarify, all ground-borne vibration and noise levels from Metrorail passbys were evaluated against the FTA and the WMATA impact criteria at the exterior façade of receptors (i.e., the closest distance between the receptor and the project alignment). Unlike environmental noise, which is typically evaluated outdoors, ground-borne vibration and noise are evaluated indoors where vibration levels from transit passbys are most pronounced.*

B. Supplemental Draft EIS Comments

No comments pertaining to this topic were received.

4.9 Hazardous and Contaminated Materials

A. Draft EIS Comments

State Agency Comments

Draft EIS Identification of 34 Sites Not Identified in the Environmental Database Search Results

State Comment: Solid and Hazardous Waste Management. Soil suspected of contamination, and wastes that are generated, must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations, including but not limited to the Virginia Waste Management Act (Virginia Code sections 10.1-1400 et seq.), the Virginia Hazardous Waste Management Regulations (9 VAC 20-60 et seq.), and the Virginia Solid Waste Management Regulations (9 VAC 20-80 et seq.). (See the attached comments from DEQ's Waste Division, Office of Remedial Programs.) According to DEQ's Northern Virginia Regional Office, the Draft EIS mentions the identification of 34 contamination sites that were not identified in the Environmental Database Search results. We recommend that these sites be discussed with that Office. (0407, 0407-A -19)

State Comment: Section 4.9 discusses field reconnaissance done in the study area and the identification of thirty-four (34) sites that were not identified in the Environmental Database Search results. Will these sites be discussed with DEQ? (0407, 0407-A –38)

> ***Response**: The Project Team will coordinate with the VDEQ Northern Virginia Regional Office regarding the potential contamination sites that were identified by the Project Team and not included in the Environmental Database Search results. This coordination will take place during preliminary engineering.*

Guidance on Demolishing Buildings With Asbestos or Lead-Based Paint

State Comment: As mentioned above and in the Draft EIS, the structures to be demolished as part of this project have not yet been checked for the presence of asbestos-containing materials or lead-based paint. The following guidance pertains in the event either of these substances is found.

(a) Asbestos Abatement. If asbestos-containing materials (ACM) are found, following their classification as friable or non-friable, all waste ACM shall be disposed of in accordance with the Virginia Solid Waste Management Regulations (9 VAC 20-80-640), and transported in accordance with the Virginia regulations governing Transportation of Hazardous Materials (9 VAC 20-110-10 et seq.). The project manager should contact the DEQ Waste Management Program and the Department of Labor and Industry for additional information.
(b) Lead-Based Paint. The project must comply with the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) regulations, and with the Virginia Lead-Based Paint Activities

Rules and Regulations. For additional information regarding these requirements, the project manager should contact the Department of Professional and Occupational Regulation.

(c) Air Quality Regulation. As indicated above, heating units may require new source review or operating permits from DEQ. In addition, open burning activities may require an open burning permit. Questions on these matters, and inquiries about time-of-year restrictions on the use of cut-back asphalt, may be directed to DEQ's Northern Virginia Regional Office. (0407, 0407-A – 20)

***Response**: Prior to demolition of any building, a survey is required by a Virginia licensed asbestos inspector and Virginia licensed lead-based paint inspector. Demolition of buildings or structures involving regulated asbestos and lead-based paint would be carried out using appropriate procedures and disposal practices, including the Federal Lead Exposure in Construction Standard, the Virginia Solid Waste Management Regulations, and the National Emission Standard for Hazardous Air Pollutants.*

Disposal of Contaminated Soil Consistent with Federal, State and Local Laws

State Comment: Since this project may involve construction, any soil that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations. Some of the applicable state laws and regulations are: Virginia Waste Management Act, Code of Virginia Section 10.1-1400 et seq.; Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC 20-60); Virginia Solid Waste Management Regulations (VSWMR) (9VAC 20-80); Virginia Regulations for the Transportation of Hazardous Materials (9VAC 20-110). Some of the applicable Federal laws and regulations are: the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Section 6901 et seq., and the applicable regulations contained in Title 40 of the Code of Federal Regulations; and the U.S. Department of Transportation Rules for Transportation of Hazardous Materials, 49 CFR Parts 107,171.1-172.558. (0407, 0407-A –31)

***Response**: Information regarding the appropriate disposal methods and safety precautions associated with these substances will be provided in the Hazardous Materials Management Plan developed prior to any construction activities.*

State Comment: Hazardous and solid waste issues and sites were addressed in the report. The central office of the Waste Division did a cursory review of its data files and did not find any additional sites that might impact this project. (0407, 0407-A –30)

***Response**: Thank you for your input.*

State Comment: The report states that structures to be demolished have not been checked for the presence of asbestos-containing materials (ACM) or lead-based paint (LBP). They should be checked and if LBP or ACM are found, in addition to the Federal waste-related regulations, State regulations 9VAC 20-80-640 for ACM and 9VAC 20-60-261 for LBP must be followed. (0407, 0407-A –32)

***Response**: Prior to demolition of any building, a survey is required by a Virginia licensed asbestos inspector and Virginia licensed lead-based paint inspector. Demolition of buildings or structures involving regulated asbestos and lead-based paint would be carried out using appropriate procedures and disposal practices, including the Federal Lead Exposure in Construction Standard, the Virginia Solid Waste Management Regulations, and the National Emission Standard for Hazardous Air Pollutants.*

State Comment: Finally, pollution prevention was not addressed in the report. VDEQ encourages all construction projects and facilities to implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. (0407, 0407-A –33)

State Comment: DEQ encourages the project manager to reduce solid waste at the source, re-use materials, and recycle wastes to the maximum extent practicable. The Draft EIS did not address pollution prevention, according to DEQ's Waste Division. (0407, 0407-A –5)

> ***Response****: Pollution prevention for solid waste generated as a result of construction activities will be addressed in the Hazardous Materials Management Plan to be developed prior to any construction activities.*

State Comment: Solid and Hazardous Waste Management. DEQ's Division of Waste Program coordination, Office of Remedial Programs (hereinafter "DEQ's Waste Division") did a cursory review of its data files and did not find any contamination sites that might affect, or be affected by this project. The Draft EIS addressed hazardous and solid waste issues (pages 4-170 through 4-184, section 4.9). (0407, 0407-A –4)

> ***Response****: Comment noted.*

State Comment: Hazardous Contamination Materials Technical Report (June 2002) * No additional comment since the review comments of the 95% Draft EIS, on 3/10/02 (0421, 0421-A –9)

> ***Response****: Comment noted.*

State Comment: Integrate pollution prevention techniques into facility maintenance and operation, to include the following: inventory control (record-keeping and centralized storage for hazardous materials), product substitution (use of non-toxic cleaners), and source reduction (fixing leaks, energy-efficient HVAC and equipment). Maintenance facilities should be designed with sufficient and suitable space to allow for effective inventory control and preventive maintenance. (0407, 0407-A –17)

> ***Response****: Comment noted.*

Local Agency Comments

Coordinate Hazardous Materials Management Plan with Fairfax County Fire and Rescue Department

Local Comment: Preparation of the project's Hazardous Materials Management Plan should be coordinated with the County's Fire and Rescue Department. (0479, 0479-L –6)

> **Response**: *Preparation of the Hazardous Materials Management Plan will be coordinated with the County's Fire and Rescue Department, as requested. Preparation of this plan will not take place until all environmental documentation is complete.*

Public Comments

Project Impacts or Asbestos and Groundwater

Public Comment: There are community questions regarding projection of residents and commuters during construction from naturally occurring asbestos around Hunter Mill Road. Many residents around Hunter Mill Road are on wells. The EIS discussion is on surface water. What will happen to ground purity, groundwater purity? (0179, 0179-T –9)

Public Comment: There are environmental concerns regarding the naturally occurring asbestos in old service tanks and it is unclear how the communities in near proximity will ultimately be impacted. Additionally, it appears that new soil test have been performed. (0150, 0150-T-7)

> ***Response:*** *A Fairfax County Report entitled Control and Prevention of Asbestos Exposure from Construction in Naturally Occurring Asbestos (January 1993) states, "In an undisturbed natural*

environment, these fibers [naturally occurring asbestos] are locked in place within the rock and represent no health hazard." Asbestos fibers are not soluble in surface or ground water and therefore, would not pose a threat to surface or groundwater resources.

Prior to implementing any soil disturbance activities in areas that may contain naturally occurring asbestos minerals, a compliance plan would be prepared and submitted to the Fairfax County Health Department for review and approval.

B. Supplemental Draft EIS Comments

State Agency Comments

Compliance with Applicable Regulations

State Comment: Soil suspected of contamination, and wastes that are generated, must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations. (0080 0094-12)

State Comment: As we stated in our reply to the Draft EIS, dated August 27, 2002 (DEQ-02-124F, page 9, item 11), DEQ advocates that principles of pollution prevention be used in all construction projects as well as in facility operations. Effective siting, planning, and on-site Best Management Practices (BMPs) will help to ensure that environmental impacts are minimized. (0080 0094-9)

State Comment: If asbestos-containing materials (ACM) are found, following their classification as friable or nonfriable, all waste ACM shall be disposed of in accordance with the Virginia Solid Waste Management Regulations (9 VAC 20-80-640), and transported in accordance with the Virginia regulations governing Transportation of Hazardous Materials (9 VAC 20-110-10 et. seq.). (0080 0094-13)

State Comment: The project must comply with the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) regulations, and with the Virginia Lead-Based Paint Activities Rules and Regulations. (0080 0094-14)

State Comment: Pollution prevention was not addressed in the SDEIS. DEQ encourages the proponents to implement pollution prevention principles, including the reduction of solid wastes at the source, re-use of materials, and recycling of waste materials. (0080 0094-3)

***Response:** Comment noted. All Project activities will be completed in accordance with relevant federal, state, and local laws and regulations and accepted Best Management Practices.*

4.10 Energy

A. Draft EIS Comments

No comments pertaining to this topic were received.

B. Supplemental Draft EIS Comments

Public Comments

Documentation of Energy Analysis

Public Comment: The Supplemental Draft Environmental Impact Statement is in error when it says that Dulles Rail in opening year will increase energy usage 0.31% over No Build and +3.7% when completed. The SDEIS estimate the elimination of 214,500,000 vehicle miles traveled in opening year and 257,400,000 VMT when completed. This is in scale with 53,600 initial passengers on Dulles Rail and 86,900 when completed. At 22 miles per gallon, 9.7 million gallons will be saved the first year and 11.2

million gallons when completed. To run the trains, you need only 36 million kilowatt hours if energy will be added, equal to only 2,500,000 gallons of gasoline. The energy usage shall go down 63 percent for the specific people involved. We should save $11 million a year on use of foreign oil refined into gasoline. (0054 0055-1)

> ***Response:*** *The energy analysis was conducted according to FTA guidance for the determination of energy effects. Your analysis suggests that energy savings due to the Project will be much greater than estimated in the Supplemental Draft EIS and Final EIS.*

Public Comment: The SDEIS envisions energy usage that would increase by only 1.6% with a Phase 1 project. An objective and adequate source generation analysis needs to be conducted and presented. The data needs to be re-evaluated and defensibly explained in a manner that accounts for the incremental energy expenditure at coal-fired power plants that are used to provide the source of power for Metrorail trains – i.e., electricity from coal-burning power plants. Such power is referred to as source-generation and needs to be factored into a meaningful environmental impact statement. (0068 0173-32)

> ***Response:*** *Project Team utilized methodologies consistent with that described in the FTA's Reporting Instructions for the Section 5309 New Starts Criteria (April 2004). The methodology used to assess the energy consumption impacts of the Project is outlined in the FHWA report entitled Energy and Transportation Systems (July 1993) and in the* Energy and Transportation Manual (Caltrans 1983)*. See Section 4.10 of the Final EIS for the discussion on energy impacts.*

5.0 ECONOMIC EFFECTS

5.1 Economic Conditions

A. Draft EIS Comments

Public Comments

Public Comment: In general, the proposed rail system mainly benefits the commercial interests of Tysons Corner property owners (especially those within close proximity of a rail station) and some of the workers in those buildings (mainly people who live near metro stations). It doesn't seem to offer any benefits to other people in the Tysons/McLean area. (0233, 0426-M –28)

> ***Response:*** *As identified in Chapter 1 of the Final EIS, the goals for the Dulles Corridor Rapid Transit Project include improving transportation service and increasing transit ridership, among others. One of the project purposes is to provide an alternative to auto travel to help meet increases in travel demand. By providing a high-quality link to the existing Metrorail system, the project would improve mobility for residents and employees throughout the Washington metropolitan region*
>
> *Although the Wiehle Avenue Extension and Full LPA would not serve the travel needs of all trip makers in the Dulles Corridor, the Project—in combination with the planned transit-oriented urban form—offers alternative means of travel for the growing number of residents, employees, and visitors in the Dulles Corridor, helping to increase overall mobility in the corridor. In this way, they would benefit adjacent residents who would not directly benefit from the new transit service.*
>
> *Other highway and transit improvements that would address the existing and potential future deficiencies in Northern Virginia's transportation system are recommended in the Northern Virginia 2020 Plan, the Statewide Transportation Plan, and local comprehensive plans.*

Financial Impact of Loudoun County Joining WMATA Compact

Public Comment: And finally, as a major Loudoun County taxpayer, the Greenway is concerned that the financial impact on Loudoun County of becoming an active member of the WMATA compact has not been adequately discussed and that the operational and capital improvement subsidies to be paid by Loudoun County will be enormous in relation to the number of riders. Terminating the line at Route 606 should allow Loudoun County to obtain benefits from the availability of mass transit while minimizing the capital costs and the subsidies. (0257, 0257-T –9)

> ***Response:*** *The Loudoun County Board of Supervisors with support of the Office of County Administrator and the Office of Transportation Services has fully considered the capital and operating funding plans of the Project's financial analysis. Loudoun County has endorsed the Project for its benefits in mobility, in support of future development and in support of environmental quality. In cooperation with the Commonwealth of Virginia through the course of the Major Investment Study of the mid-1990s and through the current NEPA process, the County has consistently endorsed the locations of the Route 772 Station and the Route 606 Station.*

Distribution of Economic Benefits

Public Comment: Residents in my neighborhood are exemplary citizens who make significant contributions to the county and state through real estate, personal property, sales and other taxes. The Dulles Corridor Project will primarily benefit individuals residing in the outer suburbs or other states who want an easier commute into the Washington, DC and Tysons Corner areas. Those of us who reside near the project will benefit to a much lesser degree if at all, yet we will shoulder a disproportionate share

of the burden through our higher property and real estate taxes, as well as the quality of life burdens referenced above. (0425, 0425-E –3)

Response: *As identified in Chapter 1 of the Final EIS, the goals for the Dulles Corridor Rapid Transit Project include improving transportation service and increasing transit ridership, among others. One of the project purposes is to provide an alternative to auto travel to help meet increases in travel demand. By providing a high-quality link to the existing Metrorail system, the project would improve mobility for residents and employees throughout the Washington metropolitan region.*

Although the Wiehle Avenue Extension and Full LPA would not serve the travel needs of all trip makers in the Dulles Corridor, the project—in combination with the planned transit-oriented urban form—offers alternative means of travel for the growing number of residents, employees, and visitors in the Dulles Corridor, helping to increase overall mobility in the corridor. In this way, they would benefit adjacent residents who would not directly benefit from the new transit service.

Other highway and transit improvements that would address the existing and potential future deficiencies in Northern Virginia's transportation system are recommended in the Northern Virginia 2020 Plan, the Statewide Transportation Plan, and local comprehensive plans. This program of improvements is being evaluated and developed by VDOT, DRPT, and others.

Positive Economic Benefit of Metrorail

Public Comment: Two KMPG studies confirmed that MetroRail earned the Commonwealth of Virginia a nineteen (19) percent return annually on the Commonwealth's investment, in addition to the local county gains. Clearly, MetroRail is highly profitable for all concerned even though it operates at a bookkeeping loss. (0013, 0013-L –28)

Public Comment: MetroRail to Dulles and Loudoun County is well worth $67.3 million per year. Property values in the Dulles corridor will increase by roughly $12.5 billion, based upon parallel experiences, yielding approximately $185 million annually in additional tax receipts, or, more hopefully, a reduction in the property tax rate as occurred when MetroRail came to Huntington Avenue and Vienna. (0013, 0013-L –27)

Public Comment: Wherever metrorail goes, prosperity follows. Metrorail is a tangible and measurable asset for both businesses and local economies. (025, 0253-T –3)

Public Comment: Living near a metro station is one of the best things that can happen to you. And, as your transportation options get better, your house becomes worth, if you are living near it, an enormous amount of money. I'm surprised my little 1500-square-foot house is now worth half a million on the market, but that's because I'm close to a metro station. (0263, 0263-T –2)

Response: *Proximity to Metrorail stations has been shown to have positive impacts on property values. The increased property values and amount of development allowed by proposed density bonuses adjacent to some Metrorail stations could increase property tax receipts for local government in the Dulles Corridor. However, changes to local property tax rates are solely within the control of the local government (i.e., Fairfax and Loudoun counties).*

The Project Team agrees that rail transit has been shown to have positive effects on property values in the vicinity of transit stations. As described in Chapter 3 of the Final EIS, the corridor is one of the region's fastest growing areas and is expected to continue growing over the next 25 years; however, implementation of the Wiehle Avenue Extension and the Full LPA are expected to have a significant positive impact on the intensity of development in station areas.

Request Disclosure of Property Ownership

Public Comment: Oh yes, there was also a speaker at the Ashburn session that said the properties in East Loudoun would benefit from rail (I would think it would be rail or BRT…but he only said RAIL). I guess there wouldn't be any objection to a full disclosure of who all the owners and/or partners are of those properties that are likely to benefit from rail? (0233, 0426-M –18)

> ***Response***: *Without knowing the specifics of the comment referred to in this statement, only a general reply can be prepared in relation to disclosure of property owners. In general, mobility and land development benefits will be generated by the presence of BRT or Metrorail in Loudoun County, not only for property owners within close proximity to transit stations, but also to residents, employers, and visitors to the county who will enjoy enhanced transit access. The Final EIS does not identify parcel ownership information for the properties adjacent to the proposed station areas, or ownership information for all of Eastern Loudoun County, as requested in the comment. However, this information is available online in the Loudoun County Assessment and Parcel Database at www.loudoun.gov.*

Concern of Impact on Property Values and Neighborhood

Public Comment: Again, I am not saying that I would favor abandonment of the project, but it is only fair to consider the welfare of those of us on Greenwich and other streets that may be affected. I refer not only to noise and traffic but to reduction of property values and potential neighborhood deterioration. (0307, 0307-E –3)

> ***Response****: The LPA is expected to have positive effects on commercial and residential properties located near transit stations. As described in greater detail in Chapter 5 of the Final EIS, the LPA would contribute to greater economic development by encouraging or supporting higher-density residential and commercial land uses around transit stations. Past experience with the Metrorail system has demonstrated that transit investment has had positive effects on the residential and commercial development near the stations. It is expected that new development around station areas in the Dulles Corridor would also attract businesses from outside Fairfax and Loudoun counties, providing net economic benefits. Negative neighborhood impacts are not anticipated. Chapters 3 and 4 of the Final EIS document social and environmental effects associated with implementation of this project. Where appropriate, specific mitigation measures are proposed.*

Public Comment: I also urge the state to take measures to compensate homeowners for the reduction of property values that will undoubtedly follow the construction phase and completion of this project. (0425, 0425-E –1)

> ***Response:*** *The LPA is expected to have positive effects on commercial and residential properties located near transit stations. As described in greater detail in Chapter 5 of the Final EIS, the LPA would contribute to greater economic development by encouraging or supporting higher-density residential and commercial land uses around transit stations. Past experience with the Metrorail system has demonstrated that transit investment has had positive effects on the residential and commercial development near the stations. It is expected that new development around station areas in the Dulles Corridor would also attract businesses from outside Fairfax and Loudoun counties, providing net economic benefits. Negative neighborhood impacts are not anticipated. Chapters 3 and 4 of the Final EIS document social and environmental effects associated with implementation of this project. Where appropriate, specific mitigation measures are proposed.*

Request Explanation of Calculation of Economic Benefits

Public Comment: On one page, you project $1.1 billion in economic benefit for Loudoun vs. Fairfax. How does that break down by county? How did you come to that number? (0112, 0382-L –13)

Public Comment: On pages 30 and 31 of the "Economic and Secondary Development Effects Technical Report," you calculate a $323 million economic effect for Fairfax and Loudoun counties through BRT, and $1.736 billion for rail. How does that break down by county? How did you come to that number? Does this mean BRT pays for itself but rail does not? (0112, 0462-L –41)

> ***Response****: As described in Chapter 5 of the Draft EIS, each of the Build alternatives would have a positive effect on the local and state economy as a result of construction expenditures. These effects include impacts on employment, output and earnings as funds are spent and re-spent throughout the economy. These temporary effects vary for each alternative, based on the amount of construction expenditures, the type of expenditures and timing of the expenditures. Measuring these effects provides a measure of the relative effects of each build alternative as compared to the No Build Alternative. While the analysis does account for funds that would have been spent within the Counties whether a build alternative is implemented or not, it is important to note that these effects represent the redistributive economic effects of increased federal and state funding within Fairfax and Loudoun counties. These are one type of economic impact, and do not necessarily represent the full cumulative effects of the project on the regional economy.*
>
> *In preparing the Final EIS, the Project Team applied multipliers from the US Department of Commerce, Bureau of Economic Analysis' (BEA) Regional Input-Output Modeling System (RIMS II). These multipliers, which reflect the industrial base of the region, are multiplied by the direct capital expenditures in order to calculate the total effects on the regional and state economy. The multipliers used reflect the economic base of Fairfax and Loudoun counties combined; BEA does not provide a Fairfax County only multiplier, as the raw data does not permit this disaggregation.*

Suggestion for Calculating Economic Impacts on Dulles Corridor Residents

Public Comment: The Draft Impact Statement did not contain the economic impact on residents of the Dulles Corridor. Recommendation: Present EIS Cost Model examples as:
- Family of four - two incomes both working in Reston/Herndon
- Family of four - one income working and DC and one income working in Reston/Herndon - mass transit user and POV required use.
- Single person living and working in Reston/Heron.
- Single mother of two (2) minor children - living in Reston/Herndon and working in Tysons - mass transit user.
- Single mother with two minor children living and working in Reston/Herndon. (0427, 0427-E –2)

> ***Response****: The Final EIS evaluated the economic impacts of the alternatives resulting from construction expenditures, ongoing operations and maintenance, and changes in the property tax base as a result of property acquisition. The analysis requested in the comment is at a greater level of detail than needed to support a decision about providing transit alternatives in the Dulles Corridor and would be highly speculative due to the general nature of the classifications identified. An economic analysis of this specificity is not required element of the Final EIS.*

Impacts on Increasing Tolls on the Dulles Toll Road

Public Comment: What immediate and long-term impact will more-than-doubling the tolls on the Dulles Toll Road have on traffic volumes and safety on local roads such as Sunset Hills, Hunter Mill, Crowell, Browns Mill, and Beulah Roads which are used by commuters as an alternate route between Reston and Tysons Corner? (0460, 0460-L –5)

Public Comment: How will more than doubling the Dulles Toll Road tolls impact residential property values of the Hunter Mills Road corridor communities? (0460, 0460-L –6)

> ***Response****: The proposed increase in the toll levels is not expected to have a negative impact on property values in the Dulles Corridor. Any increases in travel costs, which could be capitalized in*

property values, are expected to be offset by positive effects of increased transit access and transportation capacity in the corridor

Impact of Lack of Adequate Parking on NADA

Public Comment: The lack of adequate parking will also detract from the favorable aspects of the Headquarters Building and undermine the ability of NADA to retain and attract tenants. (0477, 0477-L –10)

Public Comment: In order to retain and attract tenants, owing to the adverse impacts of visual blight and reduced parking capacity NADA must make virtually permanent financial concessions with respect to rates, tenant allowances and lease terms. The Headquarters Building's fair market value will decline substantially as a result of these financial concessions. (0477, 0477-L –11)

***Response**: The comments relate to visual impacts of the T4 Alignment in Tysons Corner and the loss of parking due to the placement of a Traction Power Substation on the NADA property. The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. Alignments T1, T4 and T9 were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Concern Over Parking Garages Impeding Joint Development

Public Comment: They are also concerned about the garage itself. It does take up all of the Security Storage and Templeton Oldsmobile site. However, they do believe that there are alternatives that could result in having parking for that station in conjunction with some joint development opportunities, and we will be providing written testimony to that fact between now and August 29th. (0161, 0161-T -3)

Public Comment: Parking facilities. Much of the EIS work tried to evaluate how much parking was going to be needed at the various stations, and they did come up with a 2000-space parking facility in Tysons Corner at your Tysons West station, and we are kind of concerned about this, because the places next to stations are your hundred percent corner, where if you put out development, you could generate the greatest ridership and you could also have high quality development that has the highest taxable ratables generating greater tax returns for the county. We suggest that this particular station area [Tysons West] not be used as an interim station, but that the county once again encourage the property owners to develop a long-term plan for transit-oriented village on that particular site in Tysons Corner. It's a great opportunity to get more residents there. (0141, 0141-T –5)

Public Comment: While joint development opportunities with the private sector that include limited parking facilities represents a viable alternative to the DEIS proposals, TMS Limited Partnership has concern that the timing of when the Commonwealth is prepared to construct the parking-related facilities versus when the market could support such a joint development program may not match. Once they're in place, they're likely to remain. (0135, 0135-T –6)

***Response:** Facilities proposed as part of the Final EIS at the Tysons West Station do not preclude transit-oriented development at this location. The Project Team recognizes the importance of residential and commercial development in proximity to station areas. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations.*

Consider Ad Valorem Tax Revenue as Part of Local Subsidy

Public Comment: I suggest that the economic impacts should discuss the increase in ad valorem tax revenue caused by the construction of the mass transit to Dulles. The increase in the ad valorem tax revenue, an increase in the cost of county services to serve the development that will occur along the corridor, and the annual contribution that the county will make to the mass transit system. It is possible

that the increase in ad valorem tax, minus the cost for funding county services, will generate subsidies that will finance the annual contributions that the local jurisdictions will have to make. The expected revenue, increased cost and resultant surplus, the annual county contributions and any deficits or surplus should be estimated and put in the final environment impact statement and considered during decision-making. (0279, 0279-T –1)

> ***Response:*** *Chapter 8 of the Final EIS discusses the Project's capital funding strategy. It describes the capital cost estimate, presents the expenditure schedule of capital costs, identifies the capital funding sources and shares, and describes the financing approach for the Wiehle Avenue Extension and the Full LPA. The financial analysis and planning documented in this Final EIS reflects a level of detail appropriate for a project in the planning phase. The next phases of project development - preliminary engineering and final design - will define the project in detail, produce more reliable cost estimates and result in a final financial plan.*
>
> *As described in Chapter 5 of the Final EIS, construction of the Wiehle Avenue Extension and the full LPA represents significant capital investment in the local economies of Fairfax and Loudoun counties. This spending would increase the employment, earnings and output for the duration of the construction process. These impacts are not long-term and are not included in the financial analysis or funding strategy.*

Positive Impact of Metrorail on Local Employment

Public Comment: Metrorail serves as an icon in local employment. It stands as one of the largest and most stable employers for many area residents. Metrorail employees and their families use the system and shop and spend their money with our local businesses. (025, 0253-T –4)

Public Comment: Metrorail is an icon in local employment, it stands as one of the largest employers of area residents. These same professional and courteous Metro employees ride this very same system to shop and spend their money with our local businesses. (0278, 0278-T –2)

> ***Response***: *Chapter 5 of the Final EIS documents the positive impacts implementation of the project would have in creating jobs and earnings as a result of ongoing operations and maintenance expenditures.*

Potential Impact on Employment of Local 2 Union Members

Public Comment: If this were a metro construction project, we would find Local 2 office and professional employees, professional and union employees, engaged in such activities as engineering design review, right-of-way acquisition, such as I am engaged in, construction inspection and procurement. But, ladies and gentlemen, and elected officials, appointed officials, this is not a true exclusive metrorail construction project. Rather this project is under the auspices not only of WMATA but more directly the State of Virginia through its Department of Rail and Public Transit. With that circumstance and situation, that Virginia state department, we understand, is or will be the applicant for a federal grant from the Federal government for funding for this project, and it will also be responsible for the activities that I previously outlined, engineering design review, right-of-way acquisition, construction inspection, and procurement. Now that the state of Virginia has options in the way that it does that. It can do that itself, it can do that through consultants or perhaps other means. The point of what I have said is with some irony, I suppose, while we have the metro-like project going forward, it could result in negative employment impacts for Local 2 union members at Metro in those disciplines that I described. (0187, 0187-T –1)

Public Comment: Consequently, Local 2 union is concerned for it professional employees, particularly in this realm, over issues of job security, project safety, project construction quality, and project procurement procedures. (0187, 0187-T –2)

Public Comment: Tonight, however, I learned two principal things. First, that this probably will not be a WMATA project, but rather it will be a project of the Virginia Department of Rail and Public Transit. That

agency has been identified, not in the public hearing but in the exhibit room, as something like the "project owner" - not Metro. And that the State of Virginia Department of Rail and Public Transit would be operating under a Virginia law called the PPTA. That law is identified informally to me as the "Public Private Transportation Act." It concerns me that the State of Virginia, having jurisdiction over this project, in a right-to-work-for-less state, will probably exclude any way, shape, or form of labor-organized labor union participation, to the great detriment, not only of WMATA employees, but also the citizens of the State of Virginia, the citizens of Fairfax County, and the citizens of the region that comprises the jurisdictions that compose the Washington Metropolitan Transit Authority. (0187, 0282-T –1)

Public Comment: The second part of this direction that this project is headed in has to do with contracting out for the work overall for this project. I understand from a reliable source in the exhibit room, that even at this time a particular firm is either negotiating with or about to negotiate with the State of Virginia for something that I would call a design-build contract. It's unclear whether this is being done competitively or not, but it sounded to me as though this arrangement is not being put out for competitive proposals or bids. So in contracting out this work to a private firm, design-build contractor, even more of the union positions at Metro, like architects, engineers, attorneys, real estate specialists, etcetera, that work done by those people at WMATA will be taken away and given to these others, from other firms outside of Metro. (0187, 0282-T –3)

Public Comment: Now, the public should know that the main reason for my great concern about the direction that this project is headed, in this respect, is that Local 2 has a collective bargaining agreement with WMATA, which specifies what is to be done and what is not to be done by Local 2 union representatives. This is my initial reaction that the direction that this project is taking, as I have described previously in my comments, subject to my further review of the collective bargaining agreement and discussion with my colleagues at Local 2, including the elected officers and Executive Board members. This direction and action being taken on this project could very well represent a substantial violation of the Local 2 WMATA labor agreement. I don't know that for a certainty, but I'm going to research it immediately. And I don't say that in a threatening tone or direction, but merely to let the public know that there are some of us in organized labor who view this approach that's being taken as an anti-labor union move, to the detriment of organized labor representatives at WMATA, including those in Local 2. (0187, 0282-T –4)

Public Comment: This direction that this project is headed in appears to be an anti-union labor project, and that concerns me very, very greatly. If this project were controlled from start to finish by WMATA, we would have the same labor union arrangements that we have had on the 106-mile system. The essential part of the first aspect is that there will be a loss of jobs in the real estate right-of-way acquisition realm. The work that my colleague Local 2 labor union members and I do in the Office of Property Management and Development, will not be done by us, it will be done by others, either directly by employees for the State of Virginia, in the right-to-work-for-less state, or by some contracted out consultants, who will work for even less than the right-to-work-for-less state employees, thus taking away jobs from union members at Metro. (0187, 0282-T –2)

Public Comment: We would like to invite, urge and encourage the Metro management to meet with representatives of Local 2 as soon as possible to explain to us, consistent with the terms and conditions of the existing collective bargaining unit, if not the spirit, to share with us how this project in it peculiar arrangements is going to impact the employees of Local 2 at Metro. (0187, 0187-T –3)

> ***Response:*** *Comment noted. The Virginia Department of Rail and Public Transportation (DRPT) is the project sponsor. Its approach to project development entails the following: 1) that DRPT is the program manager, Federal grant applicant and recipient, design/build contracting authority and initial owner of the Project, and 2) that WMATA is DRPT`s technical manager of NEPA process, of preliminary engineering (PE) and of the design/build contract and will be the leaseholder of the Project, its operator and ultimate owner.*
>
> *DRPT has received FTA approval to conduct preliminary engineering and an FTA grant to fund this effort All PE activities that involve FTA grant management, FTA liaison and FTA project*

management oversight are the responsibility of DRPT. DRPT has negotiated and executed a Comprehensive Agreement with Dulles Transit Partners, LLC (DTP) to be its PE consultant; as the technical manager of PE, WMATA will direct the day-to-day work of DTP. DTP is comprised of Bechtel Corporation and Washington Group International. For development of the project, DRPT is responsible for right-of-way acquisition, environmental permitting, interagency agreements, utility agreements, final financial plan, funding agreements and more.

The method used for scheduling meetings between representatives of the Office And Professional Employees International Union, Local No. 2, AFL-CIO and WMATA management is beyond the scope of the Draft EIS, Supplemental Draft EIS and Final EIS. It is suggested that the Local No. 2 representatives request a briefing through normal WMATA channels.

B. Supplemental Draft EIS Comments

Public Comments

Positive Economic Impact of Transit Investment

Public Comment: The extension of a full scale, efficient transit system in the Dulles Corridor will do as much to stimulate the economy of this area as the opening of the Dulles Toll Road did in the 1980's. (0041 0042-4)

Public Comment: Please emphasize the facts stated in 5.1.1.2 Para. A and B. This economic data has not been used in “selling rail” and is quite impressive. (0113 0132-9)

Public Comment: Please emphasize the facts stated in 5.1.1.2 Para. A and B. This economic data has not been used in "selling rail" and is quite impressive. (0123 0158-11)

Response: *Comment noted. Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and will be considered by decision-makers in the preparation of the Final EIS.*

Public Comment: So he [Dr. Steven Fuller] said the economy would be in terrible trouble unless Northern Virginia continues to grow and, again, brought in Dulles Rail now. (0060 0063-2)

Response: *Comment noted. Growth in the Dulles Corridor is expected to continue to outpace growth throughout the region. The Purpose and Need for the proposed action, as described in Chapter 1 of the Final EIS, includes the need to support future development in the region.*

Clarification Regarding the Economic Impact Analysis of Bus and Rail

Public Comment: In the DEIS and SDEIS, reference is made that the economic impact from rail is greater than if bus had been the preferred alternative. Please demonstrate through density credit analysis for rail and density credit for bus the difference for each of the transit stations. (0109 0128-8)

Response: *Because the purpose of the Supplemental Draft EIS was to provide additional information on the effects of refinements to the LPA, the economic effects estimated in the Supplemental Draft EIS consist of regional economic impacts resulting from construction expenditures for the proposed LPA and LPA Phase 1 (now referred to as the Wiehle Avenue Extension), as compared to the No Build Alternative and the Metrorail Alternative. Chapter 5 of the Final EIS addressed the potential secondary development impacts of the various alternatives, based on existing zoning and the density bonuses allowed under the Fairfax County Comprehensive Plan. Chapter 9 of the Final EIS assessed the potential population and employment effects of the secondary development.*

5.2 Station Area Development

A. Draft EIS Comments

Public Comments

Develop Plan for Funding Community-Friendly Element of Stations

Public Comment: Plans for making the stations more community-friendly through design competition, local control of operating policies, and training of staff. Plans for phasing of land development and provision of affordable housing. And, finally, and perhaps most importantly, development of a plan for funding these other improvements - these and other improvements from the economic growth that will occur in the station areas. (0173, 0173-T –10)

> ***Response:*** *The Dulles Corridor station architecture shown in the General Plans incorporates WMATA's "New Look" design now being advanced for the New York Avenue Station and the two stations of the Largo Extension. This concept retains key principles of Harry Weese's original design, with more inviting and better-defined entrances, an emphasis on customer information, and an open, graceful, and light feel through the use materials such as steel and glass for enclosures. These are systemwide "signature" elements that support a unified system identity as well as economical design and construction. The project is expected to maintain a high level of design quality regardless of whether design competitions are held. Station configurations do not preclude community facilities and functions separate from station facilities. WMATA station agents are well-trained for safe and efficient transit customer service.*
>
> *The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be the goals of the efforts. If a joint-development project would affect the design of the project, the technical issues would be resolved during preliminary engineering. Relative to the phasing of development, provision of affordable housing, and funding provided for these activities associated with the growth that could potentially occur in the transit station areas, all policy decisions controlling these activities are under the purview of the local jurisdictions.*

Physical Impacts of Tysons Parking Structure

Public Comment: However, the Owners do have concerns over the specific facility designs for the Tysons [West] rail station. All Metrorail alternatives and the BRT alternative in the Draft Environmental Impact Statement propose that a 2,000-car commuter-parking garage be located on the Security Storage and Templeton Oldsmobile sites. This large structure would occupy one of the key redevelopment sites at the Tysons West Station and is a major concern to the Owners. We suggest that a commuter parking garage of this magnitude is not appropriate for this area. Tysons Corner is viewed as the "downtown" of Fairfax County and, as such, rail service should be planned to implement that vision. Attracting commuters into Tysons Corner so that they may park and use Metrorail to reach other destinations such as Washington, DC, Arlington or Dulles Airport seems contrary to the Tysons Corner Comprehensive Plan. This station area should be planned so as to maximize the number of residents and workers within walking distance of the station. Not only will this garage occupy one of the "100% corners" at the Tysons West station, it will also impede pedestrian flow from adjacent property north and west of the station area. We suggest that this commuter garage be relocated to another station outside of the Tysons Corner area and allow the Tysons Corner stations to function in a more urban not suburban design. (0400, 0400- L-2)

Public Comment: However, if it is concluded that a commuter-parking garage is a necessary component to the Tysons West station, we suggest that there are other design alternatives that would make this commuter facility blend in better with other transit related mixed-use development. For example, if the 2,000-car requirement were spread out over several sites as opposed to being massed on one site, it would allow for better distribution of commuter parking spaces and an ability of the property owners to

absorb this commuter-parking requirement as part of their private development. This essentially would result in a joint development effort of public parking and private parking to support a private transit related mixed-use development. We have commissioned studies of how the commuter parking could be integrated into proposed development plans for the 22 acres and find that it could be accommodated without requiring WMATA's acquisition of the Security Storage and Templeton Oldsmobile sites. (0400, 0400- L-3)

> ***Response:*** *The park-and-ride facility of Tysons West Station has been reduced from 2,000 to 500 spaces specifically in response to concerns regarding traffic impacts. The 500-space park-and-ride would be part of a joint development project, so the private sector would be involved in the design and development. However, the specific location and design is not yet known. The park-and-ride would be accessed from local roads, and its cost is part of Wiehle Avenue Extension.*

B. Supplemental Draft EIS Comments

Public Comments

Transfer of Property for Stations

Public Comment: As you are aware, this past June, the Fairfax County Board of Supervisors unanimously approved our zoning to allow for a mixed-use development at Tysons II in conjunction with the FFGA for rail through Tysons. One of our proffers is the dedication of the land necessary for the Tysons Central Station in the T-6 alignment to Fairfax County. While we are not seeking any monetary compensation for this dedication, there are a number of items that we will require be incorporated in any transfer agreement to accommodate this rail station. The method of this incorporation has yet to be determined.
Although we are 18 to 24 months away from the FFGA, we believe that the discussions regarding these items referenced below should begin as soon as possible so as to complete the transfer as soon as possible following the FFGA.
The transfer agreement among other things, would have to cover the following items:
- Design approval of the station.
- Maintenance of the station and our rights to self-help.
- Construction staging and access.
- Sound attenuation.
- Station access on both the north and south sides of Tysons Boulevard.
- The name of the station.
- Construction coordination, including scheduling.
- Insurance.
- Other relevant items.

0008 0008-1

> ***Response****: The issues you have raised will be addressed through continuing coordination by the DRPT and WMATA as the project moves beyond the environmental review process and into preliminary engineering and final design.*

5.3 Development Effects/Potential

A. Draft EIS Comments

State Agency Comments

Increased Development of Tysons Corner Rail Stations

State Comment: There will be increased intense development around rail stations. There's a sizeable amount of land that's underdeveloped land in Tysons Corner. For example, there's a 13-acre parcel located next to the Lincoln that is underdeveloped and owned by the West Group which is a major supporter of the transit rail. There's also a 100-acre property that also has some underdeveloped parcels. (0147, 0147-T –3)

State Comment: What about let's look at transportation; let's look at whether these metro stations in Tysons Corner and in this corridor are really going to carry the amount of development that's being suggested by the developers. This should not be a developers' plan, but a transportation plan. I'm afraid it's a developers' plan. (0136, 0136-T –5)

> ***Response:*** *Relative to the comments made, the change in development character in Tysons is discussed in Chapter 5 of the Final EIS. The analysis addresses potential development within Tysons Corner at the proposed transit station areas. Some of this secondary development may be on undeveloped parcels as noted in the comment. The form of development and implementation of any site-specific private development opportunities within the corridor is under the control of local jurisdictions.*
>
> *The LPA is expected to have positive effects on commercial and residential properties located near transit stations. As described in greater detail in Chapter 5 of the Final EIS, the LPA would contribute to greater economic development by encouraging or supporting higher-density residential and commercial land uses around transit stations. Past experience with the Metrorail system has demonstrated that transit investment has had positive effects on the residential and commercial development near the stations. It is expected that new development around station areas in the Dulles Corridor would also attract businesses from outside Fairfax and Loudoun counties, providing net economic benefits. The actual level of development and implementation of any site-specific private development opportunities within the corridor is under the control of the local jurisdiction.*

Careful Planning for Related Land Use Impacts

State Comment: Careful planning for the related land use impacts is essential. Rail will bring dramatic changes to the area- whether these are positive or negative will depend on the land use planning. This is an unprecedented opportunity to implement "smart growth" principles throughout the Corridor. Both Fairfax and Loudoun counties have adopted Comprehensive Plans that support increased mixed-use development around the rail stations. Careful coordination of land use and transportation plans, with extensive public participation, needs to continue and take the highest priority. (0298, 0298-L –8)

> ***Response:*** *As stated in Chapter 5 of the Final EIS, the local jurisdiction's land use regulations supporting transit-oriented development have been summarized in relation to the project as an evaluation of the potential change in development characteristics at the transit station areas The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among the goals of these efforts. However, all land use decisions are under the jurisdiction of local government. All stations have been designed to provide access to development in the vicinity of the station for riders, residents, employees, and visitors.*

Revisions to Figure 3.1-2 Map of Proposed Land Use in Corridor

State Comment: Pg. 3-11, Fig. 3.1-2 - Proposed Land Use in the Corridor: Map and insert identify major roads (Dulles Toll Road, Beltway) as Open Space. Suggest additional label in the legend. (0421, 0421-A –19)

Response: *The Final EIS properly displays proposed land use in Figure 3.1-1.*

Comments on Economic and Secondary Effects Technical Report

State Comment:

- Page 28 [of the Economics and Secondary Effects Technical Report] - Tax Revenue Effects - "Construction of the Build Alternatives will require the purchase of some private land and/or structures for easement, rights-of-way, parking and station facilities, thereby removing these properties from the existing local tax base."
- Should any necessary lands be obtained through a process that would allow for density transfers, which is often the case; there would be no loss of tax revenue. In addition, under this process there may be no cost for acquisition.
- Page 105 - Secondary Effects Related to Density Increases - "The allowable transit-related growth will result in an increase in development in the immediate vicinity of stations throughout the corridor, but does not represent a dramatic increase over the overall level of growth allowed in the Fairfax and Loudon counties."
- As this is already a congested corridor, "an increase of approximately 38 million of 43 million square feet of development over the Baseline Alternative (Page 112)" with associated increase in work vehicle trips of "20,000 per day" (Page 114) and increase of non-commute vehicle trips of "50,000 per day" (Page 114), does pose a significant threat for increased delays.
- "transit related growth allowed in Loudon County was not included (in) the supplemental transportation demand analysis."
- One proposal in Loudoun County calls for the development of some 19 million square feet of office space alone at the Route 772 Station. No resultant impacts of such development on the Metro rail system, the surrounding roadways, and the corridor in general are provided in the report.
- "Even without mobility benefits associated with the provision of rapid transit improvements, the corridor is projected to absorb high level of development under the Baseline Alternative."
- While it may be possible to physically add all this new development under the Baseline Alternative, it does not seem reasonable to assume that it would actually be built with the higher traffic congestion that would result from such development.
- Page 125 - MITIGATION - The mitigation strategies contained in the report speak mainly to the opportunity of the local jurisdictions to limit development in the area of the transit stations if undue congestion is experienced in the area. The report does not look at the impacts to roadways running in a north-south direction or otherwise outside the corridor. As indicated, these roadways would also be affected by the increase in density at the transit locations. (0421, 0421-A –7)

Response: *The commenter is correct that the effects of the density bonuses in Loudoun County were not included as part of the traffic analysis conducted for the secondary and cumulative effects section in Chapter 9, due to the limited information available on the potential location of development and construction of supporting roadway network. The commenter also notes that the growth projected under the No-Build Alternative may not occur due to traffic congestion. Finally, the mitigation does focus primarily on localized congestion at the transit station areas. Many of the north-south roadways that provide access to the corridor, including Route 123, Route 7, I-66, Reston Parkway, Route 28, Loudoun County Parkway, and the Capital Beltway have improvements scheduled or in planning stages designed to meet projected increases in demand by 2025 as part of the regional planning process. The Final EIS incorporated information from the regionally adopted land use projections prepared by MWCOG, Round 6.3 that do indicate strong growth trends in the corridor, even under congested conditions.*

Build on Fairfax and Loudoun County Comprehensive Plans

State Comment: Likewise, future planning needs to build upon the pioneering work already completed in Fairfax and Loudoun counties to amend their comprehensive plans. That planning calls for rail stations with maximum access and flexibility for riders and transit-oriented development around the stations. (0131, 0163-T –9)

> ***Response:*** *The change in development character in the corridor is discussed in Chapter 5 of the Final EIS. The land use plans adopted by local government within the Dulles Corridor all contain guidelines to support transit, higher densities, mixed-use development, and walkable, bike-friendly development patterns in close proximity to the transit stations. The Project Team will work with the local government to support access to transit stations for pedestrians and cyclists and to implement transit-oriented development initiatives, although implementation of this form of development, including the provision of bike lanes, parking regulations, and demand management measures is under the jurisdiction of the local government in the area. The stations proposed as part of the LPA are designed to provide access to pedestrians, cyclists, and feeder bus services, as well as transit-oriented development that might be implemented in proximity to the stations.*

Conduct Engineering Studies to Analyze Potential Air Rights Development

State Comment: Another major reason for our support of rail in the corridor is the opportunity it provides to use transient-oriented development to create attractive neighborhoods and communities with a pedestrian focus, the kind of planning that has made much of Reston a model of community scale development for the rest of the world. Transit-oriented development provides opportunities to develop a variety of housing types for an increasingly diverse population and to reduce household expenditures on transportation. A well-planned and mixed use in close proximity to the station is the key to generating rail ridership. To optimize ridership, we urge that the engineering studies for the station take into account the potential for air rights development as well. (0131, 0131-T –5)

> ***Response:*** *Higher density at station areas triggered by implementation of the LPA will open up opportunities for joint development, including opportunities for air rights development above transit stations. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among the goals of these efforts. All land use decisions are under the jurisdiction of local government.*
>
> *With respect to air rights development above Metrorail stations in freeway medians, the Project Team acknowledges that the two Counties govern land use and that FAA, MWAA, VDOT and TRIP II, as the owners and/or operators of the DIAAH, Dulles Toll Road and Dulles Greenway, must be involved. Therefore, the Project Team will await any initiative of the two Counties with the involvement of the highway owners and operators.*

Preserve Air Rights Options at Reston Parkway/Route 772 Stations

State Comment: There was considerable support for air rights development at rail station areas. We request that the project team take a pro-active approach to ensure that this can be accomplished easily, without the need to reconstruct station platforms, in particular at the Reston Parkway and Route 772 stations. (0131, 0434-E –2)

> ***Response****: With respect to air rights development above Metrorail stations, the Project Team acknowledges that the two Counties govern land use and that FAA, MWAA, VDOT and TRIP II, as the owners and/or operators of the DIAAH, Dulles Toll Road and Dulles Greenway, must be involved. Therefore, the Project Team will await any initiative of the two Counties with the involvement of the highway owners and operators. .*

Local Agency Comments

Coordinate Metrorail Extension with Land Use in Tysons Corner

Local Comment: It would be a tragic lost opportunity if we do not innovatively attempt to coordinate and integrate land use with the extension of metro to Tysons Corner. By partnering with all stakeholders we have an opportunity to preserve and improve the existing success of Tysons Corner resulting in the improvement of traffic circulation and creating pedestrian friendly civic space where none now exists. (0130, 0308-L –3)

> ***Response:*** *The change in development character in Tysons is discussed in Chapter 5 of the Final EIS. The analysis in the Final EIS addresses potential development within Tysons Corner at the transit station areas associated with the LPA. Station plans presented in the General Plans do not preclude joint development; however, no specific provisions have been made to accommodate it. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among the goals of these efforts. All land use decisions are under the jurisdiction of local government. If a joint-development project would affect the design of the project, the technical issues would be resolved during preliminary engineering and/or final design.*

Will Stations Be Urban Villages

Local Comment: Will each station constitute an urban village and destination in its own right, with both residents and office workers able to walk to a full spectrum of retail and commercial services needed to meet their daily needs? (0151, 0297-E –11)

> ***Response:*** *As stated in Chapter 3 of the Final EIS, the land use plans adopted by local government within the Dulles Corridor all contain guidelines to support transit, higher densities, mixed-use development, and walkable, bike-friendly development patterns in close proximity to the transit stations. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be goals of these efforts. All land use decisions are under the jurisdiction of local government. If a joint-development project would affect the design of the project, the technical issues would be resolved during preliminary engineering and/or final design.*

Smart Growth Strategies at the Route 606 and 772 Stations

Local Comment: A major element of this Smart Growth strategy is the Dulles Corridor rail project, and our land use policies are specifically structured to maximize the benefits and the opportunities presented by the Dulles corridor rail project stations at both Route 606 and 772. (0240, 0240-T –1)

> ***Response:*** *The change in development character in the corridor is discussed in Chapter 5 of the Final EIS and quantified in Section 5.3. The analysis in the Final EIS addresses potential development at the proposed transit station areas. As stated in Section 5.2 of the Final EIS, the land use plans adopted by local government within the Dulles Corridor all contain guidelines to support transit, higher densities, mixed-use development, and walkable, bike-friendly development patterns in close proximity to the transit stations. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be the goals of these efforts. All land use decisions are under the jurisdiction of local government. If a joint-development project would affect the design of the project, the technical issues would be resolved during preliminary engineering and/or final design.*

Encourage DRPT/WMATA to Integrate Parking and Mixed Use Development

Local Comment: I strongly encourage and would fully support DRPT / WMATA to think outside the box by seriously looking at alternative design opportunities to integrate ample parking for metro with mixed-use development on and around this future metro station. To achieve that end, I encourage DRPT / WMATA to work with the development community to explore creative ways to fully take advantage of all the opportunities that future rail stations would provide. The public investment in the extension of Metro is too great to ignore opportunities to maximize that investment. (0130, 0308-L –2)

> ***Response:*** *As stated in Chapter 5 of the Final EIS the land use plans adopted by local government within the Dulles Corridor all contain guidelines for mixed-use development and walkable, bike-friendly development patterns in proximity to the transit stations. Parking is provided at several stations in the corridor as part of the LPA. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among the goals of these efforts. All land use decisions are under the jurisdiction of local government. If a joint-development project would affect the design of the project, the technical issues would be resolved during preliminary engineering.*

Preserve Future Options for Air Rights at Rail Stations

Local Comment: Maintain implementation options for rail that do not preclude addressing the issues of air rights. (0437, 0437-E –12)

> ***Response****: With respect to air rights development above Metrorail stations in freeway medians, the Project Team acknowledges that the two Counties govern land use and that FAA, MWAA, VDOT and TRIP II, as the owners and/or operators of the DIAAH, Dulles Toll Road and Dulles Greenway, must be involved. Therefore, the Project Team will await any initiative of the two Counties with the involvement of the highway owners and operators.*

Public Comments

Work with Loudoun and Fairfax Counties on Station Parking Facilities

Public Comment: DCRA recommends additional planning work be done with Loudoun and Fairfax Counties on the size, location and design of station parking facilities. There are significant opportunities for mixed-use, transit-oriented development (TOD) at most of the stations and several joint development opportunities. As the Draft EIS analyses indicate, well planned TOD is an important generator of ridership. Any parking planned for the stations should be integrated with TOD. As the counties encourage TOD, transit planners should study the impact of providing more feeder bus service to reduce the need for parking at stations. By reducing vehicle trips, feeder bus service supports efforts to reduce harmful vehicle emissions and improve air quality. (0131, 0434-E –5)

> ***Response: Chapter 5*** *of the Final EIS discusses potential transit-oriented development at the proposed transit station areas. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among the goals of these efforts. However, all land use decisions are under the jurisdiction of local government. All stations have been designed to provide access to development in the vicinity of the station for riders, residents, employees, and visitors.*

BRT Not Effective for Encouraging Higher Densities

Public Comment: Fairfax and Loudoun County Comprehensive Plans allow for higher densities within walking distance of proposed rail stations. Without rail, however, the densities around proposed stations

will not be triggered in county plans and the option for a cost-effective rail replacement of BRT in the future will be gone, leaving no attractive alternative to increasing levels of highway congestion. Consequently, BRT as proposed in the Draft EIS, is not an effective stepping-stone to rail, as its use for any length of time would cause the Corridor to develop at densities which are too low to support a rail system, yet too high for the Corridor's projected highway capacity. (0133, 0405- L-11)

> ***Response:*** *BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS. Density bonuses associated with a BRT Alternative in Fairfax County were evaluated in Chapter 5 of the Draft EIS. , The densities are higher with the LPA, the Metrorail Extension, through the core of Tysons Corner. The language in the comprehensive plan would have limited development even under the BRT Alternative if highway capacity could not have accommodated the projected growth.*

Recommendations for Mixed-Use Air Rights Development

Public Comment: WATF members have examined the potential for mixed-use Air Rights developments above transit stops in the Dulles Corridor. The feasibility of using air rights above appropriate points in the corridor and at Tysons Corner would be driven by civic planning and economic considerations as well as by market forces. The conceptual illustration for a "Ponte Nova" mixed-use development above the proposed Reston Town Center station forms Figure 2. Its purpose is to demonstrate the seriousness with which the air rights concept should be considered and to stimulate a dialogue of civic and governmental interests regarding the future use of air rights. The conceptual work indicated the following potential benefits from such developments as they become economically feasible:

a) Expanded ridership revenue for the proposed transit system, (and thus reduced subsidy) as well as increased Fairfax County revenues through fees in lieu of real estate taxes;
b) Greatly improved integration of the transit stop with surrounding land uses;
c) "Bridging" the Dulles Corridor, thus linking land uses on either side visually, as well as for pedestrian, bicycle and vehicular traffic.

The conceptual analysis indicated that a "Ponte Nova" type development should voluntarily comply with the Fairfax County planning process, should blend with appropriate community standards, in this case those of Reston, and need not be visually intrusive to neighboring residential communities. Air Rights proposals would require agreement from Fairfax County and the Metropolitan Washington Airports Authority, and should be developed in consultation with neighboring communities. In that respect, the WATF notes that Fairfax County's land use planning process, Supervisor Hudgins' Charrette, and public comment opportunities already have produced a considerable volume of suggestions favoring Air Rights, to which this concept responds. The WATF believes that Air Rights developments could become economically feasible within the next five years and strongly recommends that:

a) The EIS Record of Decision includes the ability to create Air Rights developments above stations;
b) Detailed station design at appropriate locations should consider the potential for an Air Rights development. Where the feasibility for such developments would be in the future, the provision for them should be retained in station design.

Requested Action: Include use of Air Rights and other ridership building initiatives in the preferred local alternative. (0133, 0405-L –5)

Public Comment: Whether or not the above ground or partially below ground options are selected for Tysons Corner is a function of the ability to integrate the above ground option into Tysons Corner's environment in a visually appealing manner. Air Rights concepts for example could be used to "bridge" portions of Route 123 and Route 7 in the vicinity of stations. (0133, 0405- L-9)

> ***Response****: With respect to air rights development above Metrorail stations, the Project Team acknowledges that the two Counties govern land use and that VDOT as the owner and operator of the Routes 7 and 123, must be involved. Therefore, the Project Team will await any initiative of the two Counties with the involvement of VDOT. If a joint-development project would affect the design of the project, the technical issues would be resolved during preliminary engineering.*

Integrate Station Design, Land Use, and Air Rights

Public Comment: The rail station should be integrated with land use in order to increase ridership and reduce the subsidy burden on the region's taxpayers. The lack of parking at Route 772 and the location of parking at Route 606 are examples of the many refinements required during the design phase. Consequently, we believe that the final EIS should be written so that the record of decision gives the designer the maximum flexibility for this integration with land use including the use of air rights above stations, adequate parking, and use of covered moving sidewalks or other devices to extend the reach of stations in appropriate locations. (0133, 0133-T –5)

Public Comment: The EIS should be written so that the Record of Decision gives the designer the maximum flexibility for this integration with land use including use of air rights above stations, adequate parking and use of covered moving sidewalks or other devices, to extend the reach of stations in some locations. (0133, 0221-M –5)

> ***Response:*** *Proposed park-and-ride facilities were the subject of on-going coordination with Loudoun and Fairfax counties during completion of the Final EIS. Station designs do not preclude construction of additional parking or conveying systems by others outside the station entrances.*
>
> *With respect to air rights development above Metrorail stations in freeway medians, the Project Team acknowledges that the two Counties govern land use and that FAA, MWAA, VDOT and TRIP II, as the owners and/or operators of the DIAAH, Dulles Toll Road and Dulles Greenway, must be involved. Therefore, the Project Team will await any initiative of the two Counties with the involvement of the highway owners and operators. If a joint-development project would affect the design of the project, the technical issues would be resolved during preliminary engineering.*

Questions about Future Development around Station Areas

Public Comment: How much of the projected commercial and residential growth in the corridor can be accommodated by denser development around the metro stations? How many people currently live or work within the quarter mile walking distance of the proposed bus or rail stations? How exactly are people like those working in the Reston Town Center or Herndon Town Center to get to the bus-rail platforms in the median strip? Will the stations become a focal point of a mix of residential and commercial development? Will the areas around the station be pedestrian-friendly? Will each station, in short, constitute an urban village and a destination in its own right, with both residents and office workers able to walk to a full spectrum of retail and commercial services needed to meet their daily needs? (0151, 0151-T –6)

Public Comment: The Fairfax County Board of Supervisors last year attempted at least a partial solution to these issues by approving measures to encourage denser development around the Metro stations. We applaud the goal, but did they go far enough? In fact, those measures raise an intriguing question: Are we extending Metro to deal with growth in the corridor, or are we promoting growth in order to justify the extension of Metro? How much of the projected commercial and residential growth in the corridor can be accommodated by denser development around the Metro stations? How many people currently live or work within a quarter mile walking distance of the proposed bus or rail stations? How, exactly, are people-- like those working in the Reston and Herndon Town Centers-- to get to the bus/rail platforms in the median strip? (0151, 0297-E –8)

Public Comment: Will the stations become a focal point of a mix of residential and commercial development? (0151, 0297-E –9)

> ***Response:*** *The level of projected commercial and residential growth in the corridor was presented in Chapter 5 of the Draft EIS and varied by BRT or Metrorail alternative, and by the various alignments. Each station area presented in the Draft EIS specified development levels*

within half-mile distances. This is the average maximum distance patrons will generally walk to transit stations, and this distance is consistent with the radii used by Fairfax and Loudoun counties to define transit station areas. The projected levels of growth associated with the Wiehle Avenue Extension and the full LPA were refined in Chapter 5 of the Final EIS.

As stated in the Final EIS, the land use plans adopted by local government within the Dulles Corridor all contain guidelines to support transit, higher densities, mixed-use development, and walkable, bike-friendly development patterns near the transit stations. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among the goals of these efforts. All land use decisions are under the jurisdiction of local government. If a joint-development project would affect the design of the project, the technical issues would be resolved during preliminary engineering and/or final design.

Design Options for the Tysons West Station Parking Facilities

Public Comment: However, if it is concluded that a commuter-parking garage is a necessary component to the Tysons West station, we suggest that there are other design alternatives that would make this commuter facility blend in better with other transit related mixed-use development. For example, if the 2,000-car requirement were spread out over several sites as opposed to being massed on one site, it would allow for better distribution of commuter parking spaces and an ability of the property owners to absorb this commuter-parking requirement as part of their private development. This essentially would result in a joint development effort of public parking and private parking to support a private transit related mixed-use development. We have commissioned studies of how the commuter parking could be integrated into proposed development plans for the 22 acres and find that it could be accommodated without requiring WMATA's acquisition of the Security Storage and Templeton Oldsmobile sites. (0400, 0400- L-3)

Response: *The proposed facilities cited in the comment do not preclude transit-oriented development at this station, or limit pedestrian access to it. The parking facility is set back from Route 7 to provide space for development by others as well as screening for the parking structure. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among the goals of these efforts. All land use decisions are under the jurisdiction of local government. If a joint-development project would affect the design of the project, the technical issues would be resolved during preliminary engineering and/or final design.*

Concern Over Aerial BRT Bridge at Tysons West Station

Public Comment: This aerial BRT bridge also would create a barrier separating the properties on either side, both physical and psychologically. Redevelopment of the Tysons West station area would be less likely to occur in a comprehensive fashion with the introduction of this pedestrian unfriendly design. Instead, it will create a division that, depending on which side of the proverbial "tracks" one's property lies, may never be bridged. (0135, 0391-L –6)

Response: *No barrier effects were identified for the BRT ramp at this location during preparation of the Draft EIS. The land uses associated with parcels in this area were shown in Figure 4-14 of the Economics and Secondary Development Effects Technical Report (June 2002). Existing and future uses on both sides of the bridge are industrial in character. BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Desire a Transit-Oriented Village at Tysons West Station

Public Comment: Tysons West Station. Since DCRA supports a full rail extension out the corridor, we do not support the Tysons West station at Route 7 and Tyco Road serving as a transfer station between Bus Rapid Transit and rail, nor do we see it as an end of the line station for anything but a brief construction-staging phase. We wrote to the project team earlier in the process that the Comprehensive Plan for Fairfax County envisioned mixed use at this location, not a major parking facility. This site of more than 50 acres under joint ownership represents a significant opportunity to create a true transit-oriented village in Tysons Corner. By going directly to rail and limiting the amount of parking to be provided, this opportunity can be enhanced. Fairfax County has much to gain in securing quality development and enhancing tax revenues by encouraging high-quality mixed-use development at this site. The analysis done for secondary development-related travel effects in the "Traffic Analysis and Station Access Study-Technical Report" shows that the rail transit system could benefit far more from and allowable increase in mixed-use densities adjacent to the stations than from the provision of large parking garages. While it may make sense to provide some station parking at the particular location, it should be drastically scaled back and integrated into the transit oriented development plan. (0141, 0443-E –6)

> ***Response:*** *The Project Team recognizes the importance of residential and commercial development in proximity to station areas. However, it should be noted that the existing and planned uses in this area are industrial. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among the goals of these efforts. All land use decisions are under the jurisdiction of local government. If a joint-development project would affect the design of the project, the technical issues would be resolved during preliminary engineering and/or final design.*

Address Tysons Corner Future Development through Transit and Land Use

Public Comment: We have got to fix Tysons Corner with the continued development that is coming to Tysons, and it cannot just include transit, but the pedestrian-friendly design, housing, right mix of uses and the right street connections. (0149, 0149-T –3)

> ***Response:*** *As stated in Chapter 5 of the Final EIS, the land use plans adopted by local government within the Dulles Corridor all contain guidelines to support transit, higher densities, mixed-use development, and walkable, bike-friendly development patterns in close proximity to the transit stations. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among the goals of these efforts. All land use decisions are under the jurisdiction of local government. If a joint-development project would affect the design of the project, the technical issues would be resolved during preliminary engineering and/or final design.*

Impact of Tysons West Parking Garage on Future Station Area Development

Public Comment: There was concern expressed at the 7/29/02 hearing that the 2,000 space parking garage at the proposed Tysons West station would limit development around that station along Rt. 7. If we use some imagination, we should be able to get some developer(s) to build the garage with an office or residential building placed above the garage. (0071, 0071-CC-1)

> ***Response:*** *The Project Team recognizes the importance of residential and commercial development in proximity to station areas. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among the goals of these efforts. All land use decisions are under*

the jurisdiction of local government. If a joint-development project would affect the design of the project, the technical issues would be resolved during preliminary engineering and/or final design.

Impact of Tysons West Parking Garage on Pedestrian Access and Transit-Oriented Development

Public Comment: Even if the aerial bridge for the BRT service is relocated slightly to the east to avoid the TMS Property (something the DEIS consultants indicated they had not considered), the proposed 2,000-car parking garage and related facilities at the Tysons West transit station would still substantially affect operations at Tysons Self Storage and the potential for transit-oriented, pedestrian-friendly redevelopment. Indeed, construction of a multi-story, 2,000 car parking garage will create a physical separation between and among the properties around the proposed Tysons West transit station and diminish the opportunities for transit-oriented redevelopment around the station. The increased walking distances that will be created by forcing employees or residents to walk through or past a commuter parking garage to reach the transit station also are likely to discourage many people from utilizing mass transit. Placing a multi-storied parking structure in the path of pedestrians attempting to access a new transit station appears to contradict Fairfax County's goal of creating a pedestrian-friendly environment in Tysons Corner. (0135, 0391-L –14)

Public Comment: If a parking garage is necessary near the Tysons West Station, careful consideration should be given to the location and design of the garage. The garage should not provide a structural and visual barrier between the station and the parcels to the east. Any parking facilities should be integrated into a mixed-use development to ensure that it is appropriately screened and provides retail, office and residential uses, as well as parking, to allow the garage to become an integral part of a vibrant 24-hour Tysons Corner community. To this end, the parking facility should be potentially eliminating many of the aesthetic and physical concerns with the structure. Otherwise, if the parking facilities are constructed as a stand-alone endeavor, achieving the County's goal of pedestrian-friendly, transit-oriented joint development will be a substantial, if not impossible, challenge. (0135, 0391-L –17)

Public Comment: However, the Owners do have concerns over the specific facility designs for the Tysons [West] rail station. All Metrorail alternatives and the BRT alternative in the Draft Environmental Impact Statement propose that a 2,000-car commuter-parking garage be located on the Security Storage and Templeton Oldsmobile sites. This large structure would occupy one of the key redevelopment sites at the Tysons West Station and is a major concern to the Owners. We suggest that a commuter parking garage of this magnitude is not appropriate for this area. Tysons Corner is viewed as the "downtown" of Fairfax County and, as such, rail service should be planned to implement that vision. Attracting commuters into Tysons Corner so that they may park and use Metrorail to reach other destinations such as Washington, DC, Arlington or Dulles Airport seems contrary to the Tysons Corner Comprehensive Plan. This station area should be planned so as to maximize the number of residents and workers within walking distance of the station. Not only will this garage occupy one of the "100% corners" at the Tysons West station, it will also impede pedestrian flow from adjacent property north and west of the station area. We suggest that this commuter garage be relocated to another station outside of the Tysons Corner area and allow the Tysons Corner stations to function in a more urban not suburban design. (0400, 0400- L-2)

Public Comment: The Reston community does strongly support efforts to strengthen the bonds between the north side of the Dulles Corridor and the south side, and at a minimum nothing in the development of transit in the Dulles Corridor should in any way inhibit what might be done in the future to broaden the linkage. A number of proposals are possible. Some day they will be economically feasible, but that's a four to five hundred foot gap that we must somehow bridge more effectively. (0088, 0172-T–4)

Public Comment: The Reston Community strongly supports efforts to strengthen the bonds between areas of the community to the north and areas to the south of the Dulles transportation corridor. Special sensitivity is essential in the design of Reston and all other transit stations to encourage a bridging of the 400+ foot right of way of the Dulles Corridor. (0088, 0211-M –8)

Response: *The implementation of the Wiehle Avenue Extension or the full LPA proposed in the Final EIS would provide connections to both the north and south side of the Dulles Toll Road.*

Pedestrian bridges from both the north and south sides of the Dulles Toll Road are included as part of the station design. None of the proposed improvements are anticipated to preclude the ability to further enhance north and south connections.

Station Access, Design and Future Development at Wiehle Avenue Station

Public Comment: One of the things that Reston seeks to - some of the issues in Reston are access to the transit stations, the kind of development that will occur around the transit stations, the opportunity to do some joint development, because there is a parking facility at Wiehle Avenue that can be redeveloped as a nice transit-oriented village type project, and also because of the air rights possibilities that can link Reston north and south and east and west. (0141, 0167-T –1)

Response: *As discussed in Chapter 5 of the Final EIS, the local governments' land use regulations supporting transit-oriented development have been summarized in relation to the project as an evaluation of the potential change in development characteristics at the transit station areas. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among the goals of these efforts. All land use decisions are under the jurisdiction of local governments.*

Fairfax County Supervisor Hudgins has appointed the Wiehle Avenue Steering Committee, which will advise the County staff in the creation of a Request For Proposal (RFP) to solicit transit-oriented joint development proposals for a mixed use development of the County-owned parcel adjacent to the station. Using the conclusions from the Supervisor's Reston Charrette as a starting point, the committee is establishing the process, scope and criteria for the RFP.

With respect to air rights development above Metrorail stations in freeway medians, the Project Team acknowledges that the two Counties govern land use and that FAA, MWAA, VDOT and TRIP II, as the owners and/or operators of the DIAAH, Dulles Toll Road and Dulles Greenway, must be involved. Therefore, the Project Team will await any initiative of the two Counties with the involvement of the highway owners and operators. If a joint-development project would affect the design of the project, the technical issues would be resolved during preliminary engineering and/or final design.

Need to Recognize Recommendations of the Reston Charette

Public Comment: Summary: The DEIS provides analysis for a Dulles Corridor Extension developed to serve those who drive. With this as the foundation we will build a Reston that is a better place to park, not a better place to live. The DEIS proposes investment that does not contribute to the historical and architectural context of the Washington Metropolitan Area and Reston. I support rail, but only if the County, the Project Team and all of those involved in the project work together to do all the things that should be done regarding housing, air-space development, community-friendly around the stations, and some consideration of the historic context of Reston. There was a strong consensus on these items as a result of the Reston Charrette. The DEIS gives brief recognition to the desires of the community and then ignores those desires. By 2020 we will see metro stations that parallel the "improvements" at Dulles Airport in both cost and appearance: A $3.5 Billion parking garage. (0209, 0209-M –7)

Response*: The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among the goals of these efforts.*

Fairfax County Supervisor Hudgins has appointed the Wiehle Avenue Steering Committee, which will advise the County staff in the creation of a Request For Proposal (RFP) to solicit transit-oriented joint development proposals for a mixed use development of the County-owned parcel adjacent to the station. Using the conclusions from the Supervisor's Reston Charrette as a

starting point, the committee is establishing the process, scope and criteria for the RFP.

If a joint-development project would affect the design of the project, the technical issues would be resolved during preliminary engineering. The implementation of local land use regulations around the stations is under the control of the local government, and those that are approved are considered in the Final EIS. Proposed parking facilities at Wiehle Avenue and the Herndon-Monroe station, are expansion of pre-existing Fairfax County facilities. No park-and-ride facilities are proposed at the Reston Parkway Station since it is planned to serve as a destination station.

With respect to air rights development above Metrorail stations in freeway medians, the Project Team acknowledges that the two Counties govern land use and that FAA, MWAA, VDOT and TRIP II, as the owners and/or operators of the DIAAH, Dulles Toll Road and Dulles Greenway, must be involved. Therefore, the Project Team will await any initiative of the two Counties with the involvement of the highway owners and operators. If a joint-development project would affect the design of the project, the technical issues would be resolved during preliminary engineering and/or final design.

Quantity Benefits of Transit at Reston-Area Stations

Public Comment: The last thing I would suggest is that I have not yet heard any presentation on the benefit that we are going to receive to reconnecting Reston with what we can do with the uses that can go around the stations and the connections that can be built around it, and those should be quantified so that we can demonstrate the value that we have gained from this major investment. (0171, 0171-T –4)

Response: *The change in development character in the corridor is discussed in Chapter 5 of the Final EIS.*

Consistency of Station Design with Local Land Use Plans

Public Comment: Urban Design: The proposed alternatives for either the north or south station do not propose destination activities for mixed-use associated with the County's comprehensive plan or results of the land use charrette for the property. Flexibility should be included in the final EIS recommendations for the area adjacent to the platform to increase usage at the station. We understand that the design of the transit circulation system outside of the station platform can be refined through future design, so we hope that design is integrated into the surrounding land use plans. (0451, 0451-L –5)

Response: *The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among the goals of these efforts. If a joint-development project would affect the design of the project, the technical issues would be resolved during preliminary engineering and/or final design.*

Need to Recognize Plans for the Comstock Property

Public Comment: The Comstock property, known as "Loudoun Station", is identified as Loudoun County Tax Map 79 ((2)), parcels 1, 2, 1TR, 2TR, and is proposed to be developed with a mix of uses oriented toward the rail platform. We have a pending rezoning application with Loudoun County, referenced as ZMAP 2002-0005, seeking to have the Loudoun Station property rezoned to the PD-TRC (Planned Development-Transit Related Center), the appropriate district for implementing the Loudoun County transit-related polices. (0014, 0014-L –1)

Response: *Comment noted. Current land use policy decisions are reflected in the Final EIS.*

Design Route 772 Station Area to Allow For Transit-Oriented Development

Public Comment: We respectfully submit that it is vitally important that the land planning and transit-related proposals included herein be given full consideration by WMATA [and] VDRPT in order to ensure that the Route 772 Station Area is designed to meet both WMATA standards and the Loudoun County TOD policies. The economic viability of the Dulles Rail project is directly hinged upon the implementation of sound transit-related development policies that can only be achieved through modifications in the DEIS. (0014, 0014-L –2)

Public Comment: We would respectively suggest that the DEIS of the Dulles Corridor Rapid Transit Project be amended so as to recommend that the Metrorail Alternative and that full consideration be given for bus and rail facilities and pedestrian access on both sides of the Dulles Greenway right-of-way in the vicinity of the Route 772 area. (0014, 0014-L –15)

> ***Response:*** *The Final EIS reflects the transit oriented development policies as defined by the Loudoun County General Plan at Route 772. The permitted uses, land use mixes allowed, and density provisions are incorporated into the analysis of the growth that might occur in the vicinity of the Route 772 Station. The Final EIS and final General Plans incorporate~~s~~ pedestrian access from the Metrorail station to both sides of the Greenway. The Project Team will continue to coordinate this access with adjacent developments with approved site plans.*
>
> *The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among the goals of these efforts. All land use decisions are under the jurisdiction of local governments.*

Loudoun County Plans for Transit-Oriented Development

Public Comment: Loudoun has been planning for the coming of rail transit to the Greenway corridor for the last decade. Just last July, 2001, the Loudoun County board adopted a comprehensive plan that sought to enhance TOD development around its transit stations. This work seems to be bearing fruit. I understand that there are three TOD development proposals in various stages for these future stations. (0141, 0443-E –3)

> ***Response:*** *Comment noted. The Final EIS documents major projects that are planned for station areas in Loudoun County. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among the goals of these efforts. All land use decisions are under the jurisdiction of local governments.*

Relocation of Route 606 Station Inconsistent with Goal 3

Public Comment: The Goals and Objectives of the Project are set out in the DEIS, at page 1-27.Goal 3, Support Future Development. By relocating the [Route 606] rail station away from where it was placed in the MIS, Goal 3 is greatly defeated. Millions of square feet of development stand to be made much less pedestrian friendly by moving the station more deeply into Dulles Airport. Also, at the MIS location, an entrance into the possible P&R lot adjoining Area #3 of Dulles Gateway can be readily provided. The DEIS location makes that impractical, if not impossible. This is vitally important, because the opportunity for over 1,000 surface spaces stands to be lost. (0248, 0447-L –4)

> ***Response:*** *Dulles Gateway Associates, L.L.C. and TAB I Associates, L.L.C., the owner and developer of undeveloped property to the north of the Route 606 Station and the Dulles Greenway, has commented on the Route 606 Station location, access and facilities during the two public comment periods for the Draft EIS and Supplemental Draft EIS and during several*

coordination meetings with the Project Team. In this Chapter 2 of Appendix J, his comments appear under the commenter identification number 0248 for the Draft EIS and its proposed General Plans (June 2002) and under number 0111 for the Supplemental Draft EIS and revised General Plans. For the comment period of the Draft EIS, the owner-developer submitted a February 3, 1994 plan titled "Transit Station Site 5-A, Dulles Toll Road Corridor". For the comment period of the Supplemental Draft EIS, the owner-developer submitted a technical report by his consultant, titled 'Route 606 Station and Parking Analysis' (December 2003), on alternatives for the Station's park-and-ride structure and other facilities.

With his comments on the proposed General Plans (June 2002) the owner-developer submitted an undated development site plan titled "Dulles Gateway North, Sterling Virginia - Antigone Properties" prepared by Leo A Daly. The site plan shows two major developments that are separated by the stream valley and flood plain of Broad Run. Loudoun County in its revisions to its General Plan (County's name for its comprehensive land use plan) designates the area north of the Greenway, east of Broad Run and one-half mile north of the Route 606 station as appropriate for consideration of a transit node, Transit-Related Employment Center (TREC). Specific location of the TREC will be determined when a development proposal is made that complies with the policies and criteria specified in the plan. The owner-developer has not yet submitted his proposal to Loudoun County for review and approval. The owner-developer has identified the development east of Broad Run as Area 1 and west of Broad Run as Area 2. In addition, the owner-development has a land-locked parcel south of the Dulles Greenway and Broad Run and north of Route 606, which he has designated as Area 3. The route from Route 606 to the station facilities is via the existing Route 789.

Station Location
The location of the Route 606 Station in the final General Plans is west of the Route 606 overpass of the Dulles Greenway. The Greenway was planned, designed and constructed with a section of wide median to accommodate the future station. The Project Team's design in the final General Plans reveals that the width of median is not sufficient and, therefore, a westbound section of the Greenway must be moderately shifted outward from the median.

The Route 606 Station has its facilities of bus bays, Kiss & Ride and park-and-ride structure north of the Dulles Greenway on Airport property. North of the station facilities is the Area 1 TREC development.

The station location in the proposed General Plans (June 2002*), revised* General Plans (October 2003) *and the final General Plans differs from the station location that DRPT had identified in its* Dulles Corridor Transportation Study (June 1997)*. The study has been also known by its Federal definition, Major Investment Study or MIS. During the preparation of the proposed* General Plans (June 2002), *the Team shifted the station approximately 400 feet eastward or inbound from its MIS location for three reasons:*

1) *to minimize the height and extent of Station's retaining walls and fill,*
2) *to avoid potential impacts to the existing Dulles Greenway bridges over Broad Run, and*
3) *to avoid impacts to the horizontal clearances between the eastbound lanes of the Dulles Greenway and the southern abutment of the Route 606.*

The owner-developer has consistently commented in the two public comment periods and requested in several coordination meetings with the Project Team that the Route 606 Station be restored to a location that he believes is the one identified in the MIS.

For the coordination meetings and for the Public Hearings Report (February 2004), the Project Team prepared Figure J.2-1 in order to depict the General Plans location versus the MIS location of the Route 606 Station. But, the MIS location differed from the location that the owner-developer believes is the one identified in the MIS. His location is approximately 700 feet further west or outbound from the General Plans location.

In the comparison of the General Plans and MIS locations of the Route 606 Station, the pedestrian bridge between the station and the station facilities (park-and-ride structure, bus bays, and Kiss & Ride) remains in the same location. The travel path from the platform to pedestrian bridge to the station facilities is aligned for extension to a proposed transit node and TREC. The Project Team will be coordinating with the owner-developer so that this pedestrian link will be efficient and attractive.

In his comments, the owner-developer has requested a shift of the station and a second pedestrian bridge and station entrance to serve the development west of Broad Run. WMATA and industry standards assume that one-quarter mile is a reasonable walking distance, and one-half mile represents the outer limit of distance that most persons will choose to walk. Most of the Area 1 development is within one-half mile of the center of either the MIS or final General Plans station location, and could be accessed through the station facilities to the north (as noted above). Conversely, none of Area 2 development is within one-quarter mile of either platform location, and only a small portion is within one-half mile. The Project Team utilizes the WMATA study Development Related Ridership Survey II (December 1989) *as a reference for the determination of ridership by development type and distance. It revealed that the walk mode share decreases by 0.76 percent for each 100-foot increase in distance from the station. The additional rail transit trips by walk mode to and from the Area 2 development would, therefore, be negligible due to the prohibitively long walk distance.*

The sketch plan and profile submitted with the comments would move a large portion of the platform below grade, increasing construction costs, and increasing the distance from the platform to the mezzanine and pedestrian bridge level, which still must clear the Dulles Greenway below. Since the capital and operating costs of a second station entrance are significant and the additional ridership and revenues negligible, the Project Team declined this suggestion, as it previously did in a coordination meeting with the owner-developer. The economical solution for access from the Area 2 development west of Broad Run should be private shuttle buses, for which the Project Team would provide spaces at the station facilities.

Park-and-Ride Alternatives

The owner-developer in his comments on the Draft EIS and proposed General Plans encouraged the reduction of the 4,750 park-and-ride spaces at Route 606 Station. In the Supplemental Draft EIS, the Project Team proposed, later recommended, and the decision-makers selected a reduction to 2,750 spaces.

In his February 1994 plan and his December 2003 technical report, the owner-developer suggests that the Project Team consider the reduction of capital costs by the use of a surface park-and-ride facility in lieu of a structured one for the Route 606 Station. He also suggests the relocation and reconfiguration of the park-and-ride facilities by using Airport property north and south of the Dulles Greenway and using Area 3 of his ownership.

The Project Team discourages the separation of station facilities, particularly those of moderate size. If there were two park-and-ride facilities, totaling 2,000 spaces, a park-and-ride customer of Metrorail would not readily and conveniently reach one facility if the other became full first. The Project Team also discourages the separation of the station bus and Kiss & Ride facilities from the Area 1 TREC development, since there can be intermodal transfer and direct connections between the station facilities and the TREC development.

Interchange Modifications

The owner-developer has consistently commented in the two public comment periods and requested in several coordination meetings with the Project Team that the eastbound exit ramp of the interchange between the Dulles Greenway and Route 606 be modified in order to serve the alternative park-and-ride facilities south of the Greenway.

Through its travel demand forecasting and traffic analysis, the Project Team has shown that Project does not necessitate improvements to the interchange between the Dulles Greenway and Route 606. The traffic analysis in support of the Final EIS reveals that the intersection of Route 606 and Route 789 will degrade from Level of Service B in the current year to Level of Service F in the Project's forecast year of 2025, in the No-Build Alternative, that is, without the Project, due to the forecast land use. Level of service at an intersection is measured by the delay in seconds for drivers traversing the intersection. In the opening year of 2015 and in forecast year of 2025, the Full LPA increases the delay. The Project's mitigation for the opening year of 2015 is the addition of a right turn lane from southbound Route 789 to westbound Route 606. As shared with other stakeholders in the Dulles Corridor, the Project Team notes that the traffic conditions of station access should not be a major concern to the County nor to the owner-developer. The peak activity at the station will be early on weekday mornings and the park-and-ride structure will likely be full before the local peak hour of local development. For instance, the final park-and-ride customers of Metrorail would arrive before 7:30 a.m., while the local peak hour would be between 7:30 a.m. and 8:30 a.m.

The suggested modifications of the interchange are not in conformance with A Policy on Geometric Design of Highways and Streets (Green Book) of the American Association of State Highway and Transportation Officials (AASHTO). In particular, the modifications create an interchange between the Dulles Greenway and two crossroads and place a driveway on the eastbound exit ramp. An interchange with two crossroads (in this case, Route 606 and the development roadway) creates complex signing for the exit; moreover, the driver will have unconventional decision-points in a short length of travel. The presence of the ramp toll plaza worsens the signing, the line of sight to the decision-points and the inherent weave between the plaza and ramp terminal.

The driveway on the exit ramp violates the denial of access line established for this freeway by the owner of the Dulles Greenway. That denial of access is an integral element for safe and efficient operations of freeways.

While there are other reasons for eliminating this suggestion for modifications, one to add is that the driver, having exited the Dulles Greenway via the eastbound exit ramp and then the development roadway, will not have a clear understanding of the return to the Dulles Greenway. His orientation will be confused, unlike the exactness of the conventional exit maneuver to the primary crossroad, Route 606.

In the formulation of its Team recommendations (February and March 2004), the Project Team concluded, as it did in October and November 2002 Team recommendations, that it could not accommodate the suggested alternatives of the owner-developer.

Following the revising of the LPA and approval of the revised General Plans, the Project Team participated in a May 2004 meeting with the owner-developer, his consultants, a member of the Commonwealth Transportation Board, MWAA, TRIP II, and Loudoun County. The purpose of the meeting was to review the above issues with all interest parties. The meeting did not result in a change in the selected LPA and approved General Plans.

As stated in the final Team recommendations, the Team will continue to coordinate the pedestrian connections between the station facilities and the proposed development north of Route 606 Station.

Rezoning Property in Loudoun County, Tax Map 78

Public Comment: Through Loudoun County Office of Transportation Services (OTS) staff, we met with your staff in January 2001 to review the project status and have coordinated with the County to refine the land plans to provide a transit-oriented development at the future transit site. We are in the process of rezoning the land - designated on Loudoun County Tax Map 78 as parcel 22 (MCPI 120-38-9029), Tax

Map 92 Parcel 40 (MCPI 121-36-3578), Tax Map 42 Parcel 42 (MCPI 121-47-6616), and Tax Map 93 Parcels 1 (MCPI 120-29-7420) and Parcel 2 (MCPI 089-25-8906)- to accommodate PD-TRC land use activities consistent with the County's General Land Use Plan and the Countywide Transportation Plan (CTP), revised through July 2001. We have provided electronic versions of our filings to CTC. In December 2001, the County and representatives of the Trustees met to refine the land use plan through a charrette process, which WMATA staff were involved, to develop an updated plan which still included the dedication of land for the future transit uses. If the land is not rezoned by the Loudoun County Board of Supervisors in the Fall 2002, the Trustees will proceed with development according to the approved "by-right" subdivision plan for residential uses in the CR-1 Zoning District, which does not include dedication for the transit facilities. The existing zoning is not consistent with the County's Revised General Plan and VDRPT objectives in the Draft Environmental Impact Statement. (0451, 0451-L –3)

> ***Response:*** *Comment noted. The Project Team acknowledges participation in the ongoing coordination efforts related to this zoning application and will continue to work with Loudoun County and Trustee representatives in support of the integration of station facilities with plans for transit-oriented development. The analysis of land use impacts in the Final EIS is based on currently adopted and approved zoning and land use plans. The design of the station facilities at the Route 772 Station in the General Plans (Final EIS Volume V) accommodates the station requirements within the limits of the proposed dedication as identified to the project, but does not presuppose this dedication.*

Consider Land Use and Affordable Housing During FEIS/PE Phase

Public Comment: During the FEIS and rail PE process we need hard work on…Plans for phasing of land development and provision of affordable housing. (0173, 0213-M –10)

> ***Response***: *The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among these goals of the efforts. All land use decisions are under the jurisdiction of local governments.*

EIS Density Projections Does Not Account for Rezonings and Bonus Densities

Public Comment: Additionally, EIS density projections are based on the county's comprehensive plan and fail to account for rezonings and increased transit-related bonus densities that will undoubtedly occur along the corridor. If the optimistic EIS work trip ridership projections of 20 to 30 percent are to be believed, then the vast majority of the 70 to 80 percent remaining work trips will be by car. (0150, 0150-T –4)

> ***Response:*** *The analysis in Chapter 5 of the Draft EIS presents the potential effects of increasing densities as part of the discussion of secondary development. This analysis was included in the Draft EIS to address comments received during the public scoping process about the need to quantify the potential effects of increased density at transit station areas.*
>
> *The change in development character in the corridor is discussed in Chapter 5 of the Final EIS. The land use plans adopted by local government within the Dulles Corridor all contain guidelines to support transit, higher densities, mixed-use development, and walkable, bike-friendly development patterns in close proximity to the transit stations. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among the goals of these efforts. Density bonuses related to transit oriented development will increase transit ridership, but the majority of the work trips will still be completed by automobile.*

Rail Will Not Influence Land Use in Dulles Corridor

Public Comment: Many of the so-called supporters of what they are calling Rail Now are utopian city planner types who think that their preferred technology of public transit will improve the quality and nature of development in this area. They ignore the fact that Metro in the Maryland I-270 corridor has not made any difference in what has been built. They also ignore the fact that the Dulles Corridor's tremendous boom in the last twenty years, which has consumed almost all the available land, happened without wasteful subsidized rail - perhaps because of it. Stated simply, the Dulles Corridor is built out. The projections in the EIS for added development due to density bonuses around rail stations are fantasies. In the future, as in the past, building densities will be dominated by the economics of on-site parking, not by nearby transit opportunities. These people also ignore the spill-over effect on their neighborhoods as commuters avoid the soon to be doubled tolls on the main highway. (0162, 0162-M –7)

> ***Response:*** *Comment noted. The analysis in Chapter 5 of the Draft EIS presented the potential effects of increasing densities as part of the discussion of secondary development. This analysis was included in the Draft EIS to address comments received during the public scoping process about the need to quantify the potential effects of increased density at transit station areas. In addition, the traffic effects of increased density are presented in the* traffic Analysis and Station Access Study Technical Report (June 2002). *Potential changes in development character in the corridor are discussed in Chapter 5.of the Final EIS.*

Use of Half-Mile Radii to Estimate Pedestrian Accessibility of Stations

Public Comment: The diagrams I saw with the circles around them, the different radii, were as the crow flies, not as people walk, and I'm afraid that those distances are much, much harder -- much longer in real life. (0066, 0254-T –2)

> ***Response:*** *The radii selected for analysis are based on the geographic distance and not actual walking distances or times. The use of the half-mile radii is consistent with the methodology requested by FTA in evaluating population and employment statistics for station areas and is also consistent with distances incorporated into the comprehensive plan language adopted in Fairfax and Loudoun counties.*

Metrorail Extension Will Cause Residential Areas to Convert to Commercial Uses

Public Comment: I would also like to note for residents out in this area that watching metro come into Arlington and to Fairfax, that so many residential areas were converted into commercial areas that people who are in residential areas now should consider whether metro will really benefit them or not. (0262, 0262-T –4)

> ***Response:*** *As stated in Chapter 3 of the Final EIS the land use plans adopted by local governments within the Dulles Corridor all contain guidelines to support transit, higher densities, mixed-use development, and walkable bicycle-friendly development patterns near the transit stations. Any development in the corridor would be under the regulation of local jurisdictions.*

Recommend Preparing Alternate Land Use Scenarios

Public Comment: The agencies involved prepare transportation analyses with the use of transportation models, and these models incorporate a definition of the surrounding land use. There is nothing preventing you from preparing scenarios of alternate land use patterns over time to demonstrate to local planners what the result of these patterns will have on transportation factors. You should certainly work with local planners and citizens in defining what alternatives to analyze. This effort does not conflict with local land use planning; rather it simply provides your expertise to assist decision makers on these complex issues. It will constitute integration of land use and transportation planning, which is a mandate of the regional plan and it can be part of an EIS, an assurance received from Secretary Clement in a recent meeting with several environmental leaders. (0158, 0475-L –3)

Response: *The analysis in Chapter 5 of the Draft EIS presented the potential effects of increasing densities as part of the discussion of secondary development. This analysis was included in the Draft EIS to address comments received during the public scoping process about the need to quantify the potential effects of increased density at transit station areas. In addition, the traffic effects of increased density are presented in the Traffic Analysis and Station Access Study Technical Report (June 2002).*

Potential changes in development character in the corridor are discussed in Chapter 5 of the Final EIS.

Need to Ensure Careful Planning for Future Land Use

Public Comment: Since various state and local elected officials are also members of various committees, planning groups, etc. either directly or indirectly connected to the Dulles Corridor Project, and many of them favor the rail option, it behooves them to ensure there is careful planning for related land use. This should be done with an eye to not approving plans that would overwhelm whichever option is adopted and leave us where we are now. (0401, 0401- L-6)

Response: *The timing and approval of site-specific plans and implementation of land use decisions within the corridor is under the control of local government.*

Need to Plan for Transit-Oriented Mixed-Use Development in Station Areas

Public Comment: We would strongly encourage WMATA to assist Loudoun County in implementing the TOD policies set forth in its Revised General Plan by allowing for TOD development on both sides of the future median transit station. (0014, 0014-L –9)

Public Comment: We recommend that Loudoun and Fairfax counties undertake station access studies to review these parking need projections. With the right kind of mixed-use development encouraged immediately adjacent to the stations instead of single use parking garages, rail ridership can be enhanced and the number of parking spaces substantially reduced. If transit-oriented development is encouraged adjacent to the stations, cost savings from scaled-down parking could be spent on providing improved feeder bus service. Priority should be giving to walking, bicycling and feeder bus service to the stations. Any parking facilities that are provided should be integrated into mixed-use projects that provide housing and generate economic activity, ridership, and tax revenues. (0141, 0443-E –5)

Public Comment: Effective public transportation requires appropriately high density, mixed use development within easy walking distance & a walkable bike-friendly station area environment. (0066, 0066-CC-1)

Public Comment: In conjunction with the rail construction, please also initiate needed transit oriented development around the rail stops. It is time for America to return to building small towns filled with stores, homes, apartments, small offices, retirement homes, and most importantly schools. This will allow people not only to walk to work or to the Metro to get to work, but they would then be able to walk to do their errands, walk to school, and walk to their entertainment. Which will greatly decrease congestion on the roads. This would also greatly increase the sense of community, which has been lacking in America since we made an over commitment to roads and suburban sprawl. With an increased sense of connection to others through communities people's lives will be infinitely more fulfilling. (0103, 0103-E –2)

Public Comment: Planning for urban mixed-use development in the area of rail transit stations in the Dulles Corridor needs to continue to be developed and looked at. (0244, 0244-T –4)

Public Comment: I strongly support the concept of planning for intensive urban scale mixed use development within a reasonable walking distance of the rail stations. Again, the Reston charette has been referred to, and other efforts, to look at what could be done. (0088, 0172-T –3)

Public Comment: I strongly support the concept of planning for intensive, urban scale mixed use development within a reasonable walking distance of rail stations in the Dulles Corridor. This type of development should generate better utilization of the rail system by bringing more potential users within the immediate service perimeter of the system. While local land use policy is not within the direct purview of the EIS, local government emphasis upon effective land use at each station should considerably expand potential transit ridership well beyond the estimates used by the consultants to evaluate the economic feasibility of the system in the Draft EIS report. We must be mindful, however, that with greater density of development we will see a full range of associated challenges to accommodate the increased activity. Transit, highway and local government officials must be given the resources and the responsibility to assure that the additional challenges associate with a sophisticated transit system can be effectively accommodated. (0088, 0211-M –7)

Public Comment: We strongly support the concept of planning for mixed-use development that allows for significant residential, commercial, retail and public uses within a reasonable walking distance to the rail transit stations. (0204, 0247-T –5)

Public Comment: I live and work in Herndon, but I am appearing this evening as one of the two managing cotrustees of the Ruth C. Launders Marital Trust. The trust owns approximately 50 acres of undeveloped land located at the southwest quadrant of the Dulles Airport Access Road and Centerville Road, Virginia Route 657. Most of the site is within a one-half-mile radius of the proposed Route 28 transit station stop. The trust also belongs to Dulles LEADER and the Dulles Corridor Rail Association. We believe that the trust's real estate is the largest uncommitted parcel along the Dulles Toll Road. We have recently filed a zoning application to develop this site with other 2 million square feet of mixed uses, including office, retail and residential. This proposal seeks to capitalize on recent amendments to the county's master plan intended to promote the use of mass transit. This interplay of varied uses in an urban setting will encourage use of rapid transit and lessen dependence on the automobile. (0175, 0175-T –1)

Public Comment: I'd like to see the Metro here become more than a commuter rail. Let's build stations and vibrant neighborhoods around them. I'd love to take the Metro down from the last stop in Ashburn to DC to see theater at night. I'd love to take the Metro down to shop and eat at Reston Town Center, maybe even have a drink, in the evening. (0232, 0232-L –3)

Public Comment: High density mixed use development is essential within a quarter mile and half mile radii of all stations and stops. Where stations would be located in the freeway median, serious consideration should be given to decking over the freeway and building high density development on the air rights. (0066, 0254-T –1)

Public Comment: Our support for the Dulles rail project or any transit project, for that matter, has always been contingent upon having real plans to focus development within one quarter and one half mile of the transit stations in high quality, new urbanist designed communities. (0149, 0149-T –4) (0149, 0180-T –3)

Public Comment: We will optimize ridership and reduce traffic congestion if we get the mix of office, retail, residential and services right. If we have ground-floor retail, if we have offices over stores, residences over stores, good sidewalks and narrower streets, good street grids, public parks and plazas, bike lanes, extensive bike parking at the stations, reduced parking requirements for TOD buildings, transit passes and benefits and other demand management measures, and also good feeder bus service. (0149, 0180-T –9) (0149, 0205-M –2)

Public Comment: We need to consider all these plans in a holistic fashion. We need to consider transit-oriented development and walkable communities. (0181, 0181-T –10)

Public Comment: Changes to land use are also the fastest thing we can do to cut vehicles miles traveled and are critical for making transit work. (0149, 0180-T –2)

Public Comment: I think we are on track to doing it right and getting the land use to relate to rail. (0141, 0167-T –7)

Public Comment: We want to optimize ridership and reduce traffic congestion by getting the right mix of office, retail, residential, and other services. We need ground floor retail. We need offices over stores. We need residents over stores. We need good sidewalks and narrower streets. We need good street grids. We need public parks and plazas. We need bike lanes. We need extensive bike parking at the stations. We need reduced parking requirements for transit-oriented development buildings. We need transit passes and benefits and other demand management measures and absolutely need good feeder bus service to all of these stations. (0149, 0149-T –7)

Public Comment: We need ground floor retail, offices over stores, residences over stores, good sidewalks and narrower streets, good street grids, public parks and plazas, bike lanes, extensive bike parking at the stations, reduced parking requirements for transit-oriented buildings, transit passes and benefits, and other demand management measures, and good feeder bus service. (0251, 0251-T –3)

> ***Response:*** *The change in development character in the corridor is discussed in Chapter 5 of the Final EIS. The land use plans adopted by local government within the Dulles Corridor all contain guidelines to support transit, higher densities, mixed-use development, and walkable, bike-friendly development patterns in close proximity to the transit stations. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among the goals of these efforts.*

Support Parking Located at One-Half to Three-Quarter Mile from Stations

Public Comment: In order for the project to be successful in the near term, additional parking may be in order. However, it must not occupy the prime real estate closest to the stations. We support placement of parking from a half to 3/4 of a mile from the stations to attract riders and provide access to retail along the route to the station. This factor, which will impact ridership and the project's success, is not addressed in the DEIS. (0158, 0475-L –8) (0188, 0188-T –5) (0188, 0217-M –5)

> ***Response:*** *Stations need to accommodate multiple arrival modes, including pedestrian, bicycle, feeder bus, private shuttles, and private autos. Each is important in building and maintaining ridership, and availability of daily parking is particularly influential in attracting choice riders – those who have a car available for a trip but choose to use transit. Providing such parking within a reasonable distance of the station does not preclude transit-oriented station-area development. Mixed-use, pedestrian-oriented, compact development can be integrated with parking areas. WMATA design criteria establish the maximum acceptable distance between the station park-and-ride facilities and the station entrance to be 1,500 feet. Locating the station parking more remote than this would need to be weighed against negative impact on patronage.*
>
> *Parking is a potential element of joint development opportunities in the Town of Herndon, and at the Wiehle Avenue Station. Other parking facilities may be provided through the proffer system or as incorporated into private development proposals. The parking facilities that are currently under development or proposed for the corridor have been assessed for ridership effects in the Final EIS. The actual location and implementation of remote station parking would be under the control of the local jurisdictions that implement parking requirements as part of their local land use regulations.*

Opportunities for Mixed-Income Housing and Rebuilding Communities at Rail Stations

Public Comment: Further, there is a higher growth potential for mixed income housing near the rail station areas along the corridor. Reston Interfaith is particularly interested in this issue because the rail option provides opportunities for increased low-income housing in the vicinity of major work centers such as Tyson's Corner and Dulles Airport as well as the new ones that will be created at the proposed rail stops. (0193, 0238-M –3) (0193, 0193-T –3)

Public Comment: Some of the transit-oriented development proposals, they're not in place yet. Once again, the inner Purple Line is already going to be servicing an area that's proposed for smart growth. Smart growth should be about rebuilding existing communities, not building new ones out in the middle of a field and sending a rail line out with the hopes that people are going to use it, especially when all these supposed TODs are going to come with two-car garages, anyway. (0112, 0245-T –6)

> ***Response***: *As stated in Chapter 5 of the Final EIS, the analysis of land use effects and the change in character within the corridor is built on the currently adopted land use regulations within the corridor, which encourage the provision of transit within the Dulles Corridor and implement land use regulations that support transit. The implementation of the ultimate form of development and the decision on the appropriate location of growth is under the authority of the local governments in the area.*

Location of Structure in the DAAR Median Will Impede Station-Area Development

Public Comment: Location, location, location: a phrase used by realtors to describe the importance of this one factor in determining the value or potential value of any given property. From the beginning of the process, the locations that would best serve residents and employees have been excluded from consideration. Now we are considering locations that guarantee that there will be no development within the most important 1/8-mile of stations and no residential development within 1/4-mile of stations. We are building one mistake on top of another. (0209, 0209-M –3)

> ***Response***: *The median of the DIAAH has been studied as a location for rapid transit since that roadway was constructed and the median dedicated for that use. The level of projected commercial and residential growth in the corridor within defined transit station areas is presented in Chapter 5 of the Final EIS. The Final EIS the land use plans adopted by local government within the Dulles Corridor all contain guidelines to support transit, higher densities, mixed-use development, and walkable, bike-friendly development patterns in close proximity to the transit stations. The Project Team will work with the local government to support access to transit stations for pedestrians and cyclists and to implement transit-oriented development initiatives, although implementation of this form of development on private land is under the jurisdiction of the local governments in the area.*

BRT May Preclude Future Smart Growth Land Use

Public Comment: If BRT is to be implemented, landowners may build non-transit-oriented development which will foreclose future smart growth. (0144, 0144-T –10)

> ***Response:*** *BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS. The form of development and implementation of any site-specific private development opportunities within the corridor is under the authority of the local governments. Elements of transit-oriented development had been incorporated into the land use regulations for Fairfax and Loudoun counties in conjunction with the provision of BRT service, but at densities below those allowed with the Metrorail Alternative. T*

Protect Nearby Open Space

Public Comment: We also support the protection of nearby open space to offset new development. (0233, 0426-M –43)

> ***Response:*** *Comment noted. As stated on page 5-18 and 5-19 of the Draft EIS, local regulations do call for the creation of plazas and landscaped environments to encourage pedestrian movements and incorporate open spaces in proximity to the transit stations.*
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> *As stated in Chapter 5 of the Final EIS, the land use plans adopted by local government within the Dulles Corridor all contain guidelines to support transit, higher densities, mixed-use development, and walkable, bike-friendly development patterns in close proximity to the transit stations. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among the goals of these efforts.*

Fairfax County Should Continue Work on Mixed-Use Development Policies

Public Comment: Although significant initial steps have been made by the two counties, as noted above, in adopting policies to encourage mixed-use transit-oriented development, much remains to make this a reality. Several of the recommendations above are critical in doing this. In addition, Fairfax County should continue to work on its policies and development regulations toward this end. Mixed-use development should be fostered immediately, at appropriate densities, and development plans should be required to show how development can be staged during the rail transit development process and beyond. (0478, 0484-E –23)

> ***Response:*** *Comment noted. As stated in Chapter 5 of the Final EIS, the land use plans adopted by local government within the Dulles Corridor all contain guidelines to support transit, higher densities, mixed-use development, and walkable, bike-friendly development patterns in close proximity to the transit stations. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be the goals of the efforts. However, all land use decisions such as the provision of affordable housing and phasing of development are under the responsibility of local jurisdictions.*

Need Affordable Housing in Station Areas

Public Comment: Affordable housing should be a significant component of plans for the station areas, as now stated in the Fairfax County's Comprehensive Plan. As the station area development planning process evolves, goals should be established, with funding mechanisms, to provide housing for as high a proportion of employees of all income ranges in the station areas as feasible, in order to eliminate the maximum amount of peak period motor vehicle trips and achieve other related community development objectives. (0478, 0484-E –24)

> ***Response:*** *As discussed in Chapter 5 of the Final EIS, the land use plans adopted by local government within the Dulles Corridor all contain guidelines to support transit, higher densities, mixed-use development (including diverse housing types), and walkable, bike-friendly development patterns in close proximity to the transit stations. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among the goals of these efforts. However, all land use decisions such as the provision of affordable housing and phasing of development are under the jurisdiction of local governments.*

Consider Air Rights and Station Access in Planning Stage

Public Comment: We believe that with this project, there is an important opportunity for the County to continue to make investments in transit and transit-oriented development around metro stations. For example, station access for walking and biking should be incorporated into the planning stage. Also, air rights (or, large platforms over the stations) could be offered and maintained in the design stage for future higher density development. (0233, 0426-M –42)

> ***Response****: As described in Chapter 5 of the Final EIS, the land use plans adopted by local government within the Dulles Corridor all contain guidelines to support transit, higher densities, mixed-use development, and walkable, bike-friendly development patterns within one-quarter mile and one-half mile of the transit stations. With respect to air rights development above Metrorail stations in freeway medians, the Project Team acknowledges that the two Counties govern land use and that FAA, MWAA, VDOT and TRIP II, as the owners and/or operators of the DIAAH, Dulles Toll Road and Dulles Greenway, must be involved. Therefore, the Project Team will await any initiative of the two Counties with the involvement of the highway owners and operators. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among the goals of these efforts. However, all land use decisions such as the provision of affordable housing and phasing of development are under the jurisdiction of local government*

Do Not Encourage Increased Density at Tysons Corner

Public Comment: Following the tragedy of 9-11 I feel it is more important than ever to decentralize. Why would we build high rises to house the best minds of the people who would be working in Tysons Corner? If anything, we need to stop developing Tysons to be so dense. If computers can so easily talk to each other there is no need to concentrate its operations in one local. Now more than ever we need not to build high rises in between the flight paths of National Airport and Dulles. No more development of Tysons. Let's save the humility of the neighborhood even if saving it costs us more than developing it. That would be ok. (0052, 0052-CC-1)

> ***Response:*** *Chapter 1 of the Final EIS describes the Dulles Corridor and identifies the need for the proposed Dulles Corridor Rapid Transit Project.*

Coordinate Increased Density with Transportation Improvements

Public Comment: We are afraid that the County will zone increased density but road mitigation measures or Metrorail will be delayed or never happen. We therefore recommend approval of increased density zoning only when: Mitigation measures are actually implemented, and Funds are not only approved, but are released for the Operating Segment that includes Mid-Corridor service. Higher density facilities should be timed to coincide or follow the arrival of Metrorail and road mitigation measures. (0210, 0210-M –12)

Public Comment: Metrorail allows the highest densities at the station areas of any options, and will generate the greater ridership, but we are concerned about major congestion unless substantial mitigation efforts are made. Increased densities may appear before Metrorail service and mitigation plans are implemented. Higher density facilities should be timed to coincide with or follow the arrival of Metrorail and road mitigation measures, focusing on pedestrian friendly, transit-oriented developmental and travel demand management. (0233, 0426-M –7)

Public Comment: Increased densities may appear before metrorail service and mitigation plans are implemented. (0170, 0170-T –5)

> ***Response:*** *Potential mitigation measures associated with the proposed increase in density at transit station areas are discussed in Chapter 9 of the Final EIS. The counties have a*

mechanism to ensure that appropriate mitigation measures accompany future development through the zoning application and permitting process. Also, as described in Chapter 5, the level of development presents a full build-out analysis and local government may limit growth if their mitigation measures designed to limit the effects of increased density are not effective. Actual implementation of transit-oriented development and the timing and increase in densities is under the jurisdiction of the local governments in the area.

Support for Increased Density at Station Areas

Public Comment: The Committee for Dulles strongly supports the concept of planning for intensive, urban scale mixed use development allowing for significant residential, commercial, retail and public uses within a reasonable walking distance of the rail transit stations in the Dulles Corridor. This type of development should generate better utilization of the rail system by bringing more potential users within the immediate service perimeter of the system. While local land use policy is not within the direct purview of the EIS, local government emphasis upon effective land use at each station should considerably expand potential transit ridership well beyond the estimates used by the consultants to evaluate the economic feasibility of the system in the Draft EIS report. (0204, 0204-M –7)

Public Comment: Intensity of Development: the one factor that is a proven guarantee of success of a metro station. Rather than use the successful models of intense development near stations, the template for station design will be based on our low-density failures. (0209,0209-M –2)

Response: *As stated in Chapter 5 of the Final EIS, the land use plans adopted by local government within the Dulles Corridor all contain guidelines to support transit, higher densities, mixed-use development, and walkable, bike-friendly development patterns in close proximity to the transit stations. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among the goals of these efforts. However, all land use decisions such as the provision of affordable housing and phasing of development are under the jurisdiction of local governments.*

Focus Density Within One-Quarter Mile of Stations

Public Comment: We will optimize ridership, fare box and tax revenues through focusing the highest density within one-quarter mile of the stations, and this means considering air rights development or at least airport-style moving sidewalks to speed pedestrians to the edge of the right of way. Once again, most transit advocates and experts talk about it being important to focus the highest density within a quarter-mile walk. (0149, 0180-T –8)

Use Air Rights to Optimize Ridership, Fare Box, and Tax Revenues

Public Comment: We will optimize ridership, fare box and tax revenues through focusing as high as density. We need to consider air rights development absolutely. If you don't do air rights development, we ought to be considering some sort of moving sidewalks in air conditioning, as today demonstrates would be important, to get people to the edge of this massive right of way, if you insist on running the rail out the right of way. We don't want to repeat the problems with I-66 rail. (0149, 0149-T –6)

Response: *As described in Chapter 5 of the Final EIS, the land use plans adopted by local government within the Dulles Corridor all contain guidelines to support transit, higher densities, mixed-use development, and walkable, bike-friendly development patterns within one-quarter mile and one-half mile of the transit stations. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among the goals of these efforts. However, all land use decisions such as the provision of affordable housing and phasing of development are under the jurisdiction of local governments.*

With respect to air rights development above Metrorail stations in freeway medians, the Project Team acknowledges that the two Counties govern land use and that FAA, MWAA, VDOT and TRIP II, as the owners and/or operators of the DIAAH, Dulles Toll Road and Dulles Greenway, must be involved. Therefore, the Project Team will await any initiative of the two Counties with the involvement of the highway owners and operators. If a joint-development project would affect the design of the project, the technical issues would be resolved during preliminary engineering. Loudoun counties

Analysis of Density Bonuses in Draft EIS

Public Comment: The need for speed has kept me from adequately reviewing the entire draft environmental impact study for finding the information pertaining to the density bonuses which, from what I have seen, is not adequately addressed. When this study was done, were the density bonuses taken into account? If they are to be left to the county to consider after the metro is fully approved and funded, which it will not be until next November, that is an environmental impact that has not been properly assessed. (0159, 0159-T –1)

Response: *Chapter 5 of the Final EIS address potential development at the proposed transit station areas. Chapter 9 of the Final EIS presents an analysis of the potential effects of increasing densities as part of the discussion of secondary development, and quantifies the effects of implementing density bonuses in the corridor at transit station areas. This analysis was included in the Final EIS to address comments received during the public scoping process about the need to quantify the potential effects of increased density at transit station areas. The actual level of development and implementation of any site-specific private development opportunities within the corridor is under the control of the local governments.*

Impact at Increased Density in Dulles Corridor

Public Comment: The next principle is one of freedom. In the early days of the U.S., it was a man and his horse. Everybody forgets that today it's a man and a woman and a car. It is the essential element of freedom. I can go where I want when I want. And what we are trying to do in this process is tell people how they are going to get there and how they are going to live. So we are completely recharacterizing the county. We are talking about a high-density county. I lived in Bethesda when the Bethesda metro came out. I watched the Baronet Theater torn down and an entire Bethesda metro center built on top of it. I wouldn't live in Bethesda today if you paid me. And that's what is going to happen to this section of Fairfax County. So as you're watching all this growth that's going to happen and this tax base that's going to fund this hypergrowth, I am afraid that you are going to see over time a change in the demographics of the county, and you won't see the property value increase. As you see people move in and tax these additional trips, you're going to see an additional change in the character of the population and the tax base that supports it. (0191, 0191-T –5)

Response: *All local land use decisions in the corridor are under the control of local government, namely Fairfax County, the Town of Herndon, and Loudoun County. As described in Chapter 5 of the Final EIS, the land use plans adopted by local government within the Dulles Corridor contain guidelines to support higher densities, mixed-use development, and walkable, bike-friendly development patterns in close proximity to the transit stations. As described in Chapter 9 of the Final EIS, this transit-related development would have an induced effect on the level of density expected to occur in the corridor. In addition, increased transportation access is expected to have a corresponding positive effect on property values within the immediate vicinity (one-half mile) of the stations. The Final EIS does not estimate any changes in the relative socio-economic characteristics of the increased population that would result from the project.*

Need for More Comprehensive Analysis of Higher Density Scenarios

Public Comment: While we think the rail now concept in the DEIS has merit, we have some concerns about the DEIS and the planning it reflects. This is a complex project and in order for it to succeed, it will be necessary to consider and coordinate all the elements. This includes assuring that the kind of land use planning that will bring about the quantity and quality of development that will make the project viable occurs. We acknowledge that land use planning is a local government function and that you use the forecasts of the Council of Governments, but we think that much more can and must be done to ensure the success of this project. For example, the EIS should do a more comprehensive analysis of higher density scenarios. The density forecasts in the current DEIS do not adequately illustrate potential development. (0158, 0475-L –2)

> ***Response:*** *The analysis in the Final EIS addresses potential development at the proposed transit station areas, but does not use that growth to ensure the success of the project, as specified in the comment, but rather to develop an analysis of potential effects. Chapter 9 of the Final EIS presents an analysis of the potential effects of increasing densities as part of the discussion of secondary development, and quantifies the effects of implementing density bonuses in the corridor at transit station areas. This analysis was included in the Final EIS to address comments received during the public scoping process about the need to quantify the potential effects of increased density at transit station areas. The actual level of development and implementation of any site-specific private development opportunities within the corridor is under the control of the local governments.*

Impact of Increased Density on Wiehle Avenue Area

Public Comment: The DEIS states that the Metro Rail would result in increase density along Wiehle Avenue area of 8,201 residents and work force of 21,814 and in the Reston Parkway area 9,860 residents and work force of 28,714. Why is this increase in density necessary? Is it necessary to support heavy rail and pay the 3-1/2 billion-dollar cost to construct and maintain? (0189, 0448-E –2)

Public Comment: I also am concerned that rail stations, particularly the critical one at Wiehle Avenue, include high-density land use planning with attentiveness to pedestrian access. Currently, the intersection at Wiehle Ave. and Sunset Hills Road is a nightmare for pedestrians. (0125, 0125-E –2)

> ***Response:*** *The regionally approved land use projections prepared by the Metropolitan Washington Council of Governments (Round 6.3) were used to project growth within the corridor. Both Fairfax and Loudoun counties have adopted policies to implement transit-oriented development at stations if transit service is constructed in the corridor. These policies include density bonuses for some parcels that are in proximity to the station platforms and would allow for higher levels of mixed-use, pedestrian-friendly development than would otherwise exist without transit in the corridor. Although these policies are intended to support transit within the corridor, the increase in growth associated with these policies is not part of the project justification as stated in the purpose and need. An additional analysis of the effects of increased growth was prepared to respond to issues raised by citizens and local governments during the public scoping process. Local government controls implementation of policies that support additional growth within the corridor. The effects of these policies are analyzed to determine effects, but not to justify the selection of any particular alternative.*
>
> *As stated in Chapter 5 of the Final EIS, the local jurisdiction's land use regulations supporting transit-oriented development have been summarized in relation to the project. The land use plans adopted by local government within the Dulles Corridor all contain guidelines to support transit, higher densities, mixed-use development, and walkable, bike-friendly development patterns in close proximity to the transit stations. The Project Team will work with the local governments to support access to transit stations for pedestrians, and all stations have been designed to provide access for pedestrians. The intersection at Wiehle Avenue and Sunset Hills Road in Reston is located within the half-mile radius of the transit station area, but is not directly*

linked to the transit station itself. Thus, improvements to this intersection to improve pedestrian movements would be the responsibility of Fairfax County and/or the Virginia Department of Transportation.

Consider Impacts from Increased Floor Area Ratios in Station Areas

Public Comment: Analyze and accommodate impacts from the increases in floor area ratios permitted in rail station areas by the Fairfax County Comprehensive Plan, when the site is selected and programmed for design and construction. (0392, 0392-L –4)

Response: *Comment noted. The change in development character in the corridor is discussed in Chapter 5 of the Final EIS. This chapter also discusses the change in floor area ratios, referred to in the document as density bonuses.*

Station Area Development Depends on Funding for Transit

Public Comment: For Tysons Corner, the proposal is to have three to six stations. We need to understand that under our new comprehensive plan language, the proposed sites have great potential for intense development. The trigger for this development is not when the station is constructed; it is when the funding package for transit has been executed by all funding stakeholders. (0147, 0147-T –4)

Response: *The change in development character in Tysons Corner is discussed in Chapter 5 of the Final EIS. The analysis in the Final EIS addresses potential development that is within Tysons Corner at the proposed transit station areas. The form of development and implementation of any site-specific private development opportunities within the corridor is under the control of the local government.*

Do Not Increase Density to Justify Rail Option

Public Comment: The rail project should be designed to handle current and future growth in the county that will occur, regardless of the transportation capacity. This rail project should not be used to justify increased growth -- as is already being suggested. (0007, 0007-E –1)

Public Comment: I prefer just not building this at all if the density of development must be raised. (0082, 0082-CC-3)

Response: *The project is being designed with consideration of both current and future growth. The regionally approved land use projections prepared by the Metropolitan Washington Council of Governments (Round 6.3) were used to project growth within the corridor. The local governments have adopted policies to implement transit-oriented development at stations if transit service is constructed in the corridor. These policies include density bonuses for some parcels that are in proximity to the station platforms and would allow for higher levels of mixed-use, pedestrian-friendly development than would otherwise exist without transit in the corridor. Although these policies are intended to support transit within the corridor, the increase in growth associated with these policies is not part of the project justification.*

Impacts of Metrorail Alignment Options on Future Land Use

Public Comment: How many millions of square feet developed land can occur in Tysons Corner? If we select alignment T-1, which will have office, retail, hotel, industrial, institutional and residential, we could have 2.5 million square feet of development. Alignment T-6 and T-9, sing the same uses, it can add up to 3.2 million square feet of development. And alignment T-4, the uses add up to 4.4 million square of development. (0147, 0147-T –5)

Response: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. Alignments*

T1, T4 and T9 were eliminated from further consideration after the public and interagency review and comment on the Draft EIS. As studied in the Draft EIS, the level of developed land within Tysons Corner would have varied depending on the number of stations built and the provision of bonuses due to the inclusion of housing within the mix of development, as controlled in the land use regulations of Fairfax County. Information from Fairfax County indicated that the total amount of developed land, also known as build-out, varied from a three- station alignment such as T1 with a total of about 66 million square feet of development (including residential development and the use of density and housing bonuses), to a maximum of about 70 million with a six-station alignment such as T4 (including residential development and the use of density and housing bonuses). The overall amount, form of development, and implementation of any site-specific private development opportunities within the corridor is under the control of the local government. This level of analysis was prepared to allow decision makers to discern major difference in development potential among the alternatives studied in the Draft EIS. Only corridor development projections for the Wiehle Avenue Extension and the full LPA were presented in the Final EIS.

Increase Station-Area Density to Better Compete for Federal Funds

Public Comment: My concern is that I think that we have shot too low in terms of the amount of development that we are going to allow around the stations. We are going to have to compete with an awful lot of high interest people for the money that we are going to get from Federal government, and what we need is to demonstrate that we are going to get more tax improvement from the uses around the station, which means that we should consider upping the density around the stations. (0171, 0171-T –1)

Response: *The actual level of development and implementation of local land use regulations around the stations is under the control of the local government. Only those plans and regulations that are approved were considered in the Final EIS.*

Local Government Control on Future Land Use

Public Comment: How could government intervention be used to redirect and limit the location of additional businesses and housing along the corridor? (0235, 0235-E –3)

Response: *As described in Chapter 5 of the Final EIS, the land use plans adopted by local governments within the Dulles Corridor contain guidelines to support higher densities, mixed-use development, and walkable, bicycle-friendly development patterns near the transit stations.*

Rail Will Not Impact Development in Dulles Corridor

Public Comment: The fourth urban legend that somehow rail is going to magically transform into this cornucopia of extra development around rail stations, I can tell you as a professional developer that is not going to happen for two reasons. First of all, there is no land, the Dulles corridor is built out, and second, the economics of building buildings is dominated by on-site parking and transit is not going to affect that. (0184, 0184-T –5)

Response: *The growth projections used in the Final EIS are the regionally adopted land use projections as prepared by the MWCOG (Round 6.3), which indicate that the corridor is not built out, even in Reston. The recently adopted land use regulations do include the opportunity to increase new residential development in the transit station areas, that would provide additional residential development in Reston, and these regulations do encourage affordable housing in the corridor. As stated in the Final EIS, the development totals are presented as a build-out scenario in that high levels of development are Chapter 5 shows that there is still additional development opportunity within the corridor.*

Metrorail's role in encouraging development is to offer alternative means of travel and increased mobility for the Dulles Corridor. The LPA, would support the economic development goals of

Fairfax County. The Fairfax County Comprehensive Plan, states, "the interests of the County as a whole are best served by a Metrorail transit system that penetrates the [Tysons Corner] core and brings riders to the jobs and shopping that are a major part of the foundation of the County's economic well-being."

Fairfax County Chamber of Commerce Recommends Transit-Oriented Development

Public Comment: In addition, the Fairfax County Chamber of Commerce recommends that the affected jurisdictions continue to pursue joint development efforts to provide for the ancillary facilities necessary to foster the success of mass transit service in the Dulles Corridor. On behalf of the Fairfax County Chamber of Commerce and its member businesses collectively employing over 650,000 employees throughout the Washington metropolitan region, I thank you for your consideration. (0233, 0426-M –40)

Response: *Joint development opportunities are discussed in Chapter 5 of the Final EIS. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be the goals of the efforts. However, all land use decisions such as the provision of affordable housing and phasing of development are under the jurisdiction of local government.*

Concern Over Loss of Affordable Housing at McLean Commons

Public Comment: My concerns I am addressing to the local elected leaders and land-use planners: I am concerned for my neighbors who live in the McLean Commons Apartment Complex. The complex was recently bought by a developer who plans to raze these decent, affordable apartments and build a complex of luxury high-rise apartments. This would throw these people out of their homes, and in their place bring in thousands of more cars to the immediate area (for not all new residents will be car-less & rely solely on Metro). While I applaud the idea of placing high density housing near metro stations, I oppose taking away existing affordable high density housing in favor of more luxury development. Fairfax County doesn't need any more luxury anything, especially when it comes at the expense of the people who are more likely to rely on public transit. (0034, 0034-CC-2)

Public Comment: Without Metro fully operational, the proposed change in the comprehensive plan for the redevelopment of the McLean Commons should not be approved or even looked at. We do not disagree with the need for rail to Dulles airport or its need in the Route 7 corridor, but not at the expense and destruction of the commons. Let's not let the developers push more people upon us until we have an infrastructure in place. We know what is in the best interests of the developers. What is important is what is in the best interests of McLean, Pimmit Hills and Tysons residents. When the building is done, the developers go home, but we will still be here facing larger problems than we do now. And just as an aside, would you really want to live in a building that is above where a metro train goes through? (0159, 0159-T –5)

Response: *The analysis contained in the Final EIS did not incorporate any specific redevelopment plans such as the conversion of McLean Commons mentioned in the comment, or any pending development proposals for the area. Fairfax County has the control over land use decisions in relation to any proposals for McLean Commons.*

Lack of Affordable Housing in Northern Virginia

Public Comment: Solutions to social needs: In localities, such as northern Virginia, 36 hours of work are required at minimum wage to pay Fair Market Rents; this is nearly 92 percent of a full-time work week. There is no land for housing development of any sort in Reston; we are built out. There are problems with over-occupancy in Fairfax County and we are shifting the burden of commuting to those who can least afford it. (In Northern Virginia this includes teachers, police officers and nurses.) (0209, 0209-M –5)

***Response**: The growth projections used in the Final EIS are the regionally adopted land use projections as prepared by the MWCOG (Round 6.3), which indicate that the corridor is not built out, even in Reston. The recently adopted land use regulations do include the opportunity to increase new residential development in the transit station areas, that would provide additional residential development in Reston and these regulations do encourage affordable housing in the corridor. As stated in the Final EIS, the development totals are presented as a build-out scenario in that high levels of development are projected in some sections of the corridor. The development potential quantified in Chapter 5 shows that there is still additional development opportunity within the corridor.*

Apply Measures to Protect Open space in Dulles Corridor

Public Comment: Also we can apply measures to protect additional open space in the corridor in exchange for higher density in the station areas. In particular, we have often called on the state and the county to get buy-in from the rest of us and from the community by doing land exchanges. Parkland, you know, two miles from the station, in return for a developer getting air rights or development within a quarter mile of the station. (0149, 0180-T –10)

Public Comment: Finally, and I think this is very important in the Fairfax context, we need measures to protect additional open space in the corridor in exchange for higher density in the station areas. And I think Fairfax County, combined with the state, ought to staff offices that are specifically charged with doing land exchanges. Let's give the air rights away, but let's get open space protection within the same corridor at the same time. This should not be an excuse for doubling or tripling the densities, but making the density that is already planned for this corridor work better. It's the only way we're going to again reduce trips and improve. (0149, 0149-T –8)

Public Comment: Will nearby open space be protected to offset the new density? (0181, 181-T –5)

Public Comment: Finally, we need measures to protect additional open space in the corridor in exchange for higher density at the station areas. (0251, 0251-T –4)

Response:

As stated in Chapter 5 of the Final EIS, the land use plans adopted by local government within the Dulles Corridor all contain guidelines to support transit, higher densities, mixed-use development, and walkable, bike-friendly development patterns in close proximity to the transit stations. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among the goals of these efforts.

Doubt Over Fairfax County Growth Projections

Public Comment: We still believe in some fashion that Fairfax County is in a hypergrowth mode, aka the dot.com world, and I don't believe that assumption to be correct, but still we chase that master planning process as if it were true. (0191, 0191-T –3)

Public Comment: You will see flight from Fairfax County, and the last part of my presentation is on promises, and I will be among them. (0191, 0191-T –6)

***Response:** The growth projections used in the preparation of the Final EIS are the regionally adopted land use projections (Round 6.3) prepared by MWCOG.*

B. Supplemental Draft EIS Comments

Public Comments

Utilize Options for Air Rights Development at Station Areas

Public Comment: We need to take better advantage of the air rights. (0171, 0171-T –3)

Public Comment: For rail west of Tysons Corner, focusing higher density within 1/4 mile of stations is essential, & that will require either air rights development or movable sidewalks. (0066, 0066-CC-5)

Public Comment: Consider either future air rights or an underground segment ground rights through the hill between the Wiehle Avenue and Reston Parkway stations for the rail and roadways. Add drawings showing how this could be compatible with the general plans. (0170, 0170-T –13)

Public Comment: Will air rights, large platforms over stations, be offered and/or maintained for potential higher density development? That is crucial in Reston, where we have a need for linking north and south Reston better, instead of the Chinese wall that we have now. (0181, 0181-T –4)

Public Comment: We encourage project leaders to allow offering of air rights with high-rise developments on platforms above some of the stations. There is a great interest in this concept, and we need your view of how it will affect this project. It is not mentioned in the DEIS. We would like to see the Ballston station model followed, and not the Vienna station model followed. (0188, 0188-T –3)

Public Comment: We need air right development plans, both private and public, including community services, affordable housing, open spaces, pedestrian and bike facilities, et cetera. All the great ideas that came out of the Reston charette that showed that these ideas about air rights development of that type have overwhelming support among knowledgeable actively participating residents of the community. (0173, 0173-T –7)

Public Comment: Among the alternatives to be analyzed is the impact of affecting the construction of high-rise developments on platforms above some of the stations. There is great interest in this concept and we need your view of how it will affect this project. It is not mentioned in the DEIS. (0158, 0158-T –5)

Public Comment: A proposal for air rights development over the Dulles Corridor cannot be implemented as part of this phase of the extension of rail transit in the Dulles Highway median. However, at some point in the future when economic and technical considerations permit it will be possible to more effectively bond together the two halves of the Reston Community now severed by the Dulles transportation corridor. To the extent feasible the design of rail stations must further the goal of linking opposite sides of the corridor. Nothing in the designs should in any way preclude future efforts to develop air rights linkages built across the Dulles transportation corridor. (0088, 0211-M –9)

Public Comment: What our new comprehensive plan amendments do is they bring the housing and the retail, they provide incentives to build that kind of development around the transit station areas. We had a charette, again sponsored by Supervisor Hudgins, that gave the community three days to take a look at what we wanted have out there, and in the Reston community we wanted to see air rights. We wanted to see the chance to bridge that Dulles airport access road and that toll road and nip the two sides of the community together with public plazas, community facilities, maybe schools, places of higher education. So we view it as a real opportunity to create transit-oriented villages out there, kind of in the vein that Reston was originally known for, with its fine planning. (0141, 0141-T –3)

Public Comment: During the FEIS and rail PE process we need hard work on…Air-rights development plans -- both private and public (community services, affordable housing, open spaces, pedestrian and bike facilities, etc.) (0173, 0213-M –5)

Public Comment: We encourage project leaders to allow offering of "air rights" with high-rise developments on platforms above some of the stations. There is great interest in this concept and we need your view of how it will affect this project. It is not mentioned in the DEIS. We would like to see the Ballston station model followed and not the Vienna station model. (0188, 0217-M –3)

Public Comment: To me the key words from the DEIS are found on pages 5-12, 13: "Much of the land within the station area consists of the DAAR and Dulles Toll Road and cannot be developed."
This statement:

1. Ignores the most significant factor of development near stations, intensity of development within the first 1/8th mile.
2. Ignores what is true, desirable and done in communities across the country, deck parks and air-space development.
3. Ignores solutions to social needs in Fairfax County, social equity and affordable housing.
4. Ignores the potential profits and revenues of air-space development. (0209, 0209-M –1)

Public Comment: 2. Deck parks and air-space development: In communities from Boston to Seattle, deck parks and air-space development are bridging communities that have been divided for decades by Federal Highway projects. Reston is divided exactly in half by the DAAR and the Dulles Toll Road. Plans should be made now for the inevitable reunification of Reston. (0209, 0209-M –4)

Public Comment: 4. Potential profits and revenues: We are going to spend an estimated 3 Billion dollars. Where is the return on our investment? Air-space development has the potential to add thousands of jobs and millions of dollars to northern Virginia's economy. The DEIS not only ignores this potential, but worse, it will also prevent this from ever happening. (0209, 0209-M –6)

Public Comment: We will optimize ridership, fare box and tax revenues through focusing the highest density within a quarter mile of the stations, and that means considering air rights development or moving sidewalks to speed pedestrians to the edge of the right of way. (0251, 0251-T –2)

Public Comment: By 2025 we need to reserve above ground for intra-Reston traffic to maintain our quality of life around the station areas. Consider either future air rights or an underground segment ("ground rights") through the hill between the Wiehle Ave. and Reston parkway stations for the rail and roadways. Add drawings showing how this could be compatible with the General Plans. (0210, 0210-M –8)

Public Comment: Among the alternatives to be analyzed is the impact of effecting the construction of high-rise developments on platforms above some of the stations. There is great interest in this concept and we need your view of how it will affect this project. It is not mentioned in the DEIS. (0158, 0223-M –4)

> ***Response:*** *Higher density at station areas triggered by implementation of the LPA will open up opportunities for joint development, including opportunities for air rights development above transit stations. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among the goals of these efforts. All land use decisions are under the jurisdiction of the local jurisdictions.*
>
> *With respect to air rights development above Metrorail stations in freeway medians, the Project Team acknowledges that the two Counties govern land use and that FAA, MWAA, VDOT and TRIP II, as the owners and/or operators of the DIAAH, Dulles Toll Road and Dulles Greenway, must be involved. Therefore, the Project Team will await any initiative of the two Counties with the involvement of the highway owners and operators.*

Public Comment: In addition, WEST GROUP PROPERTIES LLC supports the County's plans to increase land use density in the areas surrounding the proposed Metro stations including, where

economically feasible, air-rights developments over stations and parking facilities. Such a land use policy is essential to allow the County to realize the full range of benefits that the Metro system can provide. (0233, 0426-M –47)

Public Comment: We must have the foresight and ambition to exploit the inevitable creation of very high value areas along the Dulles Corridor. These areas most particularly include Reston. I agree with the comments of other people and local organizations suggesting the inclusion of planning for air rights at the Reston station stops. Air rights at these stops are particularly practical since the existing grades will allow for the roadbeds to be simply cut so that the Reston stations could be below grade. (0441, 0441-E –2)

Public Comment: Reston will be able to develop transit-oriented villages around its stations with the kind of mix of uses and careful attention to pedestrian scale, landscaping and design elements that is found in its first village center at Lake Anne. Those of us who attended the Reston Charrette were excited about using a deck over the Dulles Toll Road to provide a pedestrian link between north and south Reston and using air rights development to create plazas and bring in some of key public uses missing in Reston such as higher education facilities, schools, satellite community services, and public performance space. (0141, 0443-E –2)

Public Comment: Among the alternatives to be analyzed is the impact of even greater density than currently allowed at station areas, especially at Tysons, Reston Parkway and Wiehle Ave. One way this density could occur at the latter two stations is to allow offering of "air rights" with high-rise developments on platforms above some of the stations. There is great interest in this concept and we need your view of how it would affect this project. It is not mentioned in the DEIS. We would like to see the Clarendon Station model and not the Vienna station model. (0158, 0475-L –4)

> ***Response****: With respect to air rights development above Metrorail stations in freeway medians and Tysons Corner, the Project Team acknowledges that the two Counties govern land use and that FAA, MWAA, VDOT and TRIP II, as the owners and/or operators of the DIAAH, Dulles Toll Road and Dulles Greenway, must be involved. Therefore, the Project Team will await any initiative of the two Counties with the involvement of the highway owners and operators.*

General Plans Do Not Help unite North and South Reston

Public Comment: The General Plans do little to help knit together north and south Reston. Future air rights must be considered. (0233, 0426-M –6)

Public Comment: The general plans do little to help knit north and south Reston together. (0170, 0170-T –4)

> ***Response****: With respect to air rights development above Metrorail stations in freeway medians, the Project Team acknowledges that the two Counties govern land use and that FAA, MWAA, VDOT and TRIP II, as the owners and/or operators of the DIAAH, Dulles Toll Road and Dulles Greenway, must be involved. Therefore, the Project Team will await any initiative of the two Counties with the involvement of the highway owners and operators. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be the goals of the efforts. All land use decisions are under the jurisdiction of local government. It should be noted that the need to "knit together" north and south Reston is not related to the impacts of this project, since the presence of the Dulles Toll Road between north and south Reston is part of the existing condition, and would not be a result of implementation of the LPA, within the corridor. One of the benefits of providing transit in the corridor may be to create pedestrian-friendly environments at the transit stations that can serve to enhance linkages as implemented by Fairfax County.*

Consider Recommendations from the Reston Charette

Public Comment: At the April 2002 Reston Charrette there was an overwhelming consensus that air-rights development was an essential and major component for achieving the community's vision for the station areas. Much of what came out of that charrette focused on development with primary responsibility being the public sector -- e.g., affordable housing, public open spaces, public access facilities, linkages across the Dulles highway, community uses in and around the stations, and a possible major cultural center. Private development of housing, retail, office, and other uses was also envisioned, and some private sector investigation of this potential has already been done. In order to coordinate all these potential uses, a plan and a means to achieve them should be developed. This plan should be developed to assure the creation of very transit-oriented development and reduce non-transit-oriented development throughout the corridor. The ownership and control of air-rights development needs to be defined through a cooperative effort of Fairfax County, the Airports Authority, the Dulles Corridor Rapid Transit Project, and Virginia, in cooperation with community organizations and property owners. The control of uses for air-rights development is most logically a responsibility of Fairfax County through its Comprehensive Plan, zoning, and development control processes. A task force effort involving staff, community organizations, and property owners should be initiated soon in order to assure that potential opportunities are taken advantage of as the station development process proceeds. The County should review and modify all of its regulations as they relate to air-rights development to eliminate or modify inappropriate barriers such as current parking requirements and street standards. The County should also create incentives for transferring existing development rights from other localities to the station areas in order to assure a net reduction motor vehicle trips insofar as feasible. (0478, 0484-E –16)

> ***Response****: The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be the goals of the efforts. All land use decisions are under the jurisdiction of local government.*
>
> *With respect to air rights development above Metrorail stations in freeway medians, the Project Team acknowledges that the two Counties govern land use and that FAA, MWAA, VDOT and TRIP II, as the owners and/or operators of the DIAAH, Dulles Toll Road and Dulles Greenway, must be involved. Therefore, the Project Team will await any initiative of the two Counties with the involvement of the highway owners and operators.*

Consider Opportunities for Air Rights at Reston Stations

Public Comment: The county park and ride site provides an excellent opportunity for a joint development project in Reston. While the community needs some parking, it also envisions an urban village center at the transit station with housing and shops, as well as offices. Given the strong community support for air rights development, we also want to work with the project engineers to ensure that the design and construction of the Reston stations enables this significant development opportunity. Air rights provide the opportunity to create landscapes plazas over the Dulles Toll Road/Dulles Airport Access Road linking north and south Reston. (0141, 0443-E –8)

Public Comment: The major issues at the Reston Parkway and Wiehle Avenue stations are station access issue, transit-oriented development, air-rights, and joint development of parking and mixed use at the Wiehle Avenue station. As you know, all of the major organizations in Reston - the Reston Association, Reston Community Association, and the Greater Reston Chamber of Commerce -- support four-quadrant access to the rail stations. The recently adopted amendments to the Fairfax County Comprehensive Plan include this goal for the transit station areas. We know this will require work closely with properties owner and developers to achieve. We would like to work the project engineers and the County to adopt guidelines and develop concept plans that show how this enhanced access could be achieved. We view the coming of rail to Reston as an opportunity to knit the community together. The last thing we want to see is the stations become yet another barrier between north and south and east and west in Reston. (0141, 0443-E –7)

***Response**: Opportunities for joint development at the Wiehle Avenue Station were identified in Chapter 5 of the Final EIS. The Project Team will continue to participate in the efforts of Fairfax and Loudoun counties and of private stakeholders for the creation of transit-oriented development at the new Metrorail stations. Advanced urban design and friendly pedestrian connections will be among the goals of these efforts. All land use decisions are under the jurisdiction of local governments.*

Fairfax County Supervisor Hudgins has appointed the Wiehle Avenue Steering Committee, which will advise the County staff in the creation of a Request For Proposal (RFP) to solicit transit-oriented joint development proposals for a mixed use development of the County-owned parcel adjacent to the station. Using the conclusions from the Supervisor's Reston Charrette as a starting point, the committee is establishing the process, scope and criteria for the RFP.

With respect to air rights development above Metrorail stations in freeway medians, the Project Team acknowledges that the two Counties govern land use and that FAA, MWAA, VDOT and TRIP II, as the owners and/or operators of the DIAAH, Dulles Toll Road and Dulles Greenway, must be involved. Therefore, the Project Team will await any initiative of the two Counties with the involvement of the highway owners and operators.

Population and Employment Projections

Public Comment: The Supplemental Draft EIS provides a range of "Population increase at stations" for Phase 1 that is so extreme and wide as to be meaningless: 13%-986% (e.g., TABLE 2-2). (0068 0173-30)

***Response:** The population percentages displayed in Table 2-2 of the Supplemental Draft EIS represented the range of potential population increases at the different station areas. Additional detail regarding the station area development potential is presented in Chapter 5 of the Final EIS. These percentages represent the potential effects of the maximum development that would be permitted under current zoning regulations and allowable density bonuses with implementation of the LPA.*

Need for Funding of Transit Oriented Development

Public Comment: PEC proposes that the TODs west of Tysons be targeted for funding based on criteria of housing and employment levels that are reasonably expected to occur rather than on date certain straight-line trend projections stretching out many decades. (0115 0135-3)

***Response:** As described in Chapter 5 of the Final EIS, the regionally approved land use and population estimates developed by MWCOG (Round 6.3) were used for the No Build Alternative. The actual level of development and implementation of any site-specific development opportunities within the corridor are under the control of the local jurisdictions. The level of development projected in the Final EIS represents the maximum allowable development under current zoning regulations and allowable density bonuses with implementation of the LPA.*

Use of Air Rights Over Station

Public Comment: The use of air rights over stations, where the development would be economically feasible, would stimulate new revenue for the system and for the jurisdictions. As the project moves forward, opportunities for air rights developments should be welcomed and incorporated in station design. (0108 0127-7)

Public Comment: [Reston Association] supports the air rights concept for a deck over the Dulles corridor highways that would accommodate parking, direct access for pedestrians, bicycles, and feeder buses, and mixed-use development. (0039 0040-10)

Public Comment: [Reston Citizen's Association] supports the air rights development of a deck over the Dulles highway that would accommodate parking, provide access for pedestrians, bicycles, and feeder buses from all directions, and supports mixed-use development immediately adjacent to the station entrances above the highway in order for the community to be integrated across the highway and integrated with the station. (0040 0041-7)

> ***Response:*** *With respect to air rights development above Metrorail stations in freeway medians, the Project Team acknowledges that the two Counties govern land use and that FAA, MWAA, VDOT and TRIP II, as the owners and/or operators of the DIAAH, Dulles Toll Road and Dulles Greenway, must be involved. Therefore, the Project Team will await any initiative of the two Counties with the involvement of the highway owners and operators.*

Need for Transit Oriented Development Patterns

Public Comment: The existing condition is that the current Virginia Transit System has multiple transit stations in place that continue to fail as actual transit-oriented development. Those stations are instead commuter depositories that perpetuate the myth that we can live 50 miles from our job and expect a speedy, uncomplicated trip to work and back home daily. The priority capital investment of both public and private sectors should be in those nonfunctioning TODs. (0115 0135-2)

Public Comment: The more immediate need is to invest in transforming the nonfunctioning rail stations into viable transit-oriented developments and to secure the Tysons, Springfield, and Wilson Bridge TOD additions. (0115 0135-4)

> ***Response:*** *Comment Noted. Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in revising the LPA and preparation of the Final EIS.*

6.0 TRANSPORTATION EFFECTS

6.1 Transit Effects

A. Draft EIS Comments

State Agency Comments

Consider Additional Development Approved by the County

State Comment: My reading of the Travel Demand Forecasting Technical Report provides no insight as to the levels of development assumed along the corridor. Since the Economic and Secondary Development Effects of the additional development are quantified elsewhere in the DEIS and in the supporting technical report, the additional development levels that the County has approved for each of the station sites also need to be considered in the ridership projections. (0387, 0387-L –7)

> ***Response****: The Project's ridership forecasts are based on regionally adopted population and employment forecasts for the opening and horizon years. The density bonuses associated with the Metrorail Extension are not part of these regionally adopted forecasts and therefore were not calculated as part of the demand forecasting process for the Supplemental Draft EIS and Final EIS. The impacts of congestion due to density bonuses were included in Chapter 9 of the Draft EIS and the Travel Demand Forecasting Methodology and Results Technical Report (June 2002). Chapter 5 of the Final EIS does discuss the potential effects of increasing densities on the level of development as a result of the two Build Alternatives. In addition, density bonuses were included in the analysis of secondary development effects that is presented in Chapter 9 of the Final EIS. This analysis was included in the Final EIS in order to address comments about the need to quantify the potential effects of increased density on traffic at Metrorail station areas.*

Interim Express Bus Service and Future Rail Service

State Comment: Local governments are to be complimented for the express bus system it has put in place. It is a form of bus rapid transit. It should be increased and enhanced. But future plans should be directed to the rail alternative, using express bus in the interim. (0131, 0163-T –8)

> ***Response:*** *The comment reflects the final recommendations of the Project Team and the evaluation of the two Build Alternatives in the Final EIS.*

Clarifications Regarding BRT Stops, Traffic Forecasting Assumptions, HOV Assumptions, Interchanges Included in CLRP, Roadways in TIP/CLRP, Forecast Roadway Volumes, Development Impacts and Mitigation, Impact Analysis Techniques, and Pedestrian Safety

State Comment: Traffic Analysis and Station Access Study - Technical Report (June 2002)
[a]* Pg. 13, item 2.2, BRT Alternative: 2nd paragraph states: "BRT stops would be located at facilities outside the median [of the DAAR]", and "BRT vehicles would provide access to stops by leaving the DAAR or the Greenway". Examples or descriptions of the BRT stops would be very helpful for the reader to better understand the difference between BRT stations and BRT stops.
[b]* Section 3.3, Pg. 22, 2nd full paragraph - The report states that volumes for the various ramps proposed by VDOT to access Route 7 and 123 expressways from the local roads were necessary to complete the balancing process, and that these were obtained from the Tysons Corner Route 7 and Route 123 Transportation Collocation Study (Collocation Study), State Project Number TPD 11671-2-01, dated April 3. It should be noted that the Draft Collocation Study report was conducted within a compressed 3-month schedule. As stated in Chapter VI of the Collocation Study, traffic growth was based on a previous report (June 2002 Route 7/123 Corridor Study) and on several assumptions. It is hoped that any traffic volumes used in the DCRTP study included an understanding of the Collocation Study's context and limitations, and a verification of the assumptions used. We recommend that both the

Traffic Analysis and Station Access Study and the Travel Demand Forecasting Methodology reports include a description of: the assumptions and how they were verified or modified as appropriate; and how the resulting volumes were determined to be consistent with the overall forecasting effort conducted specifically for the DEIS.

[c]* Section 6.3, pg. 134, Table 6-2 - Footnote 1 states that "Direction not specified by VDOT" yet numbers refer to Dulles Toll Road eastbound. Note 2 refers to Route 50, yet Footnote 2 refers to HOV lane on I-495. It appears that the text of the footnotes was changed between the 95% Review Draft and this latest (June 02) report, but the corresponding notes on the table were not revised. Footnote 1 in the 95% Review Draft referred to "Volumes exclude high occupancy vehicle lanes; no direct comparison to year 2000 can be made" (please note that by year 2000 (base year in table), HOV lanes were already in place and, for the DTR, volumes are available by lane.

[d]* Chapters 9 through 17:The proposed interchanges at 7/West Park-Gosnell and 123/International are not identified in the CLRP. Although an interchange at an isolated location does not need to be called-out from an air quality conformity standpoint, a series of interchanges in close proximity to one another could change the functional classification (for modeling) of the road from arterial to freeway (which would have to be accounted for in the model).

[e]* Monroe St/Van Buren in the town of Herndon are not identified for improvement in the adopted FY-01
TIP/CLRP. East Elden St. is identified in the adopted FY-01 TIP/CLRP as reconstructed as a 4-lane section between Monroe St. and the Herndon Parkway East and widened to 6 lanes between the Herndon Parkway East and the Fairfax Co. Parkway. Both widening and reconstruction have a completion date of 2005.

[f]* It is suggested that, when discussing the Planned Roadway Improvements, the CDRTP DEIS report make specific reference to their source official documents: the Six Year Program, the Transportation Improvement Program (TIP) and the Constrained Long Range Plan (CLRP), and the Fairfax County Comprehensive Plan. Please refrain from using statements about "VDOT's decisions" that are not backed up by the approved Six Year Program. For projects beyond the Six Year Program time horizon, reference should be made to the source document (TIP, CLRP as appropriate), noting that these documents are the result of cooperative efforts of multiple agencies at various levels (federal, state, local) and subject to public review. Please remove all references to VDOT deciding that specific interchange and road widening projects (Route 7 and Route 123) are "high priority" (e.g. section 10.1 on pg. 173, section 11.1 on pg. 187, section 12.1 on pg. 203, section 14.1 on page 233). Prioritization is typically a result of coordinated evaluation with input from Fairfax County, and in accordance with Fairfax County's Comprehensive Plan. Perhaps the consultant is making inferences from preliminary or final VDOT-funded consultant reports such as the 6/00 Transportation Corridor Study by PHR&A, or the 2/5/02 Tysons Corner Selected Improvement Compatibility Study by PTG. It should be noted that although these reports are used by VDOT as tools for analysis/coordination, their recommendations do not necessarily imply VDOT's concurrence.

[g]* Existing traffic volumes appear low. For example the intersection of Route 123 at Tysons Boulevard indicates 90 vehicles during the a.m. peak and 62 vehicles during p.m. peak making left turns from southbound Tysons Boulevard onto eastbound Route 123. A recent traffic study done in the same area indicates that the existing a.m. left turn (same as above) as 392 vehicles and 1845 vehicle during the p.m. peak. All numbers need to be checked properly and appropriate numbers used as a starting base.

[h]* The County has the nondegradation policy in place it is unclear as to how the increased development is planned to be mitigated. Also how is all the planned future higher densities addressed in the study? Are they included in the overall growth rate?

[I]* Pg 19 - Highway impacts are not analyzed in detail, only very generic information is presented in the document. No supporting data/analysis were provided. Statement is made that there are Synchro, HCM, Signal2000 and Transyt-7F files available for review but they were not included in the package. All the files in a electronic format as well as paper copies need to be provided for the Department's thorough review. The report includes summary findings that are very generic in nature. Highway corridor impacts need to be addressed.

[j]* Accident data and analysis are very generic and does not include the details needed. Specific attention needs to be given to address the pedestrian safety concerns. (0421, 0421-A –1)

Response: *A point-by-point response to these comments is provided below.*
[a]* *Site plans for the proposed BRT stations and BRT stops were provided in the proposed General Plans (Draft EIS Volume IV, June 2002).*

[b] The Since there will be no park-and-ride facilities (other than 500 spaces at Tysons West Station) and only two Kiss & Ride facilities at the four Tysons Corner Metrorail stations and since there will be minor changes to the roadway network in Tysons Corner, the analysis in support of the Draft EIS was not reanalyzed based on the fact that project-related impacts would be minimal.*

[c]* *Comment Noted. However, the Traffic Analysis and Station Access Technical Report (June 2002)* has *not been reproduced for this subject matter. The footnote would have been clarified to reflect the absence of HOV lanes only on the Beltway in 2000. Effects of the project on the non-HOV portion of the DTR were provided in the table.*

[d] Comment noted. References to the CLRP had been deleted from these chapters of the Draft Technical Report. In the case of Tysons Corner, the Project Team had desired that the network be as consistent as possible with highway improvements included in VDOT's Collocation Study. The basis for the Team's network assumptions were clarified in Chapter 3. If the operational characteristics of a roadway change, as on Route 7, the highway class and speed code in the model were changed accordingly; thus the model did account for this. For the analysis in support of the Final EIS, the proposed interchanges of Route 7 and Route 123 in Tysons Corner as identified by the Fairfax County in its Comprehensive Plan are not part of the future roadway network, since the interchanges are not yet recognized by regional plans.*

[e] The roadway network was modified for the Final EIS to reflect the most recent TIP/CLRP.*

[f] Comment Noted. However, the Traffic Analysis and Station Access Technical Report (June 2002) has not been reproduced in its entirety. The* Traffic Analysis Technical Report *prepared in support of the Final EIS will include the table of roadway improvements that the Project Team had prepared as input to the travel demand forecast model.*

[g] Since there will be no park-and-ride facilities (other than 500 spaces at Tysons West Station) and only two Kiss & Ride facilities at the four Tysons Corner Metrorail station, and since there will be minor changes to the roadway network in Tysons Corner, the analysis in support of the Draft EIS was not reanalyzed based on the fact that project-related impacts would be minimal.*

[h] Chapter 22 of the Traffic Analysis and Station Access Technical Report (June 2002) discussed the secondary development-related travel effects and related mitigation strategies. The analysis included in this chapter provided a "worst-case" look at the density bonuses approved by Fairfax County. All traffic impacts that would result from the increased densities would be mitigated by Fairfax County.*

[I] Regional highway operations were addressed in Chapter 6 of the Technical Report. The analysis presented the long-term (2025) and opening year effects that the Build Alternatives would have on selected highway links within the corridor. All peak hour data was received from Laura White at VDOT in Richmond. All resulting model output was provided in the Appendix to the report. Traffic analysis output was provided to VDOT.*

[j] Accident analyses were provided for each station area in Chapter 8 through 21 of the Technical Report. The methodology used for this analysis was provided in Section 3.8 of the same report. Due to time constraints, accident models were not developed for this analysis; rather the analysis is based on accident experience trends and professional engineering judgment based on planned roadway improvements on a particular segment. In terms of pedestrian safety, every effort will be made to minimize pedestrian and motorist conflicts through the design of the stations. As part of the project, pedestrian and vehicular access would be provided to each station from the nearest public rights-of-way. All other planned pedestrian and bicycle trails fall under the jurisdiction of the City of Falls Church, Town of Herndon, Fairfax and Loudoun counties and VDOT.*

Clarifications Regarding Transit Operations Information

State Comment: Pg. 6.53: Table 6.3-11 - suggest adding "Corridor Transit" to beginning of title. (0421, 0421-A –20)

State Comment: Transit Operations and Maintenance Plan - Technical Report (June 2002)

- § Page 28 - Shows the summary of dead head calculations. The Metro rail Service and inspection yard sites are listed in column 1 but not show in the report. Please include a map showing these potential locations for the Metro rail Service and inspection yard sites.
- § Page 29 - Table 3-8 Some of the columns heading show units and others particularly the distance column does not show any units. Please check all the tables to include the units for columns.
- § Chapters 1 & 2 - Header on most of the pages incorrectly displays Index of Figures in the upper right hand corner on most of the pages.
- § Page 23 - 2nd paragraph second line should read New Carrollton would be replaced instead of New Carrollton would replaced. (0421, 0421-A –3)

***Response**: The* Transit Operations and Maintenance Plan *was updated as part of the Final EIS. Relevant comments were addressed in that document.*

Recommend Establishing An Executive Summary, Screenline Volumes, and LOS With and Without Improvements

State Comment: Travel Demand Forecasting Methodology and Results & Travel Demand Forecasting Methodology and Results Appendix - Technical Report (June 2002)

- § An executive summary as previously suggested, is highly recommended. This summary ought to include information such as transit modal split, LOV and HOV for both with and without Transit (i.e. Tyson or Herndon to DC). It is unclear what are some of the critical assumptions and data sources used.
- § Screen-line volumes for the forecasted years under all alternatives, including no-built should be included.
- § It is very difficult to assess whether Highway LOS for the corridor has been addressed. It would be helpful to include Highway LOS for both with and without transit improvements and increase land use density, in order to evaluate highway impact and related mitigation measures identified. "Dulles Corridor Transit Trip Summary, 2025 Alternative T4, Home Based Work Person Trips" Table (in the Appendix I, no page #, no table #) shows 64.6% transit share from Tyson to DC Core. In this case, please show the impact on the highway LOS. (0421, 0421-A –2)

***Response**: Transit mode split, intersection levels of service and highway Levels of Service are presented in Chapter 6 of the Final EIS).*

<u>Regional Agency Comments</u>

High Demand for Metrorail

Regional Comment: Independent market research has shown a high demand for a rail system that offers competitive trip times with the automobile and a convenient service-oriented operation for the customer. (0133, 0133-T –3)

***Response:** The analysis presented in Chapter 6 of the Draft EIS and Final EIS shows that the two Build Alternatives offer similar travel times for many of the analyzed origin-destination pairs. In many of these cases, travel times are competitive with those for automobile travel.*

Need Source for Air Passenger Projections

Regional Comment: The source of the IAD passenger projections for air travel presented in DEIS Section 1.2.2.4 needs to be identified. The figures do not agree with MWAA's unconstrained projections

of passenger activity, which have been reviewed and approved by FAA. MWAA projects 37.9 million annual passengers (MAP) for 2010 and a build-out scenario of 65.7 MAP. Note that the term "million annual passengers" includes the sum of enplanements and deplanements, not simply "boardings" as stated in the DEIS. (0440, 0440-A –4)

> ***Response**: Comment noted. MWAA's airport passenger projections have been updated in the Final EIS.*

Public Comments

Concerns About Capacity Constraints of the Metro System

Public Comment: Core capacity of the metro system overall is a serious concern. We are all well aware of Metro's equipment supply and maintenance issues now, and the many trains and stations that currently experience overcrowding at rush hours. Rosslyn has been described in a Post article as a choke point, and Metro Center has difficulty handling the number of commuters it now serves. This calls into question whether the overall system will be available to accommodate the increases in ridership overall as our region continues to experience significant growth. I think it is unrealistic to think of these as connecting and have people simply going between the airport and Tysons. (0150, 0150-T –3)

Public Comment: The overall capacity of the system needs to be realistically evaluated. (0150, 0150-T –11)

Public Comment: Another concern is the looming problem of Metro's core capacity constraints, and the fact that the Orange Line is near or at capacity (in one direction). It is essential that you be forthright about the impact of this project, if it were successful, on the problems of core capacity. The DEIS makes note of the Core Capacity study, but there is no information about the timing or effects that the improvements will have on the Dulles project. If the core capacity changes are not made, in what ways will it impact this project? (0158, 0223-M –5)

Public Comment: Another concern is the looming problem of Metro's core capacity constraints, and the fact that the Orange Line is near or at capacity in one direction. It is essential that you be forthright about the impact of this project, if it were successful, on the problems of core capacity. The DEIS makes note of the core capacity studies, but there is no information about the timing or effects that the improvements will have on the Dulles project. If the core capacity changes are not made, in what ways will it impact this project? (0158, 0158-T –6), (0158, 0475-L –5)

Public Comment: Rail is the Locally Preferred Alternative. I believe everybody who wants to see transportation improvements in the Dulles Corridor supports rail. But I have some questions. How will the Orange Line metro, now approaching capacity, handle increased ridership? (0181, 0181-T –3)

Public Comment: One thing that is of concern to ACT is the core capacity of the existing Metro System in the District of Columbia. The existing tunnel under the Potomac River is already at capacity. How will the additional trains that service to Dulles will need get to and through the District? (0428, 0428-E –2)

> ***Response:** To meet market demand, WMATA has a Capital Improvement Plan (November 2002) for Metrorail system capacity and service reliability. The CIP will increase train consists from six to eight cars, reconfigure the Blue and other Lines, and change the headways of all Lines, other than the Red Line, from six to seven minutes. As a result, the number of cars through the Rosslyn portal will be increasing. In 2004, the number of inbound Orange Line cars through the Rosslyn portal during the peak hour is 114. In 2011, with the opening of the Wiehle Avenue Extension, the number of cars, including those of the new Extension, will increase to 140 cars in order to satisfy higher ridership due to growth and to the Extension. The 26 additional cars will be procured by the WMATA Metro Matters program and by the Project.*

As described in Section 6.1 of the Final EIS, WMATA measures train loading by passengers per car (PPC) and by the number of passengers 'passed-by' on the platform, i.e., passengers unable to board a crowded train. WMATA has an objective of 120 PPC during the peak hour. WMATA operation planners estimate that the Orange Line PPC is currently 100 PPC, at the point where the trains have maximum loading - between Courthouse and Rosslyn. Table 6.1-12 of the Final EIS indicates that this loading will increase to 107 to 124 PPC in 2011 with the opening of the Wiehle Avenue Extension.(The maximum load point moves between Rosslyn and Foggy Bottom). Thus, the above addition of 26 cars will not match the higher ridership, but the train loading will be near the WMATA objective of 120 PPC. Beyond 2011, WMATA will continue to procure new cars to meet the market demand; thus, more and more trains will be eight-car consists.

BRT Could Provide Greater Capacity

Public Comment: BRT could provide greater transit capacity than Metrorail in the Dulles Corridor. There are BRT systems operating today that carry three to four times as many passengers per hour as the proposed Metrorail extension. Metrorail, however, already has significant capacity issues on the Orange Line, particularly where the Orange and Blue Lines converge in Rosslyn. (0444, 0444-E –3)

***Response**: As outlined in Chapter 2 of the Draft EIS, the operating plan for BRT would have resulted in approximately 80 BRT vehicles serving the eastern end of the corridor in the peak hour in the peak direction. With approximately 61 seats per vehicle (standees should not be allowed on high-speed bus service on busways and HOV lanes), the peak-hour capacity provided by the BRT Alternative would have been 4,880 passengers. The Metrorail operating plan will result in 9 trains traversing the corridor in the peak hour in the peak direction. With 8 cars per train and a loading goal of 120 passengers per car per hour, the Metrorail Extension will provide capacity for 8,640 passengers during the peak hour. Therefore, Metrorail capacity in the Dulles Corridor would be nearly twice that of BRT.*

Space considerations at West Falls Church would have limited the ability to increase the number of BRT bus bays at this station to support more than the 80 vehicles per hour in the peak period, as proposed in the Draft EIS. Moreover, at this flow rate, vehicles would have arrived at West Falls Church every 45 seconds, on average. More frequent arrivals would likely have resulted in delays, as buses would have been forced to wait for an open bay until buses in front of them pulled out.

For different applications in other cities, where the same limitations on standees and the volume of buses do not apply, BRT systems can have much higher capacities. In some cases, BRT systems carry the same level of demand as rail systems. As part of analysis for the range of alternatives proposed on the Dulles Plan B website during the Draft EIS, the Project Team evaluated the potential for higher-capacity BRT vehicles to meet the demand projected for Metrorail. The detailed response for Dulles Plan B, confirmed that, even with higher-capacity, BRT vehicles cannot meet the demand that Metrorail satisfies

As described in the analysis, transportation systems must be designed to support the demand expected during the "peak of the peak," even though this may result in under-utilization of capacity for the rest of the peak period. For the two Build Alternatives of the Final EIS, this "peak of the peak" demand requires that the system have enough capacity to support approximately 7,500 passengers in the peak direction, in the peak hour for operations in the corridor.

The analysis in the detailed response demonstrated that if vehicle size would have been increased to 80-foot bi-articulated buses with approximately 80 seats (the largest BRT vehicles currently available), the maximum capacity that could have been provided by the BRT Alternative as then defined would have been 6,400 persons in the peak hour and peak direction (80 buses per hour serve the corridor during the peak period). This capacity is not enough to meet the peak demand for Metrorail.

To meet market demand, WMATA has a Capital Improvement Plan (November 2002) *for Metrorail system capacity and service reliability. The CIP will increase train consists from six to eight cars, reconfigure the Blue and other Lines, and change the headways of all Lines, other than the Red Line, from six to seven minutes. As a result, the number of cars through the Rosslyn portal will be increasing. In 2004, the number of inbound Orange Line cars through the Rosslyn portal during the peak hour is 114. In 2011, with the opening of the Wiehle Avenue Extension, the number of cars, including those of the new Extension, will increase to 140 cars in order to satisfy higher ridership due to growth and to the Extension. The 26 additional cars will be procured by the WMATA Metro Matters program and by the Extension project. The next paragraph relates the number of cars to train loading.*

As described in Section 6.1 of the Final EIS, WMATA measures train loading by passengers per car (PPC) and by the number of passengers 'passed-by' on the platform, i.e., passengers unable to board a crowded train. WMATA has an objective of 120 PPC during the peak hour. WMATA operation planners estimate that the Orange Line PPC is currently 100 PPC, at the point where the trains have maximum loading - between Courthouse and Rosslyn. Table 6.1-12 of the Final EIS indicates that this loading will increase to 107 to 124 PPC in 2011 with the opening of the Wiehle Avenue Extension. (The maximum load point moves between Rosslyn and Foggy Bottom). Thus, the above addition of 26 cars will not match the higher ridership, but the train loading will be near the WMATA objective of 120 PPC. Beyond 2011, WMATA will continue to procure new cars to meet the market demand; thus, more and more trains will be eight-car consists.

Concerns About Capacity of Orange Line

Public Comment: In addition, the EIS ignores the significant capacity issues already facing the Orange Line. Just last year, WMATA was considering a $6 billion program to separate the Blue and Orange lines, effectively doubling the capacity of the Orange Line, a project made necessary by significant overcrowding on the Orange Line. The EIS does not address how the capacity issues will be solved if the Orange and Blue lines are not separated. In fact, the EIS states that 30 trains per hour will travel though the Rosslyn/Foggy Bottom tunnel during peak hours, which exceeds the 26 trains per hour considered necessary to maintain acceptable service levels. By contrast, a BRT alternative could be designed that would help avoid overstressing the Orange line. In the EIS, all three BRT alternatives take passengers to the West Falls Church Metro Station, where they must transfer to the Orange line. No consideration is given to taking passengers to other stations, such as Rosslyn, where they could transfer to Metrorail without crowding the Orange line, and without stopping at all of the stations between East Falls Church and DC. (0445, 0445-E –10)

***Response**: Metrorail in the Dulles Corridor will actually relieve overcrowding on the outer Orange Line, because Metrorail customers in the Dulles Corridor would access Metrorail at a Dulles Corridor Metrorail station rather than boarding at an outer Orange Line station. BRT ridership estimates, however, showed that many riders from the Dulles Corridor would have gone to an outer Orange Line station to access transit, rather than board BRT in the corridor. The reasons that BRT was not extended eastward beyond West Falls Church in the Draft EIS include the lack of bus terminal capacity at stations east of West Falls Church as well to avoid congestion on I-66, which would degrade BRT performance.*

To meet market demand, WMATA has a Capital Improvement Plan (November 2002) for Metrorail system capacity and service reliability. The CIP will increase train consists from six to eight cars, reconfigure the Blue and other Lines, and change the headways of all Lines, other than the Red Line, from six to seven minutes. As a result, the number of cars through the Rosslyn portal will be increasing. In 2004, the number of inbound Orange Line cars through the Rosslyn portal during the peak hour is 114. In 2011, with the opening of the Wiehle Avenue Extension, the number of cars, including those of the new Extension, will increase to 140 cars in order to satisfy higher ridership due to growth and to the Extension. The 26 additional cars will be procured by

the WMATA Metro Matters program and by the Extension project. The next paragraph relates the number of cars to train loading.

As described in Section 6.1 of the Final EIS, WMATA measures train loading by passengers per car (PPC) and by the number of passengers 'passed-by' on the platform, i.e., passengers unable to board a crowded train. WMATA has an objective of 120 PPC during the peak hour. WMATA operation planners estimate that the Orange Line PPC is currently 100 PPC, at the point where the trains have maximum loading - between Courthouse and Rosslyn. Table 6.1-12 of the Final EIS indicates that this loading will increase to 107 to 124 PPC in 2011 with the opening of the Wiehle Avenue Extension. (The maximum load point moves between Rosslyn and Foggy Bottom). Thus, the above addition of 26 cars will not match the higher ridership, but the train loading will be near the WMATA objective of 120 PPC. Beyond 2011, WMATA will continue to procure new cars to meet the market demand; thus, more and more trains will be eight-car consists.

Need to Clarify Operational Assumptions

Public Comment: The DEIS makes no mention of an "average speed," which factors in stopping times at stations. In Maryland's Corridor Cities Transitway study - also a contest between bus and rail in the I-270 area - and Purple Line major investment study, average speeds are given (for example, 22 mph for light rail and bus in the case of Corridor Cities). But in the case of the Dulles study, it would appear WMATA and VDRPT used an "assumed permitted speed" of 59 mph for rail and 55 mph for bus. They also factored in a 30-second "dwell time" to stop at stations and offload and load passengers. Federal data shows that the average speed of Metro is 25 mph. Dwell times at stations are more like one minute. It is physically impossible for even a four-car Metro train to get up to 59 mph between stations, except perhaps on a long stretch. In contrast, a bus can exceed 55 mph and obtain that speed within 1 to 2 minutes. Speed is essential in determining travel times from point-to-point and travel time is a key factor in determining whether people will use transit. WMATA's table showing a 78-minute trip from Dulles Airport to Union Station is unreal and probably based on these "permitted speeds" and underestimated dwell times. Such a trip is about 45 miles. It would require stopping at more than 20 stations plus a transfer at Metro Center to a Red line train. In contrast, a trip from White Flint to Metro Center (about 20 miles and 10 stops) takes 45 minutes to an hour. Hence, a trip from Dulles Airport to Union Station is more likely to take over 90 minutes by rail, but half that time on BRT. (0112, 0462-L –5)

***Response**: Total travel time is the relevant input into the travel demand forecasting model. This data for Metrorail is included in the Transit Operations and Maintenance Plan Technical Report. Since total distance is also available in the tables of the Report, average speed can be easily calculated. The maximum attainable speeds were used as part of the simulation package to determine travel time, but the simulation package also considers the number of stations, distance between stations, the number and radius of curves, station dwell time, and vehicle acceleration rates.*

Based on the data, the average speed of Metrorail in the corridor is approximately 36 miles per hour. The average system wide speed of 25.2 miles per hour reflects the extremely varied nature of the Metrorail system, including suburban stations that are more than a mile apart and downtown stations that are one-quarter mile apart.

Average Speed Assumed for Analysis

Public Comment: A significant factor in determining transit ridership - whether it is BRT, light rail or heavy rail - is average speed. Section 3.1.4, Table 3-5 on page 21 of your technical report, "Transit Operations and Maintenance Plan," mentions "maximum free flow speeds (miles per hour)" for the Dulles extension and BRT. It also notes these are "assumed" speeds. It appears you used these speeds in your modeling, not average speeds, because I saw no "average speeds" any where in the documents. (See Exhibit 2) However, nowhere do you see "average speed" when you calculate boarding times at stations (dwell time). Table 3-5 only provides the maximum design speed (75) and permitted attainable speed

(59.5 mph), and no maximum design speed for buses, but you have a permitted attainable speed of 55. (0112, 0462-L –24)

Public Comment: The DEIS makes no mention of an "average speed," which factors in stopping times at stations. In Maryland's Corridor Cities Transitway study - also a contest between bus and rail in the I-270 area - and Purple Line major investment study, average speeds are given (for example, 22 mph for light rail and bus in the case of Corridor Cities). But in the case of the Dulles study, it would appear WMATA and VDRPT used an "assumed permitted speed" of 59 mph for rail and 55 mph for bus. They also factored in a 30-second "dwell time" to stop at stations and offload and load passengers. Federal data shows that the average speed of Metro is 25 mph. Dwell times at stations are more like one minute. It is physically impossible for even a four-car Metro train to get up to 59 mph between stations, except perhaps on a long stretch. In contrast, a bus can exceed 55 mph and obtain that speed within 1 to 2 minutes. Speed is essential in determining travel times from point-to-point and travel time is a key factor in determining whether people will use transit. WMATA's table showing a 78-minute trip from Dulles Airport to Union Station is unreal and probably based on these "permitted speeds" and underestimated dwell times. Such a trip is about 45 miles. It would require stopping at more than 20 stations plus a transfer at Metro Center to a Red line train. In contrast, a trip from White Flint to Metro Center (about 20 miles and 10 stops) takes 45 minutes to an hour. Hence, a trip from Dulles Airport to Union Station is more likely to take over 90 minutes by rail, but half that time on BRT. (0112, 0462-L –5)

Public Comment: What are the average speeds assumed for rail and bus? In the EIS I believe there is a "top speed" from station to station, 59 mph for bus and rail, or something like that, but what is the average speed for the Dulles Rail and Dulles BRT considering station stops? (0112, 0382-L –3)

Public Comment: Secondly, these speeds are not even in line with the inflated AVERAGE speeds Maryland DOT used for its Purple Line study - 47 mph for heavy rail and about 35 mph for light rail. According to the "Urban Transport Fact Book," prepared from 1997 data from the Federal Transit Administration, Washington's Metrorail system only averages 25.2 miles per hour! (0112, 0462-L –26)

Public Comment: Buses can average 50 miles per hour even with the six stops slated in these proposals. Metrorail would travel no more than 35 mph given the numerous stops in between, and the idea of having as many as six stops just at Tysons Corner is ridiculous. Also, if you wanted to, you could just add express bus service to the Dulles Access Road, build flyover ramps at key locations for on-and-off traffic, and charge single occupancy motorists to use it under the HOT lane/congestion pricing concept. (0112, 0269-M –7)

Public Comment: Bus rapid transit is not only a faster mode, but it's cheaper. This means motorists who want to drive alone could pay -- we could have hot lanes with this to help pay for the cost of that. There's no hot lane proposal here that I can see. Buses can average 50 miles per hour, even with six stops in between. Metro, I would say, would be no more than 30 or 35; at least that's what the Purple Line study showed. (0112, 0245-T –7)

> ***Response****: Total travel time is the relevant input into the travel demand forecasting model. ridership for a given transit alternative will be more dependent on travel times than on average speeds. The Transit Operations and Maintenance Plan (June 2002) prepared in support of the Draft EIS showed that Alignment T6 had a travel time of approximately 41 minutes between the Route 772 and East Falls Church stations. The all-stops operating pattern for BRT 1 had a travel time of approximately 48 minutes between Route 772 and West Falls Church, even though this alignment has fewer stops than Alignment T6.*
>
> *Since total distance is also available in this technical report, average speed can be easily calculated. The maximum attainable speeds were used as part of the simulation package to determine travel time, but the simulation package also considers the number of stations, distance between stations, the number and radius of curves, station dwell time, and vehicle acceleration rates. Based on this data, the average speed of Metrorail in the corridor is approximately 36 miles per hour (mph). The average speed of BRT 1 (Route 772 to West Falls Church making all*

stops) would have been 31 mph. The average Metrorail system wide speed of 25.2 miles an hour reflects the extremely varied nature of the Metrorail system, including suburban stations that are more than a mile apart and downtown stations that are one quarter mile apart.

As the owner and operator of the Dulles Toll Road (and other major HOV facilities in the region), it would be VDOT's responsibility to fully evaluate and implement any proposals that allow travelers driving alone to use the HOV lanes during peak hours for a fee ("value pricing"). Such value pricing systems would require would require in-depth study. Issues include the lack of space for barrier-separation, technological challenges associated with a non-barrier-separated system, and equity considerations.

Accessibility and Frequency of Metrorail Service in Corridor

Public Comment: We need to be sure that the rail options through Tysons will be extensive, easy to access, and run frequently at all hours, to encourage people to leave their cars off the roads. (0179, 0179-T –7)

Response: *Access provisions for four Metrorail stations in Tysons Corner include pedestrian bridges across major roadways, and Kiss-and-ride facilities at the Tysons West Station and Tysons East Stations. All stations include provisions for feeder bus service or are located near existing bus stops.*

The Wiehle Avenue Extension would have the same operating hours as the existing Metrorail system: 5:00 a.m. to 12 p.m. on weekdays (2 a.m. on Friday), 8 a.m. to 3 a.m. on Saturdays, and 8 a.m. to midnight on Sundays.

Service Must be Rapid and Affordable

Public Comment: This new service must not only be affordable for the riders and the taxpaying public, but it also must be rapid, or it may not be used by those of us for whom it is to be built. (0148, 0148-T –2)

Response: *The analysis presented in Chapter 6 of the Final EIS shows travel times for a number of origin-destination pairs. In many of these cases, travel times are competitive with those for automobile travel.*

Concerns Regarding Speeds and Travel Times Assumed for Analysis

Public Comment: Speed is a significant assumption in modeling any new transportation project and if you assumed these speeds for rail, your ridership projections are highly suspect, but so are your travel times. For example, Table 6.3-4 on Page 6-40 of Part I of the EIS is impressive for what is left out - an estimated rail travel time from Dulles Airport or any of the Loudoun County stations to any rail station in the District of Columbia. Might this omission be due to the unpleasant truth that such trips will take over 90 minutes in each direction if done by rail? (See Exhibit 3) However, this table forecasts a 57-minute estimated Metrorail ride time from Union Station to Reston Town Center and 60-minute ride via express bus. How can a train stop at seven stations between Reston and East Falls Church, and from there, 10 more station stops on the Orange Line, plus a transfer to a Red Line train at Metro Center, and make the trip in 57 minutes, when it took me 45 minutes to one hour to ride the Red Line from White Flint to Metro Station, which only requires stopping at 10 stations? Why weren't travel times between ALL stations computed and provided to the public? It is physically impossible for a Metro train to do this unless you are assuming 59 mph speeds, which means you will likely have many passengers with upset stomachs due to the revving up of high speeds and slowing down from station to station. But your calculation of 30-second "dwell times" also is mischievous. It is preposterous to assume that a Metro train can stop and unload and load passengers in only 30 seconds. More likely, we are talking about a 1 to 2 minute dwell time. (0112, 0462-L –25)

Public Comment: How can a trip from Dulles Airport to Union Station take only 78 minutes (see one of your charts) and pass more than 25 stations in the process, when now it takes me about 45 minutes to an hour to go from White Flint to Union Station, and that is no more than passing 15 stations? (0112, 0382-L –5)

> ***Response****: The travel times for both Metrorail and BRT were developed using a detailed simulation package that takes into account station dwell times, number and radius of curves, allowable train speeds, vehicle acceleration times, number of stations, and distance between stations. The inputs into the model such as station dwell time reflected WMATA experience from existing operations and WMATA vehicle characteristics. Travel times outside the corridor reflected WMATA schedules that are used in the operation of the system. Scheduled trip time between White Flint and Union Station is 30 minutes. Travel times between all stations in the corridor are shown in the Transit Operations and Maintenance Plan (June 2002). This document was a public document. The 30-second dwell time is the WMATA standard and is based on current operating experience.*

Dwell Time at Stations

Public Comment: Why are you assuming only a 30 second layover at rail stations? Isn't it more like a 1 minute layover, especially during rush hour? (0112, 0382-L –4)

> ***Response****: The 30 second dwell time is the WMATA standard and is based on current operating experience.*

Public Comment: Coordinate mitigation for traffic impacts with the WMATA West Falls Church parking garage project. (0388 6-1)

> ***Response:*** *For the Final EIS, the Project Team included the new 960-space WMATA park-and-ride structure in the No-Build Alternative for the traffic analysis of this station area.*

Consider Additional Development Approved by the County in Ridership Projections

Public Comment: Since the Economic and Secondary Development Effects of the additional development are quantified elsewhere in the DEIS and in the supporting technical report, the additional development levels that the County has approved for each of the station sites also need to be considered in the ridership projections. (0387, 0387-L –7)

Public Comment: Part of the analysis that was done --it was done by Loudoun County's changes to the comprehensive plan, but it was done for Reston stations and it's buried in one of the technical appendices, but is showed in Reston where we did also revise our comprehensive plan last year to promote transit oriented development with a mix of shops and housing at the stations, that you can substantially increase the number of riders, and it would go from 87,000 to 101,000, and the number of new riders would increase from 38,000 to 54,00. (0141, 0243-T –5)

> ***Response****: The travel demand forecasts in the Final EIS are based on the Metropolitan Washington Council of Governments' Round 6.3 Cooperative Land Use Forecasts. The Round 6.3 forecasts represent the regionally adopted population and employment forecasts through 2025, for the metropolitan Washington area, including Fairfax and Loudoun County. By federal regulation, such regionally approved land use forecasts must be used in the travel demand analysis of each alternative studied in an EIS. The changes in the Fairfax and Loudoun County Comprehensive plans must be incorporated into the regionally adopted land use forecasts in order to be reflected in the model results and the Final EIS. The Project Team did incorporate density bonuses in the Tysons Corner and Reston/Herndon areas into the analysis of secondary traffic impacts in support of the Draft EIS, but these demand figures were not included in the Final EIS.*

Metrorail Travel Times

Public Comment: Contrary to popular belief, heavy rail is not very fast. With up to 13 stations from Route 772 to West Falls Church, meaning about a two-minute layover for passenger discharge and boardings, this means the entire 24-mile trip from Ashburn to Tysons would consume 26 minutes just sitting at stations. I estimate the entire trip will take about an hour - the same time it takes to ride from White Flint to Metro Center on the Red Line. This means a trip to downtown Washington from Loudoun County would take more than 90 minutes. (0112, 0269-M –5) (0112, 0245-T –5)

> ***Response:*** *Estimated Metrorail travel time from Route 772 to East Falls Church is approximately 40 minutes for the Full LPA. Estimated Metrorail travel time from Route 772 to Metro Center is approximately 60 minutes. These travel times were developed with a simulation package that takes into account station dwell times, number and radius of curves, allowable train speeds, vehicle acceleration times, number of stations, and distance between stations.*

Off-Peak Service Levels and Service Hours

Public Comment: Metrorail trains must run with the most frequent headway possible throughout the day. There is no reason to reduce the frequency of service outside of so-called "rush hours." Working and commuting patterns are constantly changing; indeed, it should be the frequency of rail service that influences people's schedules, rather than the other way around. It should be a goal to ensure that no passenger ever waits more than 5 minutes for the next train. (0290, 0290-L –2)

Public Comment: Because of the additional distance involved in travel to and from downtown DC, it is important that trains run later into the evening than they currently do along the Orange line. The significant ridership seen now on Fridays and Saturdays, when Metrorail runs to 2:00 a.m., will certainly increase with Dulles Corridor passengers. The schedule must be extended, ideally past 2:00 seven nights a week, to allow as many riders as possible to use Metro. (0290, 0290-L –3)

> ***Response:*** *Changes to WMATA policies regarding mid-day service frequencies, hours of service, and holding of trains to meet late night arrivals of planes at Dulles Airport are outside the scope of this Project, and would be the responsibility of the WMATA Board of Directors. The Metrorail operating plan in support of the Final EIS has headways of seven minutes for the sake of service reliability.*

Public Comment: There must be a provision to hold the last train of the night until after the last plane arrives at Dulles. Occasionally, planes are delayed beyond their scheduled arrival time; in that case, Metro must remain open. Arriving passengers may be counting on riding Metrorail to their destinations. This is an easy step to take to ensure that people who fly can have confidence in the availability of Metro to get to and from the airport. Intermodal cooperation such as this is key to gaining public support and increased ridership. In contrast, a stranded traveler will be a customer lost. Similarly, trains must begin running early enough in the morning -- seven days a week! -- to allow passengers from the farthest reaches of the system to reach Dulles Airport in time for the earliest scheduled flights. Not taking this step would exclude and alienate a significant number of potential riders. (0290, 0290-L –5)

> ***Response:*** *Formulation of policies on holding trains to meet late-night arrivals and early flights of planes at Dulles Airport is outside the scope of this Project, and would be the responsibility of the WMATA Board of Directors.*

Clarify Metrorail and BRT Deadhead Costs

Public Comment: What are the deadhead costs for the BRT system versus rail? (0112, 0382-L –17)

Public Comment: You refer to "deadhead costs." In table 3-7, you say that to place the rail maintenance yard at the end of the line, there will be about $4,500 per day in deadhead costs each day. Is that for the

entire system or just Dulles Rail and what would be the annualized costs of deadhead for each service yard alternative? What are the deadhead costs for the BRT system versus rail? (0112, 0462-L –44) (0112, 0382-L –16)

> ***Response**: In the Draft EIS, deadhead costs were calculated as part of the overall costs for BRT but were not broken out specifically because this data was not needed for any analysis purposes. Metrorail deadhead costs were broken out because this data was required to compare alternative yard sites. The data in the table represented daily deadhead costs incurred at each yard site only, and did not reflect costs associated with the entire system. The Project Team recommended and the decision-makers selected the Yard Site Y15 on Dulles Airport property.*

Consider Short Turning Service and Shuttle in Tysons Corner Area

Public Comment: Operations -- There was no consideration in the operation section of short line service terminating at the Tysons West or Tysons East Stations even though both include pocket tracks to accommodate the short line turnback movement. Tysons West could serve as a short line terminus for service between Tysons Corner and the core or some point further east. Tysons East could serve as the inbound terminus of service between Loudoun County and Tysons. Implementing this short line service would produce a savings in operating costs and may also reduce rail car requirements. The consideration of short line service appears to be supported by the ridership projections. In the OB direction, more than half of the Dulles Corridor riders disembark from the rail system at Tysons Corner. In the IB direction, approximately 1/4 of the riders who board the train OB of Tysons Corner will disembark at Tysons which suggests that not all of the Dulles service needs to continue IB toward the core. This cut back would facilitate the merge with the Orange Line at WFC and the Blue Line at Rosslyn. The operations analysis also needs to examine a Tysons shuttle between Tysons East and West Stations to provide internal service within Tysons. This service would be particularly useful during off peak periods to facilitate travel within Tysons for work, shopping, dining etc. and I believe that it could produce a measurable ridership increase, all of which would be new riders. It's very probable that this service could also be provided without the need to purchase additional rail cars. (0387, 0387-L –14)

> ***Response**: No consideration was given to short turning service in Tysons Corner because the significant majority of corridor riders are traveling beyond Tysons. Dulles Corridor trains will be replacing supplemental Orange Line service currently in operation. This supplemental service is used to relieve overcrowding on the Orange Line. A shuttle within Tysons Corner is no longer possible, since the pocket track at Tysons East Station was eliminated.*

B. Supplemental Draft EIS Comments

Federal Agency Comments

Impacts of Project Phasing

Federal Comment: Phasing of the project does appear to adversely effect early year ridership numbers and thus may have less of an air quality and traffic benefit in the short run as compared to an early full build out. (0085 0100-1)

> ***Response:** Ridership is not as high in the Wiehle Avenue Extension as it is in the Full LPA. Therefore some of the benefits resulting from higher ridership may not accrue until the Full LPA is completed. The impacts of phasing on air quality and traffic are documented in Chapters 4 and 6, respectively, of the Final EIS.*

Local Agency Comments

Impacts of Project Phasing

Local Comment: Table 6.2-3 Is it reasonable to expect that in 2025 for LPA I only, PNR trips will

decrease? It seems that once garages fill up, they remain that way. Also, with the Full LPA, bus trips appear to drop significantly. Is that reasonable to expect? (0093 0109-4)

> ***Response:*** *Peak hour park-and-ride trips at Wiehle Avenue Station might decline between the opening year 2011 and the forecast year 2025 for the Wiehle Avenue Extension, because fewer trips might arrive in the peak hour of arrival. Bus trips decrease significantly after implementation of the Full LPA because Wiehle Avenue would no longer be an end-of-line station; so, many of those bus trips would board at other stations.*

Public Comments

Accommodating Eight Car Trains

Public Comment: Again, the project team assumed eight car trains on the line to Wiehle. Metro now cannot run eight-car trains due to insufficient traction power. How is Metro going to upgrade its system to handle 8-car trains so you run 8-car trains on the Wiehle line? (0016 0122-6)

Response: *Under its Metro Matters campaign, WMATA is presently obtaining funding of its near-term capital needs to sustain the Metrorail and Metrobus systems. Within the $1.5 billion Metro Matters campaign, there is over $600 million for the eight-car train operations.*

Impacts of Project Phasing

Public Comment: In addition, the ridership and other projections used to justify Phase I assume that Phase II will be built, even though the FTA has clearly stated that Phase II is a separate project for purposes of funding. This analysis is highly misleading, because it misleads the public about the true likelihood of completing Phase II, and about the true benefits of building Phase I. (0063 0151-5)

> ***Response:*** *The ridership forecasts for the Wiehle Avenue Extension make no assumptions about the likelihood of the Full LPA being implemented. The Wiehle Avenue Extension ridership forecasts are based on the service definition described for Extension in the Final EIS, which is a combination of local bus services, Corridor express bus serving Wiehle Avenue, and Metrorail service at Wiehle Avenue Station on 7 minute headways.*

Travel Time Savings

Public Comment: Additionally, should rail become a reality with four stops as proposed in Tysons Corner, my commute to L'Enfant Plaza on the Orange Line would be made more time consuming than it already is. I am not pleased with the plan as it is presently proposed. (0035 0036-2)

> ***Response:*** *For passengers accessing transit in the peak direction from West Falls Church, Dunn Loring, and Vienna stations, there will be a marginal increase in transit travel times under the Wiehle Avenue Extension or the Full LPA relative to existing conditions. However, for the majority of origin points within the corridor, transit travel times will decrease. In addition, significant improvement in travel times will occur for passengers making trips in the reverse peak direction. This improvement is based on the much higher frequency of outbound service relative to today's service and also because there is direct service to key destinations in the corridor for reverse peak trips.*
>
> *The run time for Metrorail from Wiehle Avenue to East Falls Church Stations (the first Metrorail station served by the Dulles Corridor service) would be approximately 15 minutes (with a transfer time of 2 minutes, the total trip would be about 17 minutes). Travel time from Wiehle Avenue to West Falls Church Stations via the existing Fairfax Connector 980 service is about 15 minutes. However, people are required to transfer to Metrorail at West Falls Church, thus adding 2 minutes for a total of approximately 17 minutes.*

Public Comment: SDEIS, 6.1.3, states, the proposed LPA Phase 1 would improve the convenience of existing service, but would not provide the same degree of improvements as the full LPA. Travel time savings would not be as great for proposed LPA Phase 1, and transfer requirements would generally not improve over the No Build. According to the SDEIS, FTA has determined that the first phase now being considered for funding has independent utility even if the subsequent phase is never built. Therefore, using the information in 6.1.3.1, demonstrate your analysis in table format showing transit travel time between the trip from LPA Phase 1 for points east, including BRT and Premium Bus Service. (0109 0128-9)

> ***Response:*** *During the preparation of the Draft EIS, a number of other modes, including Bus Rapid Transit, were considered for the Dulles Corridor Rapid Transit Project. Based on the analysis contained in the Draft EIS, public hearings held in July 2002, and comments received on the Draft EIS, the Metrorail Alternative (T6/Y15) was selected as the Locally Preferred Alternative (LPA) a by the Commonwealth Transportation Board (CTB) and by the WMATA Board of Directors in late 2002. The purpose of the Supplemental Draft EIS was to provide additional information on refinements that have been made to the LPA since the publication of the Draft EIS Public Hearings Report. As such, the analysis of transit travel times in Section 6.1.3 of the Supplemental Draft EIS presents a comparison of travels times under the Full LPA and the Wiehle Avenue Extension compared to the No Build Alternative.*

Maintain Express Bus Service

Public Comment: Ensure that we maintain express bus service from Wiehle to Pentagon and Crystal City for the people who wish to go that way. (0064 0072-5)

> ***Response:*** *The bus operating plans used in the Final EIS assumed that Loudoun County express service to the core was maintained. Otherwise, all Fairfax Connector Corridor express bus routes feed into Wiehle Avenue Station.*

Rosslyn Tunnel Capacity

Public Comment: With the current Orange line tunnel in periodic failure, is it not safe to assume heavy rail line passenger increases could create a requirement for new expensive unplanned tunnel? What will be the impact on the current Orange line tunnel? What mitigation options are proposed to relieve this impact? What is the capital cost to implement these mitigation measures? What is the funding source for meeting the capital cost? (0107 0125-15)

Public Comment: Explain how the Rosslyn Tunnel, which is already operating over capacity, will be able to handle the addition of the Silver Line to the existing Orange and Blue Lines. (0063 0151-18)

Public Comment: The Orange Line already is over capacity. To prevent further crowding in the Rosslyn Tunnel, some Orange Line trains will need to be removed to make room for Silver Line trains. Please explain how projected growth in Orange Line demand will be met. (0063 0151-17)

> ***Response:*** *Assessment of an additional tunnel between Virginia and Washington D.C. is not within the scope of this project. The Metrorail operating plan in support of the Final EIS reflects the overall capacity of the Rosslyn tunnel of 26 trains in the peak direction during the peak hour.*
>
> *To meet market demand, WMATA has a Capital Improvement Plan (November 2002) for Metrorail system capacity and service reliability. The CIP will increase train consists from six to eight cars, reconfigure the Blue and other Lines, and change the headways of all Lines, other than the Red Line, from six to seven minutes. As a result, the number of cars through the Rosslyn portal will be increasing. In 2004, the number of inbound Orange Line cars through the Rosslyn portal during the peak hour is 114. In 2011, with the opening of the Wiehle Avenue Extension, the number of cars, including those of the new Extension, will increase to 140 cars in order to satisfy higher ridership due to growth and to the Extension. The 26 additional cars will be procured by*

the WMATA Metro Matters program and by the Extension project. The next paragraph relates the number of cars to train loading.

As described in Section 6.1 of the Final EIS, WMATA measures train loading by passengers per car (PPC) and by the number of passengers 'passed-by' on the platform, i.e., passengers unable to board a crowded train. WMATA has an objective of 120 PPC during the peak hour. WMATA operation planners estimate that the Orange Line PPC is currently 100 PPC, at the point where the trains have maximum loading - between Courthouse and Rosslyn. Table 6.1-12 of the Final EIS indicates that this loading will increase to 107 to 124 PPC in 2011 with the opening of the Wiehle Avenue Extension. (The maximum load point moves between Rosslyn and Foggy Bottom). Thus, the above addition of 26 cars will not match the higher ridership, but the train loading will be near the WMATA objective of 120 PPC. Beyond 2011, WMATA will continue to procure new cars to meet the market demand; thus, more and more trains will be eight-car consists.

Ridership Forecasts and Mode Split

Public Comment: We also suggest that Fairfax County re-evaluate its mode split data in all future traffic analysis associated with rezoning applications requested for increase in density at rail stops. The current Tysons Plan assumes a 20% mode split and a Level of Service F as the acceptable basis for any traffic study accompanying a land use application. Table 6.1-3 refers to a 16.1% mode split assumption so the Comprehensive Plan formula assumption must be modified to meet the realities cited in this EIS. (0113 0132-10)

Response: *Fairfax County's use of a 20 percent mode share includes trips by Metrorail, transit bus, car pooling and van pooling. The 13 percent in Table 6.1-5 of the Final EIS is the Metrorail share of trips.*

Public Comment: The project model predicts that ridership at the WFC station will decrease; this makes no sense at all. (0026 0027-10)

Response: *Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church Station will return to its former level.*

Public Comment: Outside of New York City, no rail line carries as many passengers as a pair of freeway lanes. Right here in our area, we do not believe that any part of the WMATA system in the suburbs carries as many passengers as a pair of adjoining freeway lanes. Please confirm or deny. (0061 0069-13)

Response: *A pair of freeway lanes would carry 3,600 vehicles per hour under acceptable traffic operations (LOS D, wherein traffic is generally free flowing, though with some delay – 1,800 vehicles per hour per lane) and 4,800 at full capacity (LOS F, wherein traffic operations are severely degraded). The Orange Line to Vienna service is forecasted to carry approximately 11,000 passengers per hour at its maximum load point in the No-Build condition in 2025 (this is forecasted demand on the Orange Line if the Full LPA is not constructed). In general, rail transit provides much higher capacities than highways. ,*

Public Comment: how many of your 25,000 riders are new versus people who used buses or came off the Orange Line. (0016 0122-10)

Response: *Ridership estimates indicate there would be approximately 48000 new transit riders per day regionally in 2025 under the Full LPA. These are people that currently do not use transit.*

Operating Characteristics of Metrorail and Bus Service

Public Comment: While promising a "seamless" ride on the proposed "Silver Line," the project has never explained how it plans to accommodate demand on the Orange Line train if every other train is a Silver train. In this SDEIS, you are proposing to terminate the Silver Line at Stadium Armory and requiring a transfer there to New Carrollton. (0016 0122-22)

> ***Response:*** *With the Dulles Corridor Metrorail Project, the Orange Line through the core of the Metrorail system receives more service. The Orange Line supplemental service of 2004 and the No-Build Alternative (known as trippers) are one-direction during the peak hour. The Dulles Corridor trains replace the trippers and operate during all revenue hours, although turning back at Stadium-Armory.*
>
> *To meet market demand, WMATA has a Capital Improvement Plan (November 2002) for Metrorail system capacity and service reliability. The CIP will increase train consists from six to eight cars, reconfigure the Blue and other Lines, and change the headways of all Lines, other than the Red Line, from six to seven minutes. As a result, the number of cars through the Rosslyn portal will be increasing. In 2004, the number of inbound Orange Line cars through the Rosslyn portal during the peak hour is 114. In 2011, with the opening of the Wiehle Avenue Extension, the number of cars, including those of the new Extension, will increase to 140 cars in order to satisfy higher ridership due to growth and to the Extension. The 26 additional cars will be procured by the WMATA Metro Matters program and by the Extension project. The next paragraph relates the number of cars to train loading.*
>
> *As described in Section 6.1 of the Final EIS, WMATA measures train loading by passengers per car (PPC) and by the number of passengers 'passed-by' on the platform, i.e., passengers unable to board a crowded train. WMATA has an objective of 120 PPC during the peak hour. WMATA operation planners estimate that the Orange Line PPC is currently 100 PPC, at the point where the trains have maximum loading - between Courthouse and Rosslyn. Table 6.1-12 of the Final EIS indicates that this loading will increase to 107 to 124 PPC in 2011 with the opening of the Wiehle Avenue Extension. (The maximum load point moves between Rosslyn and Foggy Bottom). Thus, the above addition of 26 cars will not match the higher ridership, but the train loading will be near the WMATA objective of 120 PPC. Beyond 2011, WMATA will continue to procure new cars to meet the market demand; thus, more and more trains will be eight-car consists.*

Public Comment: Increased frequency of feeder bus service would help reduce demand for parking at that lot and generate transit ridership. (0060 0169-13)

> ***Response:*** *The feeder bus plans utilized in the Final EIS reflect the plans and available resources of the bus systems of the two Counties. Revising these services would be the responsibility of Fairfax and Loudoun Counties.*

Capacity and Use of Transit and Highway Facilities

Public Comment: Please compare and contrast the ridership, boarding, and hourly throughput for the proposed Silver Line with the existing Orange Line. Compare the passenger throughput for each line, (one actual, one proposed) with the vehicle and passenger throughput on the Dulles Toll Road and I-66 paralleling both lines. Calculate these figures in a way that can be compared with the collection methodology that VDOT uses to determine the intensity of highway use at particular hours. Conclude from these numbers whether or not the rail lines carry more or less vehicles or people than a pair of adjacent highway lanes. Make this calculation for peak hours and non-peak hours and for the day as a whole. (0061 0117-16)

Public Comment: There are peak hours for rail users. What are the rail volume averages for the Wiehle Avenue station? How does this compare to the volume averages of the adjacent Dulles Toll Road? For

example, does the rail carry more or less the volume carried by the inbound and outbound Dulles Toll Road? (0109 0128-10)

> ***Response:*** *In 2025, peak hour loads at the maximum load point on the Dulles Corridor service under the Full LPA is forecast to be approximately 8,640, while on the Orange Line service it would be approximately 10,100. Each lane of I-66 and the Dulles Toll Road can carry approximately 1,800 vehicles at reasonable free flowing speeds and 2,400 cars at greatly deteriorated service. Assuming average vehicle occupancy rate of 1.1, the two Metrorail lines would carry more people than the adjacent highways.*

Public Comment: We do not believe projections that rail technology will attract three and a half times as many riders as an altered and improved mixed transit system incorporating best available technology. (0061 0136-8)

> ***Response:*** *The travel demand forecast model used to develop the project ridership forecasts utilizes the most recent data on mode preference, based on significant research into this subject. The ridership forecasts reflect these preference patterns.*

Public Comment: We would like to see capacity figures for the current bus system because we suspect it already has substantial excess capacity. (0061 0136-9)

> ***Response:*** *It is the understanding of the Project Team, that certain Fairfax Connector buses between Herndon-Monroe transit center and West Falls Church Station have standees. In general, bus system capacity is based on the frequency of service. The bus service assumed for the No-Build and for the two Build Alternatives is outlined in the Transit Operations and Maintenance Plan prepared in support of the Final EIS.*

Travel Times of Transit Verses Automobiles

Public Comment: The SDEIS claims that transit times will be competitive with auto for many routes, we don't agree with that; most studies say that auto trips are half the time. (0061 0136-6)

> ***Response:*** *The transit travel times or auto travel times identified in the Draft EIS, Supplemental Draft EIS or Final EIS are door to door. Instead, the times are calculated between the centers of transportation analysis zones (TAZ) that represent areas of the region (for instance, Reston is divided into approximately five TAZs). The use of TAZs is typical in travel demand forecasting. Vehicle travel time for automobiles is based on observed data and is included in the demand forecasting modeling package, which attaches a travel time to each link in the regional highway network (this is based on observed data). Transit travel times are based on a detailed simulation package that takes into account station dwell times, number and radius of curves, allowable trains speeds, vehicle acceleration times, number of stations, and distance between stations.*

Public Comment: The SDEIS claims that transit times will be competitive with auto for many routes. Practical experience in driving routes currently served by existing Metro service does not support this assumption. Most businesses in the Tyson's area will be outside of ¼ mile radius from a station that many people believe is an acceptable distance to walk to work. This would suggest that most people would continue to drive to their place of employment. Additionally, express bus service to West Falls Church Metro Station will be terminated if rail is implemented in order to increase passenger ridership. This could have the opposite action of encouraging people to continue driving to employment destinations. (0110 0129-3)

> ***Response:*** *Each of the factors that impact the mode choice of potential riders such as travel time on competing modes and access to final destinations is factored into the travel demand forecasting model. The forecasted ridership results reported in the Draft EIS, Supplemental Draft EIS and Final EIS already reflect these factors. The impacts of changes in bus service to West Falls Church have also been reflected in the model assumptions.*

Transit Travel Time Assumptions

Public Comment: The SDEIS claims that transit times will be competitive with auto for many routes. For door-to door trips, we dispute this claim. Please explain your methodology. (0061 0069-7)

Public Comment: The project team has dramatically overestimated the "travel time savings" of rail over other modes, especially compared with the high-occupancy vehicle (HOV) and transit bus modes from anywhere in the Dulles Corridor to Ballston, Rosslyn, the Pentagon, and downtown Washington, D.C. (0016 0122-15)

Public Comment: The SDEIS claims that transit times will be competitive with auto for many routes. For door to door transportation, we dispute this claim. Explain how you arrived at this conclusion. For what percentage of trips on the corridor would transit travel times be competitive with auto? (0061 0117-7)

> ***Response****: Neither the transit travel times or auto travel times originally identified in the Supplemental Draft EIS and included again in the Final EIS are door to door. Instead, the times are calculated between the centers of Transportation Analysis Zones (TAZs) that represent areas of the region (for instance, Reston is divided into approximately five TAZs). The use of transportation analysis zones is typical in travel demand forecasting. Vehicle travel time for automobiles is based on the demand forecasting modeling package, which attaches a travel time to each link in the regional highway network (this is based on observed data). Transit travel times were based on a detailed simulation package that takes into account station dwell times, number and radius of curves, allowable train speeds, vehicle acceleration times, number of stations, and the distance between stations.*

Parking Impacts on Ridership Forecasts

Public Comment: The number of planned parking spaces appears to have been reduced. How will the ridership projections be met if parking is reduced? (0063 0151-15)

Public Comment: Ridership Numbers are Inflated: Ridership numbers are highly unrealistic because the parking has been slashed at the stations but only meager offsetting adjustments have been made to the ridership which will certainly be reduced commensurate to the parking reductions. (0072 0150-3)

Public Comment: Revise the patronage figures for rail to reflect the removal of the structured parking garage from the Wiehle Avenue terminus. Study the relationship between parking available for suburban locations and usage and project from this study the amount by which use of the Wiehle terminus would be reduced if no new parking were built there. (0061 0117-17)

> ***Response:*** *The travel demand forecasts reported in the Draft EIS, Supplemental Draft EIS and Final EIS take into account the planned park-and-ride capacity at each Metrorail station. Ridership arriving at each station by automobile is constrained, if necessary, by park-and-ride capacity limitations. The Project Team does not anticipate a reduction in the proposed park–and-ride capacity at the Wiehle Avenue Station.*

Transit Travel Times

Public Comment: What will be the increase in travel time for the bus rider who now travels from Reston East to West Falls Church metro but will now have to ride the proposed rail system with four stops in Tysons Corner? (0107 0125-10)

Public Comment: What is the travel time for the rail riders going from the Wiehle station to the West Falls Church Station? How does this compare to the travel time of the present bus riders who use Reston East to get to West Falls Church? Is there an increase in travel time? If so, then using the statement

related to longer transit trips reduces the attractiveness of the transit mode, describe the possible impact to ridership. (0109 0128-11)

> ***Response:*** *The travel times would be similar. Run times for Metrorail from Wiehle Avenue to East Falls Church Stations (the first Metrorail station served by the Dulles Corridor service) would be approximately 15 minutes. Travel time from Wiehle Avenue to West Falls Church Stations via the existing Fairfax Connector 980 service is about 15 minutes. However, people are required to transfer to Metrorail at West Falls Church, thus adding 2 minutes for a total of approximately 17 minutes.*

Transferring Bus Riders to Metrorail

Public Comment: what is the economic impact on the present bus rider who will be forced to take the proposed rail system or return to their automobiles? (0107 0125-12)

> ***Response:*** *Some transit bus riders from south of Tysons Corner on bus routes along Route 7 would be forced to transfer to Metrorail at West Falls Church Station to travel to Tysons Corner. No bus rider from the western part of the corridor within Fairfax County who does not currently transfer to Metrorail would be forced to transfer to Metrorail in the future. The only difference between today's bus operations in the western part of the corridor in Fairfax County and the operations defined in the Final EIS are that people who currently transfer to Metrorail from bus at West Falls Church Station would transfer at Wiehle Avenue Station*

Development Impacts on Ridership

Public Comment: What percentage of ridership from Wiehle station to Tysons corner comes from the former bus riders? (0109 0128-12)

Public Comment: Bus riders will be forced to use rail because the Reston East bus route to West Falls Church will be eliminated. What percentage of ridership from Wiehle station to West Falls Church comes from the former Reston East bus riders? (0109 0128-13)

> ***Response:*** *It is anticipated that most users of the current express service would change to Metrorail. Exact statistics would require a boarding survey after the Metrorail service is in operation.*

Public Comment: The revised DEIS notes that ridership likely would increase 15% with "density bonuses" and that the projections do not include airport users. Consequently, even on a conservative basis the rider ship is understated by at least 20%! (0108 0127-9)

> ***Response:*** *The project's ridership forecasts are based on regionally-adopted population and employment forecasts for the opening and horizon years. The density bonuses associated with Metrorail are not part of these regionally adopted forecasts and therefore were not calculated as part of the demand forecasting process for the Final EIS. . Airport users are included in the demand forecasts reported in the Final EIS, but may be understated because of the lack of comparable data with which to forecast this ridership, which does not follow typical commuting patterns.*

Budget Impacts on Ridership Potential

Public Comment: WMATA has a $48M deficit in next year's budget, and needs $274.5M for projects labeled urgent over the next five years. This deficit produces a budget headache that could prevent WMATA from running 8 car trains. How will this impact the projected increase ridership on the Orange Line, which requires 8 car trains to meet the projected level of efficiency? (0109 0128-18)

Response: *Under its Metro Matters campaign (, WMATA is presently obtaining funding of its near-term capital needs to sustain the Metrorail and Metrobus systems. Within the $1.5 billion Metro Matters campaign, there is over $600 million for the eight-car train operations.*

Public Comment: WMATA had capital plans to buy 650 new buses and can now only buy 380. Bus routes are being eliminated. For every 10% fare increase ridership drops by 0.36% The fare increases and the increase in parking fees are reality issues. Describe how these issues were factored in for ridership projections for 2009? (0109 0128-19)

Response: *All factors that impact on mode choice, including fares, parking fees, and the bus network (factors identified by the commenter) are fundamental elements of the demand forecasting model. Assumptions regarding these factors are implicit in the demand forecasting results.*

Ridership for Work Trips

Public Comment: What percent of the riders who work in the Tyson's Corner area will use the proposed rail from Wiehle Avenue Station to reach their place of employment? (0109 0128-2)

Public Comment: Residents in the Washington region now use transit for about 4.5% of all daily trips. (Washington Post, B-9, 7/17/02) What percent of the employees who work in the Tyson's area will use rail to reach their place of employment? (0109 0128-1)

Response: *This data is shown in Chapter 6 of the Final EIS. The transit share of all trips to Tysons Corner under the proposed Wiehle Avenue Extension is approximately 13 percent.*

Maintain Current Bus Services

Public Comment: Will the present bus service from Reston East to West Falls Church be eliminated? (0107 0125-11)

Response: *Under both the proposed Wiehle Avenue Extension and the Full LPA, bus service that currently serves the Reston East Park-and-Ride before continuing to West Falls Church would terminate at the Wiehle Avenue Metrorail station.*

Consider Impacts of "Just in Time" Carpoolers

Public Comment: Determine the number of just in time carpoolers (sluggers) using Herndon Monroe parking station or any other stop. Compare this use of slugging with that experienced along the Shirley Highway. Revise the no-build alternative numbers to incorporate formalized slugging to attract at least the same percentage of commuters as the Shirley Highway. How will this affect peak hour public transit demand? (0061 0117-14)

Response: *The issue of "slugging" in the Dulles Corridor was addressed in the Public Hearings Report for the Draft EIS. The issues associated with implementing just-in-time ridesharing zones in the Dulles Corridor and the possible benefits of increased HOV were explored as part of the Project Team's review of Dulles Plan B. Neither the Project Team nor VDOT could develop facilities with the express purpose of encouraging just-in-time ridesharing (also known as "slugging" or casual carpooling) because of the tremendous liability risk associated with such activities. While these agencies recognize the benefits that have been gained in the I-95/I-395 corridor through this informal ridesharing arrangement, the random pairing of drivers and passengers inherent in this form of commuting presents risks that most public agencies are not prepared to assume.*

Ridership Estimates Seem Overly Optimistic

Public Comment: A defensible and objective ridership analysis needs to be included in the SDEIS. The projected ridership data is unrealistic (e.g., at 2-17 and S-12 and TABLE 2-2). The authors have failed to present a defensible basis for inflated ridership data. (0068 0173-15)

Public Comment: Many of us would question ridership forecasts as wildly optimistic, even with massive development or redevelopment of rail oriented sites. Plans for the Wiehle Avenue site are the densest in all of Reston, with an FAR of 2.5. As VDOT said in its critique of the original DEIS, while rail might produce some slight alleviation of East-West congestion, north-south roads will be overwhelmed by density increases. (0096 0112-3)

> ***Response:*** *The methodology for completing the ridership forecasts were outlined in detail in the Travel Demand Forecasting Methodology and Results Technical Report (June 2002) prepared parting support of the Draft EIS. This same methodology was used in the Final EIS analysis as well. This modeling methodology is based on commonly accepted and widely used forecasting techniques applied on projects throughout the United States. Further, the forecast results have been calibrated to existing ridership on Metrorail, thus providing an additional measure of accuracy.*

6.2 Effects on Roadways

A. Draft EIS Comments

State Agency Comments

Include Roadway Improvements in CLRP

State Comment: Pg. 6.6, 2nd to last paragraph: "VDOT is planning several major roadway improvements along Routes 7 and 123 in Tysons Corner . . .. Widening of Routes 7 and 123, and the construction of grade-separated interchanges at Route 7/Westpark Drive, Route 7/International Drive, and Route 123/International Drive . . . By 2010." (Recall 8/4/00 letter by Tom Farley, included in report's Appendix, asking that the team consider and evaluate the improvements planned by 2010 that are included in the Fairfax County Comprehensive Plan and the regionally adopted Constrained Long Range Plan CLRP). (0421, 0421-A –18)

> ***Response****: All improvements planned by the opening year and forecast year of the two Build Alternatives of the Final EIS that are included in regional transportation plans are considered in the analysis that support the Final EIS. The exceptions are the proposed interchanges of Route 7 and Route 123 in Tysons Corner as identified by the Fairfax County in its Comprehensive Plan. Those interchanges are not yet recognized by regional plans. All improvements included in the regionally adopted Constrained Long Range Plan that are located in Fairfax County are included in the analysis.*

Local Agency Comments

Traffic Impacts on Access Roads to Stations

Local Comment: In other words, what good is this transit system if you can't get to it? And you can't get to it unless you address systematically the neighborhood streets, the transit services that provide transportation, conceivably, to this important new addition to the region, and in otherwise provide for a much greater area than is provided for now. We know that the highways in the area that potentially would be accessed for this system are already significantly under stress and, frankly, break down regularly as effective transportation corridors. And those include Route 7, Route 29, Route 66, and many other neighborhood highways. (0165, 0165-T –6)

Response: *The Project Team agrees that the Metrorail Extension will not resolve traffic gridlock; however, it would provide an alternative to driving the automobile, which in turn would help to improve air quality in the corridor. As outlined in Chapter 6 of the Final EIS, the Metrorail Extension will substantially increase the transportation capacity of the corridor (i.e., the number of travelers that can be comfortably accommodated in the corridor during peak travel times), relative to the No-Build Alternative. In theory, every "new rider" generated by this project would result in one less automobile on the Dulles Toll Road or other regional roadways.*

More Intersections Should Be Studied in the City of Falls Church

Local Comment: Impacts - The traffic impacts are more far reaching than the intersections studied. The City [of Falls Church] had requested that thirteen (13) key intersections be studied and is disappointed to find only three (3) were considered. The City continues to believe this project may have a significant impact on Falls Church and its environs requiring analyses that would include secondary and cumulative effects of traffic increases through existing neighborhoods. This potential for increased commuter "cut through" traffic needs to be monitored and will require the collection of additional traffic counts. (0122, 0122-A –15)

Response: *The three intersections included in the traffic analysis for the Orange Line Connection section of project corridor were selected based on their proximity to the West Falls Church Metrorail Station. These three major intersections are directly adjacent to the station and have the potential to experience the greatest impact, if any, from the project. Based on the results of the analysis, it can be inferred that the intersections directly adjacent to the three under study would also receive the same impact since they are located in close proximity to each other. Moreover, the further away the intersections are located from the station area, the less likely project-related impacts would be felt.*

A secondary effect is an indirect effect. In other words, they are caused by the proposed action, but will occur later in time or further in distance than the other direct impacts from the project. With regard to the Dulles Corridor Rapid Transit Project, secondary effects would be those resulting from the increased density of development that would occur because local government have plans in place that allow for greater density in some areas if transit is provided (known as density bonuses). These effects could include increased traffic congestion. While it is expected that increased density will result in localized traffic congestion in some of the station areas, the new transit-oriented urban form will help to increase the overall mobility in the corridor, counties, and the region. The Project Team, however, disagrees that secondary traffic would be a problem for the residents of Falls Church. Secondary and Cumulative impacts of transit-related growth were analyzed in Chapter 9 of the Final EIS and the *Economics and Secondary Development Effects Technical Report (June 2002). No assessment of secondary development impacts was undertaken for West Falls Church because density bonuses are not allowed in this area.*

The Project Team did not analyze the potential for overflow parking nor cut-through traffic on neighborhood streets. The Project Team did initiate meetings with the City of Falls Church to discuss these issues.

Local Comment: Equity - The City [of Falls Church] is more directly impacted than other communities, but these impacts were not analyzed at the same level of detail as the proposed Metro stations. Unlike the planned stations in Tyson's Corner, the impact of traffic overflow will be felt on adjacent residential streets causing safety concerns for our residents. It is puzzling to then contrast that only the three (3) directly adjacent intersections at the West Falls Church Metro area were analyzed, whereas, for the new stations, as many as nine (9) and an average of five (5) adjacent intersections were analyzed. (0122, 0122-A –16)

Response: *As part of the Dulles Corridor Rapid Transit Project, four stations are anticipated to be constructed in Tysons Corner, some of which would have overlapping station area impacts.*

Relative to the City of Falls Church and the other sections of the corridor, the effects of the project on the Tysons Corner area would be much greater than that at the West Falls Church Station. Metrorail service is currently provided for the West Falls Church Station and no project improvements are planned there for either Metrorail Alternative. As shown in Chapter 6 of Final EIS on average, three to four intersections were analyzed for each of the Mid-corridor and Loudoun County Stations. More intersections may have been analyzed due to station facilities (i.e., Kiss & Ride and park-and-ride spaces) being provided on the north and south sides of the Dulles Toll Road.

The three intersections included in the traffic analysis for the Orange Line Connection section of project corridor were selected based on their proximity to the West Falls Church Metrorail Station. These three major intersections are directly adjacent to the station and would therefore experience the greatest impact, if any, from the project. Based on the results of the analysis, it can be inferred that the intersections directly adjacent to the three under study would also receive the same impact since they are located in close proximity to each other. Moreover, the further away the intersections are located from the station area, the less likely project-related impacts would be felt.

Traffic Impacts May Limit Development Potential in the City of Falls Church

Local Comment: Safety/ Infrastructure - The City is unique in that the West Falls Church Metro area is directly adjacent to City owned property, which includes the George Mason Middle and High Schools, as well as the UVA/ Virginia Tech Grad Center. - Assumptions - The assumption that failing roadways should accommodate more traffic without improvements is flawed. One of the major goals of the Project is to support future development. However, in reality, the Project may actually prohibit such future development in the area and severely limit the City's [of Falls Church] future economic development potential because existing roads are now operating at near or full traffic capacity. (0122, 0122-A –21)

Response: *It is not the responsibility of the Dulles Corridor Rapid Transit Project to mitigate existing traffic/roadway capacity problems. The Final EIS does not assert that failing roadways should be able to accommodate more traffic without improvements. Chapter 6 of the Final EIS states that increases in vehicle trips are not anticipated for the West Falls Church Station as a result of either of the two Build Alternatives. . This is primarily a result of the addition of transit park-and-ride capacity in the mid-corridor. Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church Station will return to its former level.*

Traffic and Mitigation Measures Not Fully Addressed for the City of Falls Church

Local Comment: Mitigation measures - Table 6.2-6, "Summary of Traffic Issues and Proposed Mitigation Measures," does not address or consider Falls Church traffic issues or propose mitigation measures. (0122, 0122-A –17)

Response: *The Dulles Corridor Rapid Transit Project will not substantially expand service at either the East or West Falls Church Metrorail Stations. The Final EIS states that large increases in vehicle trips are not anticipated for the West Falls Church Station area for either of the Metrorail Alternatives. This is primarily due to the addition of transit parking elsewhere in the Dulles Corridor. Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church Station will return to its former level.*

Public Safety and Infrastructure Not Addressed for the City of Falls Church

Local Comment: Equity- Public safety and infrastructure improvements are included in the EIS recommendations for many other impacted areas, but not for the City of Falls Church. (0122, 0122-A – 23)

Local Comment: The draft EIS has failed to adequately address public safety and infrastructure issues regarding pedestrian traffic, especially students conflicting with vehicular traffic in and around the West Falls Church metro station, given the prediction for increased vehicle trips per day. Our middle school and high school are adjacent to that station. (0122, 0164-T –5)

> ***Response:*** *As stated in Chapter 3 of the Final EIS, the study area for safety and security was the limit of disturbance for the Metrorail Extension. Since neither the West Falls Church nor East Falls Church Metrorail Station would require major improvements as part of the Extension, these stations fall outside the limit of disturbance and therefore were not analyzed. In addition, the Final EIS states that increases in vehicle trips are not anticipated for the West Falls Church Station area for either of the two Build Alternatives. This primarily would be due to the addition of transit parking in the Mid-corridor.*
>
> *Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church Station will return to its former level.*

Hours of Delay Measure

Local Comment: Hours of delay may provide a more realistic and meaningful measure of traffic impacts than the LOS and seconds of delay measure used in the DEIS. (0479, 0479-L –4)

> ***Response****: Comment noted. Since the review period of the Draft EIS, FTA has instituted a measure of travel time savings in hours for its evaluation of New Starts projects.*

Potential Impacts to City of Falls Church

Local Comment: I am pleased to provide the following "Impact Evaluation" for the referenced draft EIS report dated January 28, 2002 (including revised Section 8.0 dated March 15, 2002). This brief evaluation reviews this EIS report in consideration of possible impacts to the City of Falls Church, particularly the affected Metrorail stations and environs with the City of Falls Church. Based on my evaluation of this report (and revised Section 8.0 attachment), I offer the following observations and comments (presented in order by Section of the EIS report):

Section 1.0 -- No comment.

Section 2.2 -- It is noted that the BRT alternative includes modification to the West Falls Church Metro Station.

Section 3 -- No comment.

Section 4 -- No comment.

Figure 5-1-- At the Haycock Rd./Falls Reach Drive intersection, it is shown that the predominant AM inbound flow is from Great Falls Street, yet the predominant PM outbound flow is to the other direction (towards Rt.7). This is a curious traffic pattern where the predominant outbound trips (from West Falls Church Metro Station) are opposite of the predominant inbound trips. This should be explained further.

Figure 5-17 -- At the Haycock Rd./Falls Reach Drive intersection, there are "movements" going into an unmarked road opposite Falls Reach Drive. Perhaps this unmarked road is one-way, yet nothing is shown on this graphic. This should be explained further.

Section 5.3.2 - Roadway analysis was performed for eight (8) roadway segments, not including Rt. 7 near Falls Church (e.g., near Haycock Road). Why not? It seems this important eastern end of the study area should have been included.

Section 6.1 -- Level of Service (LOS) analyses were conducted for selected highway links, but not Rt. 7. Why not? Again, it seems this important highway corridor within the study area should have been included.

Section 7.1 -- A general statement is made that "…traffic impacts within the Orange Line Connection sub area of the corridor are not expected to be significant." On what basis is this general statement made? On what proof or evidence can this be made?

Section 7.1 -- It is stated that "…no formal analysis of park/kiss-and-ride entries and exits or the nearby local road network was undertaken for the East Falls Church metro station area…" due to insignificant increase in traffic near the station, yet it is also stated that "…implementation of either the Metrorail or BRT/Metrorail Alternative would result in increased off-peak service frequencies at East Falls Church for eastbound trains…" These statements seem contradictory. An explanation of how increased off-peak service creates no significant increase in traffic near the affected station needs to be clarified.

Section 8.2 (March 15, 2002) -- It is stated that none of the planned changes to the West Falls Church Metro station are assumed in the analysis, yet no explanation is provided as to why? Also, isn't a parking garage being planned/programmed for this station? If so, why isn't this included in the analysis?

Table 8-1 (March 15, 2002) -- This table shows exactly the same LOS and delay for the RT.7/Haycock Rd. and Haycock Rd./West Falls Church Station Parking Entrance intersections during the AM and PM peak hours for the 2025 Baseline condition. It is highly unlikely that this coincidence would occur. This needs to be checked and verified.

Section 8.3.1 (March 15, 2002) -- Under the "BRT Alternative" it is stated twice that the Rt. 7/Haycock Rd. intersection would improve to LOS C in the PM peak hour. I believe that this applies to the AM peak hour as well (per Table 8-1).

Section 8.3.1 (March 15, 2002) -- Under the "BRT Alternative" it is stated that "…any of the build alternatives would reduce the demand for parking at the West Falls Church Station …", yet no evidence is presented to support this finding.

Section 8.3.2 (March 15, 2002) - It is stated here that "…only selected intersections and station entrances/exits are analyzed." It is curious why the most impacted intersection in the West Falls Church Metro Station area (Great Falls Rd./Haycock Rd. intersection was not part of the analysis.

Section 8.3.2 (March 15, 2002) -- It is stated here that "…because it is the controlling time period for the design year, only the PM peak hour conditions have been analyzed…" Since the area near the West Falls Church Metro Station (i.e., Rt.7/Haycock Rd. intersection area) is directly influenced by the adjacent educational facilities, thus directly and strongly influenced during the AM peak hour much more than the PM peak hour, it is questionable why only the PM peak hour was analyzed, and not the AM peak hour.

Section 8.5 (March 15, 2002) -- It is stated that since "… the project is not anticipated to have a negative impact on adjacent intersections, analysis of pedestrian and bicycle access and circulation was not undertaken." In light of prior comments and uncertainties, it is not necessarily factual that no negative impact has been afforded at adjacent intersections, thus perhaps pedestrian and bicycle access and circulation should be conducted.

Section 8.6 (March 15, 2002) -- It is claimed that the measured "delay" impact is not significant enough to warrant mitigation. Under what criteria is this based? This seems to be objective.

Figure 8-1 (March 15, 2002) The predominate PM peak hour traffic flow out of Falls Reach Drive is contrary to that shown in Figure 5-1. Which is correct?

Section 22.0 -- It is noted that the study only accesses the potential effects of development near the Tysons Corner and Mid-Corridor areas. Apparently no development is forecast near the Falls Church Metro Stations. This needs to be verified with the City.

Section 22.2 -- It is noted that "… the increase in traffic attributable to the rail development-related forecasts represent area-wide impacts." It is curious whether these area-wide impacts reach to Falls Church Metro Station areas.

Section 22.2 -- The final paragraph of the report states that development will result in increased ridership and also attract additional traffic to adjacent roadways. Does this apply to roadways near the Falls Church Metro Stations? This needs to be clarified. (0122, 0122-A –31)

> ***Response:*** *The Project Team addressed and verified these comments (which were made on the January and March 2002 draft versions of the Traffic Analysis and Station Access Technical Report). The Project Team also initiated meetings with the City of Falls Church to discuss these issues.*
>
> *Section 6.1. The links included in Table 6-1 were a sample of the important highway links in the project area. The table was not meant to be comprehensive of all heavily traveled links in the corridor. The links included in the table were selected based on their proximity to the BRT and Metrorail alignments, and were adjusted to be links most affected by implementation of the Build Alternatives.*
>
> *Section 7.1. The general comment in Section 7.1 regarding limited impacts was based on two different sources. With regard to East Falls Church, the comment was based on the fact that there will be no change in parking capacity at the East Falls Church Station as a result of the project, and thus there will be no change in the primary generator of auto trips to and from the station. There would be changes in traffic levels because of general population and employment growth, but these changes would not be the result of project implementation. With regard to the West Falls Church Station, the comment was based on traffic analysis contained in Chapter 8 of the Traffic Analysis and Station Access Technical Report (June 2002). The data in Chapter 8 showed very marginal changes in traffic volumes as well as very marginal changes in intersection levels of service (in some instances intersection delays actually improve slightly).Section 7.1. The most predominant generator of auto traffic to and from the East Falls Church Station is the park-and-ride facility. No changes to the capacity of the lot are planned as part of the Metrorail Extension. Furthermore, the facility typically fills up by 8 a.m. Therefore the major generator of auto trips to the station essentially would not generate trips after 8 a.m., regardless of the change in service frequencies.*
>
> *Section 8.2. Changes to the station and associated facilities resulting from implementation of the project were incorporated in the analysis. Other changes to the station must be part of the region's Constrained Long Range Plan in order to be included in the analysis. The new park-and-ride structure for West Falls Church is included in the No-Build Alternative but has not been considered a project impact.*
>
> *Table 8.1. These data were checked and verified; the data in the table was correct.*
>
> *Section 8.3.1. Comment noted. BRT was eliminated from further consideration after the public and agency review and comment on the Draft EIS.*
>
> *Section 8.3.1. Parking demand at each station under the two Build Alternatives is contained in the Patronage Forecast Report in support of the Final EIS. As an example, parking demand at*

West Falls Church under the No-Build Alternative is estimated to be 1,950 spaces. Under the LPA demand would be approximately 2,000 spaces.

Section 8.3.2. The Great Falls Street/Haycock Road intersection is included in the Final EIS analysis.

Section 8.3.2. The traffic analysis contained in the Final EIS is based on 2025 traffic levels. Both the a.m. and p.m. peak hours were analyzed for all relevant intersections for the design year 2025.

Section 8.5. Responses to prior comments have shown the adequacy of the traffic analysis completed for West Falls Church. Therefore the decision to not undertake bicycle and pedestrian access analysis was reasonable.

Section 8.6. The determination that mitigation is not required is based on the fact that the intersection will fail in 2025 regardless of whether the project is built. Mitigation to improve intersection performance would require improvements to address not only the incremental delay resulting from project implementation but also the delay and deteriorated intersection performance resulting from general population and employment growth. Improvements to address growth are not the responsibility of the project.

Figure 8.1. Figure 5.1 in the Traffic Analysis and Station Access Technical Report (June 2002) represented current traffic flows and volumes while Figure 8.1 represented flows and volumes for 2025. The differences between the two figures represented changes in the location of population and employment concentrations in the station area and the region as well as changes in roadway operations (which impact on travel path choice) in the station area and the region.

Section 22.0. The analysis outlined in Chapter 22 of the Traffic Analysis and Station Access Technical Report (June 2002) was completed specifically to understand the impacts of the transit-oriented density bonuses allowed for Tysons Corner and Reston because these are the locations where the density bonuses are allowed.

Section 22.2. Some impacts from additional traffic generated by density bonuses in Tysons Corner may be expected in Falls Church, though they will be much less than the impacts in Tysons Corner. This is because trips generated in Tysons Corner will have dispersed origins and therefore will take multiple travel paths. As a result, only a small percentage of the trips generated in Tysons Corner will travel through West Falls Church. Impacts from overall population and employment growth will be much more significant.

Section 22.2. See comment above.

Concerns About Traffic Impacts at East and West Falls Church Stations

Local Comment: The draft EIS did address one critical area of concern to the City [of Falls Church] -- Traffic Analysis and Station Access for the West Falls Church Metro area. While it generally addresses some concerns, we believe it falls short in its analysis. Please let me reiterate the City's critical concerns as related to this Technical Report:- Traffic- The traffic generated by this project will greatly diminish the quality of life of our residents. We asked that the City's [Falls Church] traffic consultant review and analyze the EIS. His comments are attached (Attachment 5). It is of great concern that nineteen (19) separate technical issues were identified as needing to be rectified or clarified. Our consultant states that these "shortcomings, inconsistencies, and concerns/questions are found to be rather troublesome. (0122, 0122-A –13)

Response: *Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church Station will return to its former level.*

The Project Team has reviewed the comments from the traffic consultant for the City of Falls Church and addressed his comments above. Overall, the consultant found the Technical Report was "comprehensive and well done – mostly within the standard methodologies and criteria."

Traffic at East and West Falls Church Stations

Local Comment: It is our understanding that the Dulles Corridor Project is a phased regional rapid transit project with planned station facility improvements within the East and West Falls Church Metro Station areas. Given this understanding, we firmly believe that this project will have a substantial vehicular traffic impact on the City as the East and West Falls Church Metro Stations transform into a major regional transportation/transit hub in the future. From the outset, the City has been concerned that the Project will bring thousands of additional motorists into the City, and urged that plans must be made to accommodate the additional traffic. (0122, 0122-A –8)

Local Comment: We firmly believe this project will have a substantial vehicular traffic impact on the city as the East and West Falls Church metro stations transform into a major regional transportation hub in the future. From the outset the city has been concerned that the project will bring thousands of additional motorists into the city, and urges that plans be made to accommodate the additional traffic. If these motorists drive to stations and cannot find parking, they will try to park on the residential streets, creating a significant impact on the surrounding neighborhoods. The city has repeatedly requested that these impacts and others be anticipated and addressed. 0122, 0164-T –8)

Local Comment: It is our view that the traffic impacts [in Falls Church] were not fully analyzed in four key areas: Assumptions - We believe the assumption that ridership will not increase and the assumption that failing intersections should not be improved is fundamentally flawed. Every projection throughout the EIS shows thousands of anticipated new riders. One of the project's major goals is to increase ridership and, certainly, at the starting point for the service, additional persons will be traveling to this destination. (0122, 0122-A –14)

Response: *The Project Team used the Northern Virginia Major Investment Study Model (NVMISM) to forecast the regional travel demand in the Dulles Corridor. This model was refined for use during the Dulles Corridor Rapid Transit Project, but had been last used for the Metrorail I-66 to Centreville MIS. NVMISM was developed using the general guidelines of the Metropolitan Washington Council of Governments (MWCOG) for a major update of the region's travel demand forecasting procedures, and has been considered to be a state-of-the-art model. Inputs into the model include an analysis on regional travel markets, which included private automobile use, public transit, public taxis, and walking/bicycle trips. The model also included demographic and land use data from MWCOG's Round 6.3 Cooperative Land Use Forecasts. By taking all of these items into consideration, through the use of the model, the Project Team has been able to project the ridership for each Metrorail station in the corridor. While the model outputs show that ridership at some stations will be higher than others, these forecasts are based on empirical data, and therefore portray the most accurate account of what will be happening in the corridor over the next 25 years.*

Implementation of the Project would result in increased off-peak Metrorail service at the East Falls Church Station. However, operating plans for the Wiehle Avenue Extension and Full LPA assume no additional feeder bus service, nor any new park-and-ride capacity for the off-peak period for this station. Because the station's existing park-and-ride facilities are typically full by 8:00 AM on most weekdays and parking is controlled on local streets, it is not anticipated that increased off-peak Metrorail service would generate additional traffic in and around the East Falls Church Metrorail Station. Based on the analysis of the forecast ridership volumes for the East and West Falls Church Metrorail Stations, the Project Team does not feel that overflow parking onto residential streets will be a problem. Moreover, since completion of the Draft EIS analysis, WMATA has programmed a 960-space parking facility at West Falls Church to be completed in early 2005. This new facility is part of the analysis in support of the Final EIS. The Project Team

did initiate meetings with the City of Falls Church to discuss the issues of overflow parking and cut-through traffic.

Public Comments

Traffic Impacts of Median Alignment

Public Comment: Is the proposed median alignment likely to reduce or increase automobile traffic? (0151, 0297-E –7)

Response: *Because of forecast increases in population and employment growth, traffic will consistently increase throughout the region over the next 20 years. However, as the Final EIS indicates, traffic on many of the regional highways, will not be increasing as a result of the Dulles Corridor Rapid Transit Project although there could be slight increases in localized traffic at intersections directly adjacent to some of the stations. This Project is intended to provide an alternative mode of travel in the corridor to alleviate the effects of increased congestion.*

Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church Station will return to its former level.

Route 123/International Intersection

Public Comment: I don't even want to think about the mess that would be created if the intersection of 123 and International were to be disrupted. (0054, 0054-CC-1)

Response: *Construction impacts on roadways as a result of the project are discussed in Chapter 6 of the Final EIS. Proposed roadway mitigation measures for the two Build Alternatives are also detailed in the Final EIS.*

Capture Traffic Further West

Public Comment: There are link studies contained within the DEIS that indicate in the year 2025, the Dulles Greenway will have a LOS of F. To mitigate this congestion, sound traffic planning principles would dictate the necessity to capture as much of the planned residential traffic as far west on the Greenway as possible (i.e., the Route 772 station). (0003, 0003-L –3)

Public Comment: The traffic analysis contained within the draft environmental impact statement indicates failing levels of service at the 606-789 intersection. To mitigate this congestion, sound traffic planning principles would dictate the necessity to capture as much of the planned traffic as far west on the greenway as possible, or the Route 772 station. (0003, 0246-T –4)

Response: *As initially evaluated in the Supplemental Draft EIS as a revision to the selected LPA and further documented in the Final EIS and final General Plans, the Project Team reconfigured the park-and-ride program in Loudoun County. Route 772 Station increased from no park-and-ride facility to two structures of 3,300 spaces combined. Route 606 Station decreased from 4,750 spaces to 2,750 spaces. Intersection LOS in the vicinity of the Route 606 station in 2025 will be F in both the No-Build Alternative and the Full LPA. The Project has proposed roadway improvements as mitigation measures.*

Traffic Signal Placement

Public Comment: Will traffic control signals be placed on dangerous intersections that are currently uncontrolled, such as Idylwood Road and Redd Road at the WFC S&I entrance? (0424, 0424-E –5)

Response: *It is not the responsibility of the Dulles Corridor Rapid Transit Project to mitigate existing traffic or intersection issues. Although additional storage tracks will be constructed at the West Falls Church Yard impacts to traffic will be negligible. Therefore, the Project Team does not anticipate any Project-related traffic impacts at this intersection.*

Concern About Traffic Impacts Near West Falls Church Station

Public Comment: The second issue is the effect of increased traffic on our streets. This includes safety impacts, congestion impacts, parking impacts, and air quality impacts. As it pertains to the primary streets directly surrounding our development (Haycock Road, and the Metro Service Road), these have not been addressed in the EIS because our property was simply not considered significant, in spite of our critical location. The report is similarly deficient in laying out what will be done to mitigate congestion and secondary effects from nearby and highly important intersections, such as Haycock-Great Falls and Haycock-Route 7, which we routinely use and which directly affect our local travel. (0126, 0126-E –5)

Public Comment: In speaking with the consulting representatives at the public meetings, and we don't find anything to the contrary in the EIS, the popular response to these fears is that the net effect is that there will be no traffic increases around West Falls Church; i.e., the motorists who now drive to and park at West Falls Church station are from communities along the proposed line, and when the project is built, those motorists will no longer drive here or will park at their new Metro parking lots. This may indeed happen, but to suggest that there will be decreases in traffic at West Falls Church is ludicrous. It flies in the face of the very justification used for the Dulles Corridor project; i.e., that traffic will continue to increase dramatically in the next 10-20 years. As they say in the movies, "If you build it, they will come", if for nothing more than to use West Falls Church as a parking and debarkation point to get to East Falls Church and then double back on Metro to Dulles or wherever. (0126, 0126-E –6)

Public Comment: I mentioned our concerns about traffic. We feel that your study methodology was flawed because of the limited areas you study. We anticipate widespread effects in the entire area surrounding the transit station and we feel your report does not adequately address the potential impacts on our neighborhood roads. (0145, 0145-T –10)

Response: *The three intersections included in the traffic analysis for the Orange Line Connection segment of the project corridor were selected based on their location relative to the West Falls Church Metrorail Station. These three major intersections are directly adjacent to the station and would therefore experience the greatest impact, if any, from the project. Based on the results of the analysis, it can be reasonably inferred that the intersections adjacent to the three analyzed in the Final EIS would also experience the same impact since they are located in close proximity to the analyzed intersections.*

Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church Station will return to its former level.

Mitigation measures were proposed for those intersections that would have unacceptable levels of service (LOS E or F) and delay times five or more seconds or five percent greater than those experienced for the No-Build Alternative. Based on the analysis, mitigation would not be warranted at Route 7/Haycock Road, Great Falls Street/Haycock Road or at the Haycock Road/Park-and-Ride entrance under the two Build Alternatives. At these locations, levels of service and delay times are improved or only slightly more than those for the No-Build Alternative.

Traffic Impact at Wiehle Avenue Station

Public Comment: The station on Wiehle is going to impact Inlet Cluster, Inlet Court, because there is a curve approaching that intersection. There is no traffic light. The speed limit is 20 or 25 miles an hour. No one adheres to it. The speed limit on the rest of Wiehle is 35. Most of the traffic goes at 50. We have had, over the 31 years of the Cluster, deaths on that intersection. They do not show up because they have been over time. (0288, 0288-T –1)

> ***Response:*** *While traffic volumes are expected to increase at the intersections directly adjacent to the Wiehle Avenue Station, the increases will be due largely to the forecast population and employment growth forecast for this area, as indicated in Chapter 6 the Final EIS. The Wiehle Avenue/Inlet Court intersection was not analyzed for this study because it is located approximately one mile from the proposed station location; therefore, Project-related effects at this location would be minimal.*

Impacts To Route 7 Service Roads

Public Comment: The proposed location of the garage also could alter the circulation pattern in the area, potentially eliminating or restricting use of the service road along westbound Route 7, which, as noted on page 2 above, is the singular access point to the TMS property. Section 14.1 of the Traffic Technical Report indicates that the Virginia Department of Transportation intends to widen westbound Route 7 between Westpark Drive and the DAAR from its current three (3) lanes to four (4) lanes. Drawing GPN-C-213 (Page 272) of the DEIS exhibits appears to incorporate these improvement with the design of the parking structure. Indeed, the service road appears to shift to the east while eliminating three (3) existing curb cuts from westbound Route 7, including the entrance that serves the Toyota Property and the TMS Property. Although the DEIS and Traffic Technical Report do not explicitly acknowledge the effect this widening will have on the Route 7 service road, we have been told the planned widening could modify the operation of the service road on westbound Route 7 to a "one-way" only road. Were this widening and change in traffic to occur, patron of Koons Toyota, Tysons Self Storage and the TMS Property no longer would have clear ingress/egress to their properties. As noted above, the service road is the only means to and from the private access easements benefiting the Property. This effect appears not to have been considered as part of the DEIS. (0135, 0391-L –16)

Public Comment: How does the DEIS envision the functioning of the westbound Route 7 service road in the event the parking garage at the Tysons West station is constructed? (0135, 0391-L –23)

> ***Response****: The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS. Therefore, the Project is no longer affecting the TMS Property nor Tysons Self-Storage.*
>
> *The park-and-ride at Tysons West Station has been reduced from 2,000 to 500 spaces specifically in response to concerns regarding traffic impacts. The 500-space park-and-ride would be part of a joint development project, so the private sector would be involved in the design and development. However, the specific location and design is not yet known.*

Construction Impacts to Tysons Corner Businesses

Public Comment: The other Host Marriott hotel will be negatively affected by the rail project is the Ritz-Carlton, Tysons Corner. Our concern is not only for this hotel but also the economic impact on the neighborhood, as people avoid the construction and traffic congestion at Tysons Boulevard and Route 123 where the Tysons Central Station is to be developed. Part of the success of our business is dependent upon providing customers an easily accessible location and we anticipate that the construction of this station will likely cause us to lose customers, given that it will interfere with the hotel's primary access along Tysons Boulevard. We acknowledge that the issue is not unique to us and that the retail

elements of the neighborhood will likely be impacted as well. As such, we suggest that appropriate efforts be made to ensure that the construction of this station be planned and phased in a manner that minimizes traffic detours and congestion along an already crowded Route 123 and Tysons Boulevard intersection. (0453, 0453-L –3)

> ***Response****: During the preliminary engineering and final design, maintenance of traffic plans will be developed to minimize any impacts to local area roadways, including the intersection of Tysons Boulevard and Route 123. Access to the hotel will be maintained along Tysons Boulevard so minimal long-term economic impact is anticipated for either the hotel or other retail facilities. In general, the mobility benefits of providing a transit station in close proximity to retail facilities and hotels outweigh any adverse traffic effects.*

Traffic Impacts During Construction

Public Comment: What are the impacts on corridor traffic during the construction phase of any of the alternatives? (0235, 0235-E –7)

> ***Response****: As discussed in Chapter 6 of the Final EIS the construction of the Metrorail Extension would require intermittent lane closures on some local roads through Tysons Corner and Dulles Airport, as well as on regional facilities such as the DIAAH, Dulles Toll Road, and Dulles Greenway. As stated in Chapter 6, of the Final EIS, maintenance of traffic plans would be developed for all construction activities that would impact regional and local roadways. To the extent possible, all construction requiring lane closures would be done at night, on weekends, or in the off-peak period.*

Noise and Traffic Generated During Construction

Public Comment: Will the noise and traffic generated by construction and construction vehicles be restricted in hours of operation and noise and light levels? (0424, 0424-E –4)

> ***Response****: Implementation of the Metrorail Extension would result in some disruptions to the operation of the transit and highway facilities in the corridor, as well some short-term noise impacts. Maintenance of traffic plans would be developed for all construction activities that would impact roadways. To the extent possible, all construction requiring lane closures would be done at night, on weekends, or in the off-peak period. Also, construction traffic would be re-routed, to the extent possible, along roadways in order to minimize noise impacts to nearby sensitive receptors.*

Specific Mitigation Needed for Roads Adjacent to Stations

Public Comment: What is the impact on both the region and individual communities in regards to shift in traffic, overflow parking, and increased traffic on feeder roads? Be more specific in identifying mitigation measures and the cost/funding sources for these measures. (0147, 0459-L –14)

Public Comment: The DEIS further states there will be deterioration around intersections in the vicinity of the Wiehle Avenue station and the Reston Parkway Station. Mitigation proposals include widening streets, build more turning lanes and build more ramps. The project team failed to adhere to the principles of cumulative effects analysis. Therefore, the analysis of the cost of the recommended mitigation measures should be factored into the equation and this analysis should be made available in the DEIS. Conceptual cost estimates should be prepared for the construction and implementations of the mitigation measures. Identification of funding sources should be determined. (0147, 0459-L –22)

Public Comment: Historically, transit rail systems do not reduce traffic congestion. In the modern American areas, traffic analysis reveals that increasing residential and commercial densities is largely incompatible with reducing traffic congestion. Citizens living around the transit stations have major concerns that the proposed rail strategies will have virtually no impact on the traffic congestion along the

Dulles Corridor. In addition, they are concerned that the excessive cost of the rail option could deny putting in place the mitigation measures proposed in the DEIS. (0147, 0459-L –26)

***Response**: Over the next twenty years, congestion in the Dulles Corridor and the region will be increasing due to the increases in forecast population and employment growth. The Dulles Corridor Rapid Transit Project would provide an alternative mode of transportation within the region. While it is stated in the Final EIS that the project most likely would not solve the current congestion problems on the Dulles Toll Road and other regional roadways, the project would increase the transit capacity of the region as a whole. As outlined in Chapter 6 Final EIS, the Metrorail Alternative would substantially increase the transit capacity of the corridor (i.e., the number of travelers that can be comfortably accommodated in the corridor during peak travel times), relative to the No-Build Alternative. In general, every "new rider" generated by this project would result in one less automobile on the Dulles Toll Road or other regional roadways. As Table 6.2-1 in the Final EIS shows, the 2025 traffic volumes on some of the regional highways with the Metrorail Extension would be comparable to the 2025 No-Build Alternative volumes, with the majority of the link volumes only slightly decreasing for the Build Alternatives. Only volumes on the DIAAH would decrease enough to result in an improved level of service.*

Near the stations, there will be increases in localized traffic to and from the stations. The increases in localized traffic would largely be driven by the amount of park-and-ride and Kiss & Ride traffic programmed for a particular station area. Chapter 6 of the Final EIS includes a discussion of the localized traffic effects and proposed mitigation measures.

Clarification Regarding LOS Improvements

Public Comment: You show several intersections at levels of service (LOS) of D, E, and F in 2025 and then you show improvements leading to better LOS rating (C,D). But these improvements are not due to transit alternatives, but widening the roads and intersections, no? (0112, 0382-L –22)

***Response**: The input to the travel demand forecast model includes the planned future roadway network. Therefore, the intersection levels of service for the No-Build and two Build Alternatives of the Final EIS reflect the roadway improvements of the year of forecast.*

The Project Team agrees that the Dulles Corridor Rapid Transit Project would not resolve traffic gridlock; however, it would provide an alternative to driving the automobile, which in turn would help to improve air quality in the corridor. For the purposes of this project, mitigation measures were proposed for those intersections that would have unacceptable levels of service (LOS E or F) and delay times five or more seconds or five percent greater than those experienced for the No-Build Alternative. In some cases, the failing levels of service at intersections could not be resolved by retiming or adding a traffic signal, therefore, turning lanes or extra travel lanes may be needed.

Traffic Calming Devices

Public Comment: Traffic mitigation features, such as speed bumps, additional stop signs, signs prohibiting cut-through traffic, and increased enforcement. These should be based on the anticipated future volume of traffic and should be put into place before the new rail facility is opened [Westhampton]. (0386, 0386-E –11) (0398, 0398-L –11) (0399, 0399-L –11) (0403, 0403-L –10) (0412, 0412-L –11) (0415, 0415-L –11)(0416, 0416-L –11) (0430, 0430-E –11) (0431, 0431-E –11) (0465, 0465-L –11) (0470, 0470-L –11) (0473, 0473-L –11)(0474, 0474-L –11)

***Response**: It is not the responsibility of the Dulles Corridor Rapid Transit Project to mitigate existing roadway and traffic issues, such as cut-through traffic in the Westhampton neighborhood. Since the project would not be increasing vehicle traffic within the station area, speed bumps an/or additional signage would not be warranted by this Project.*

Improvements to Haycock Road

Public Comment: Improvements on Haycock road, such as adding a lane to accommodate traffic turning at the Great Falls intersection and synchronizing traffic lights to alleviate congestion. (0386, 0386-E –12) (0398, 0398-L –12)(0399, 0399-L –12)(0403, 0403-L –11)(0412, 0412-L –12)(0415, 0415-L –12)(0416, 0416-L –12)(0430, 0430-E –12)(0431, 0431-E –12)(0465, 0465-L –12)(0470, 0470-L –12)(0473, 0473-L –12)(0474, 0474-L –12)

> ***Response****: Based on the analysis provided in Chapter 6 of the Final EIS mitigation would not be warranted at the Haycock Road/Great Falls Street intersection for two Build Alternatives. Since this intersection fails under the No-Build Alternative, mitigation was not recommended for the Build Alternatives, although the Project Team did coordinate with the City of Falls Church on this issue. For the traffic analysis, the Project Team used the Synchro software package, which optimizes consecutive traffic signals as a unit so that they all run on the same cycle. The traffic signals that were optimized/synchronized for the traffic analysis include the Great Falls Street/Haycock Road, Haycock Road/West Falls Church Metrorail Station entrance, and Haycock Road/Route 7 intersections.*

Public Comment: With respect to air pollution, the increase in bus traffic to the WFC station and the increase in automobile traffic to the new WFC multi-level parking garage will bring additional vehicular pollution in and around the WFC Metro Station which is only one-half mile from the Westhampton neighborhood. We believe that mitigation measures to improve the traffic flow on Haycock Avenue are necessary to prevent a worsening of current rush hour traffic jams in the area and a significant increase in air pollution from idling engines as people attempt to negotiate the Haycock bottleneck at Turner St. We request that the plans for the Dulles Corridor rail system include mitigation measures for peak travel flow on Haycock Road. This should include all feasible mitigation, including synchronization of traffic lights and widening Haycock Road. (0388, 0388- L-2)

Public Comment: What you do say in the EIS is that one of our neighborhood intersections, Haycock Road and Great Falls Street, will degrade to an F level of service during morning and evening hours. What I couldn't find was any suggestion of what might be done about this impact. Nor did it appear to me that you had appropriately assessed the traffic that will result in the West Falls Church area from the expansion of service. (0145, 0145-T –11)

Public Comment: The EIS does not appear to consider full impact to the Haycock Road and Great Falls Street that will degrade to an F service of level during morning and evening peak hours. There appears to be no suggestion of remedies to correct this situation, only that this project will exacerbate a poor situation. (0179, 0179-T –8)

> ***Response****: Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church Station will return to its former level.*
>
> *Based on the analysis provided in Chapter 6 of the Final EIS mitigation would not be warranted at the Haycock Road/Great Falls Street intersection for the two Build Alternatives. Since this intersection fails under the No-Build Alternative, mitigation was not recommended.*

Cut Through Traffic Near West Falls Church Station

Public Comment: Also, we currently suffer from "cut-through" traffic on our narrow streets, which have no curbs, no gutters, and no sidewalks. That situation will only get worse as traffic increases into the West Falls Church metro with the addition of a 2,000 car parking garage. (0403, 0404- L- 2)

Public Comment: In addition, the traffic congestion on Haycock Rd. has already produced cut-through traffic in the Westhampton Neighborhood, as cars attempt to avoid the light at Haycock Road and Great Falls St. This is a danger to residents of the Westhampton neighborhood. We believe that the mitigation strategies in the plans for the Dulles Corridor Project should include measures such as speed bumps on Grayson Place and signs forbidding cut-through traffic in the Westhampton neighborhood. This should be coupled with increased traffic enforcement by Fairfax County. Such measures would help reduce mobile source air pollution impacts on the health of residents in the neighborhood and improve compliance with the provisions of the federal Clean Air Act. (0388, 0388- L-3)

> ***Response****: Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church Station will return to its former level. Nevertheless, the Project Team does not anticipate any increases in project-related cut-through traffic in the neighborhoods around West Falls Church Station.*
>
> *It is not the responsibility of the Dulles Corridor Rapid Transit Project to mitigate existing roadway/traffic issues, such as cut-through traffic on Grayson Place. Since the project would not be increasing vehicle traffic within the station area, speed bumps an/or additional signage would not be required as mitigation measures of this Project.*

Public Safety Impacts

Public Comment: I am unconvinced about the effectiveness of existing plans for abating noise, traffic congestion, automobile pollution and visual pollution that will impact my neighborhood. I am especially concerned about public safety, as increased traffic will lead to a greater likelihood of auto accidents near my home. It will also increase the presence of non-residents in the neighborhood, which will reduce privacy and could increase crime. (0425, 0425-E –2)

> ***Response****: Project related impacts to neighborhoods around West Falls Church Station are considered minimal and do not warrant mitigation.*

Traffic Impacts Near the Rotonda

Public Comment: The projected traffic levels of service (LOS) in the vicinity of the Rotonda (International Drive and Westpark Drive or Greensboro Drive) remain at E or F for all Metrorail alternatives; thus T4 is of no real benefit with regard to traffic congestion in this area. (0429, 0429-E –3)

> ***Response***: *The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. Alignments T1, T4 and T9 were eliminated from further consideration after the public and agency review and comment on the Draft EIS. The Project Team agrees that the Dulles Corridor Rapid Transit Project would not resolve traffic gridlock; however, it would provide an alternative to driving the automobile. The traffic analysis in support of the Final EIS shows that traffic impacts resulting from the Build alternatives are minimal because substantial park-and-ride capacity is not provided at the four Tysons Corner stations.*

Westpark/Greensboro Drive Improvements

Public Comment: The suggested lane configurations at Westpark Drive and Greensboro Drive are very good--I only wish they could be implemented today, without Metrorail! (0429, 0429-E –7)

> ***Response****: The construction of the proposed interchanges along the Route 7 and Route 123 are not part of the Project and are not yet part of the region's Constrained Long Range Plan.*

Congestion Reduction

Public Comment: Many of us want to believe that rail will resolve gridlock, and improve our air quality. One consistent finding was that a rail system does not reduce traffic congestion, and I guess I really didn't have to spend a lot of time going through these documents and to other resources, because all we need to do is to drive along Route 66 or I-27 and we can see congestion. (0147, 0147-T –1)

Public Comment: How long will it be before the congestion would be excessive again? The Vienna metro station was proposed as a means of reducing congestion, but we have congestion again. (0166, 0166-T –4)

Public Comment: Rail will just attract its own compensating recongestion. It's clear the idea is for rail to carry more people. Voila. No wonder the study said it didn't expect rail to reduce congestion. (0155, 0155-T –4)

> ***Response:*** *The Project Team agrees that the Dulles Corridor Rapid Transit Project would not resolve traffic gridlock; however, it would provide an alternative to driving the automobile, which in turn would help to improve air quality in the corridor. As outlined in Chapter 6 of the Final EIS, the Metrorail Alternative would substantially increase the transit capacity of the corridor (i.e., the number of travelers that can be comfortably accommodated in the corridor during peak travel times), relative to the No-Build Alternative. In theory, every "new rider" generated by this project would result in one less automobile on the Dulles Toll Road or other regional roadways.*

Public Comment: Rail transit's inability to reduce congestion is generally attributed to several factors: Rail transit's share of total trips is too small to even have a significant impact on automobile use. The average transit usage by commuters in the United States is between 2 and 3 percent. (0147, 0147-T –2)

> ***Response:*** *Chapter 6 of the Final EIS outlines mode share by sections of the Dulles Corridor (Tysons Corner, Reston, Herndon/Dulles, and Loudoun East). In Tysons Corner, the highest Metrorail mode share will be approximately 34 percent; In Reston the highest Metrorail mode share will be approximately 17 percent; in Herndon it will be approximately 16 percent; and in Loudoun East it will be approximately 11 percent*

Public Comment: We are also concerned about the adequacy of the recommended mitigation measures that we suggest should result at least in no more congestion than no-build alternative. (0233, 0426-M –8)

> ***Response***: *Mitigation measures were proposed for those intersections that would have unacceptable levels of service (LOS E or F) and delay times five or more seconds or five percent greater than those experienced for the No-Build Alternative [confirm]. These mitigation measures would reduce delay at most intersections to the levels forecast for the baseline condition.*

Internal Circulation Issues in Reston and Tysons Corner

Public Comment: Both Tysons Corner and Reston have serious internal circulation issues that, if properly dealt with in conjunction with the proposed rapid transit, could become models for an integrated transportation system. Both of these areas need the ability of its commercial and residential populations to move in and around their respective areas with greater facility and flexibility. (0148, 0148-T –3)

> ***Response:*** *With the Metrorail Extension, feeder bus service would be provided from all of the proposed Metrorail stations in Tysons Corner and Reston. The majority of these stations would be constructed to include feeder bus bays onsite; however, for Tysons Central 123 and Tysons Central 7 Stations, feeder bus bays will be located on-street. Please see the Transit Operations and Maintenance Plan for a more detailed discussion of future feeder bus service in the corridor. In addition, the increased densities that are allowed in the Tysons Corner and Reston station*

areas will promote better accessibility and circulation on the ground level. The compact development will encourage walk and bike access to and from the stations.

Density of Development and Traffic Impacts

Public Comment: While it is true that BRT/rail will take some of the current cars off the roads, one of the previous studies pointed out that only 1 in 10 of any new workers to the area will actually ride rail. Roads in these areas are already at or near a grade of F. Adding all of the cars resulting from the increased density will only exacerbate the situation. (0203, 0203-L –3)

Public Comment: Specifically, what is the number of automobiles that will be added to the present streets within at least two miles surrounding these stations as the results of - Operation of the rail WITHOUT is added density provided under the most recent changes in the Fairfax County Comprehensive Plan. What type of highway construction (i.e. lane-miles) is needed handle this increased traffic and maintain a C level of service? Operation of the rail WITH the added density (commercial and residential) provided under the most recent changes in the Fairfax County Comprehensive Plan. What type of highway construction (i.e., lane-miles) is needed handle this increased traffic and maintain a C level of service. (0454, 0454-E –4)

***Response**: Table 6.1-5 in Chapter 6 of the Final EIS shows the anticipated mode shares in different portions of the Dulles Corridor for the two Build Alternatives. While the table shows that Build Alternatives experiences an increase in mode share relative to the No-Build the data in the table also shows that the majority of Home-Based Work Trips will not be made by transit.*

The increase in demand associated with density bonuses will result in localized traffic congestion in the transit station areas. As stated, the counties' development permitting process would mitigate the impacts due to increased densities within the corridor. Fairfax County has adopted non-degradation policies that will limit development that would result in traffic congestion, thus reducing the level of development and limiting any negative impacts on property values due to congestion. In addition, an evaluation of property values along other transit corridors in the Washington metropolitan area does not indicate any decrease in property values, even in areas experiencing congested conditions. Actual implementation of transit-oriented development and the timing and increase in densities is under the jurisdiction of the local government in the area, so any mitigation needed to support the increase in densities is also under the jurisdiction of local governments, and they have included such measures in their land use regulations.

Additional Traffic Analysis Needed

Public Comment: Please be assured that we are not against designing a transit project that will release gridlock. We just don't believe that the analysis before us today is complete. I believe that the EIS has not adequately studied the importance or the impact of the increased traffic volume on the neighborhood streets. So, therefore, it is my recommendation that the EIS study analysis go out beyond the intersections. (0147, 0177-T–6)

***Response:** The intersections included in the traffic analysis for the Project were selected based on their location to the planned station facilities at Wiehle Avenue, Reston Parkway, and Herndon-Monroe. At least five, but sometimes seven, major intersections were analyzed. These intersections were selected based on their location to the station, observed traffic circulation patterns, and because they would be most likely to experience the greatest project-related impact. Based on the results of the analysis, it can be inferred that the intersections adjacent to those under study would also receive the same impact since they are located in close proximity to each other. In addition, those intersections that are located further away from the proposed stations would be less likely to experience any project-related impacts. Because some of the intersections in the vicinity of stations would operate at unacceptable levels of service in 2025 with this Project, mitigation measures have been proposed as documented in the Final EIS.*

Prefer Metrorail Service

Public Comment: We support continued efforts to complete the project, and we prefer that it be a rail only project from the start. It is clear that rail will attract the greatest number of people from their cars, and that should be the overriding criteria, to reduce vehicle miles traveled. In fact, we do not see that sort of analysis in the report and it should be included. Doing so will demonstrate the value of the project to the region. BRT does not serve Tyson's corner, and this is an area that is most in need of transportation alternatives in the immediate short term - BRT won't relieve heavy traffic congestion in Tyson's. (0158, 0475-L –1)

Public Comment: In fact, we do not see that sort of analysis [VMT] in the report, and it should be included. Doing so will demonstrate the value of the project to the region. (0158, 0158-T –2)

> ***Response****: Vehicle Miles Traveled (under the No-Build, BRT, and Metrorail alternatives) were contained in Appendix II of the Travel Demand Forecasting Methodology and Results in support of the Draft EIS. The data in the appendix showed that there is a decrease in regional VMT under the BRT and Metrorail Alternatives, compared to the No-Build Alternative. This pattern would continue based on analysis conducted in support of the Final EIS.*

Concern About Assumptions for Traffic Analysis

Public Comment: Another problem is how WMATA and VDRPT invented traffic analysis zones instead of using zones entirely provided by Fairfax County. There were no such zones for Loudoun. Another falsity that led to inflated ridership estimates is the assumed speeds of Metro trains and buses. (0112, 0462-L –4)

> ***Response****: The traffic analysis zones used in the travel demand forecasts for the Final EIS are taken from the Metropolitan Washington Council of Governments' Transportation Analysis Zones (TAZ) structure that is part of the COG's regional travel forecasting model set. By federal regulation, this TAZ structure must be used to ensure an accurate comparison of transportation projects. The Project Team and Fairfax County worked together to split large zones in Tysons Corner and more accurately distribute population and employment among the smaller zones. However, the smaller zones remained within the overall boundaries of the larger zone and the overall population and employment data for the larger zone did not change, but rather was simply distributed among the smaller TAZs.*
>
> *The speeds for both Metrorail and BRT were developed using a detailed simulation package that took into account station dwell times, number and radius of curves, allowable train speeds, vehicle acceleration times, number of stations, and distance between stations. The inputs into the model reflected WMATA experience from existing operations and WMATA vehicle characteristics.*

Consideration of HOV Restrictions and I-66 and Dulles Connector

Public Comment: Page 6-3, Table 6.1-2: Peak Hour Volumes and LOS on Selected Highway Links, 2000 to 2025 for Baseline Alternative appear to fail to take into account peak-direction HOV restrictions on I-66 between the Dulles Connector and Route 29 (assume this is Interchange 69 north of Falls Church), and on the Dulles Connector itself, since LOS-F is predicted, something contrary to generally-accepted HOV operating policy. (0112, 0462-L –40)

> ***Response***: *A separate analysis was conducted for the HOV facilities on the Dulles Toll Road and the future I-495 HOV lanes because these are separated from the regular travel lanes, and would therefore be counted as separate volumes. For I-66, since it is a restricted facility during the peak period, there would not be separate volumes for HOV lanes vs. regular travel lanes; therefore, the HOV restrictions were accounted for in this table of the Draft EIS.*

Concerns About Model Version Used for Analysis

Public Comment: I saw your discussion on why you used the Northern Virginia Major Investment Study Model, but not COG Version 2. But why didn't you use the Version 1 model, which was used for the Corridor Cities Transitway study and other rail and highway studies? It's the official MPO model and is widely used for all transportation projects? (0112, 0382-L –10)

Public Comment: Which modeling techniques were employed to devise ridership estimates? Was the COG TPB Version 2 model used, or did WMATA use the Dulles Rail model or some other model? Please advise. (0112, 0112-E –4)

Public Comment: The modeling technique used to forecast ridership was the Northern Virginia Major Investment Study (NVMISM) model. This is also commonly called "the Dulles rail model," which in itself shows bias toward heavy rail over BRT. While the DEIS gives a detailed explanation why it used this methodology, believe that WMATA's reasons for using NVMISM do not provide acceptable rationale for deviating from the regionally approved travel demand forecasting model, known as Version 1 or 2 National Capital Region Transportation Planning Board at the Metropolitan Washington Council of Governments (COG TPB for short). While MDOT and other DEIS endeavors have used COG's Version I. Version I was not even considered for the Dulles project, though Version 2 was tested against NVMISM. WMATA and VDRPT must explain why Version I was not used, though that is the official technique of the COG TPB, which is the metropolitan planning organization (MPO) for the greater D.C. area. DEIS Technical report on methodology and forecasting (page 22) states: "NVMISM was developed initially for the 1994 Dulles Corridor Rail Study…" have been advised that NVMISM was invented by Parsons Brinkerhoff and was "refined" by Jeff Bruggeman of AECOM for the I-66 study. However, the main purpose of this model was for building a case for Dulles Rail - not BRT. It would appear that WMATA did more "refinements" with the Dulles model to build a case for rail. (0112, 0462-L –12)

> ***Response****: The Project's ridership estimates were developed using the Northern Virginia Major Investment Study Model (NVMISM). This model was developed for the original Dulles Corridor Major Investment Study and was also utilized for the Metrorail I-66 to Centreville Major Investment Study. This model set was utilized instead of the COG Version 2 model because Version 2 had not yet been validated. A more detailed description of the selection of the model was outlined in Chapter 3 of the Travel Demand Forecasting Methodology and Results Technical Report (June 2002).*
>
> *The NVMISM model was not a replacement of the Version 1 Model but rather an adaptation and refinement of the model for more localized analysis. This approach was used because the Version 1 model is region wide and was meant to describe regional travel flows. The NVMISM model refined this model in terms of a more detailed highway and transit network, smaller transit analysis zones that more closely reflect the differences in land use, and the incorporation of BRT into the model. In addition, the Version 1, because it was a regional model, did not estimate mode of arrival accurately at a station area level, thus making it difficult to plan for park-and-ride capacity and other station area improvements.*

Credibility of Model Results

Public Comment: I understand the NVMISM model cannot be calibrated due to the "deep nesting" method it relies on to determine trip generation. Why did you use it then? (0112, 0382-L –11)

Public Comment: NVMISM was the same model that predicted 115,000 Dulles rail trips from the earlier Dulles Rail study. That number did not even pass the laugh test, though rail transit advocates have given it a life of its own! This number persists in being spread around the Internet on various Web sites, such as: http://www.libertynet.org/netis/ridership_comparison.htm. (0112, 0462-L –13)

> ***Response***: *The NVMISM model was used because the Project Team determined that it provided the best tool available at start of the environmental review process in year 2000. The MWCOG*

models at the time had poor transit modeling capabilities and could not be used to address many of the issues which were of importance to the study, including the trade-off between BRT and Metrorail, detailed station choice and alignment issues in Tysons, mode of access at suburban stations, and park-and-ride capacity restraint.

Bias Against BRT

Public Comment: The bias against BRT in using this model is noted on page 72 of the technical report, where you state: "NVMISM, as with most regional travel demand forecasting tools, was not originally equipped to deal with the mode of Bus Rapid Transit." You add that "it was clear that as scoped by project stakeholders, BRT could not be considered as an express bus system…rather was assumed that BRT was a hybrid system, which at last for travel demand analysis, should generate a demand somewhere between an express bus system and rail system." This statement shows an inherent bias and fundamental flaw with this DEIS. Indeed, most of the "stakeholders" during scoping were advocates of fixed rail over bus service. Examining the scoping reports, one would conclude that most of the "stakeholders" were environmental activists and proponents of high-density development. Few impacted communities were considered in terms of new density to attract rail ridership, nor commuters who would have to pay high tolls to fund fixed rail. It also is untrue that "most regional travel demand forecasting tools" cannot "deal" with BRT. (0112, 0462-L –14)

Public Comment: In addition, NVMISM has a bias against BRT because it factors in "potential traveler's perception of ride comfort, convenience, safety, security, the availability or lack of a seat, system image and reliability" (See page 72). These are all subjective and are not proper measures of effectiveness for a transportation study. (0112, 0462-L –17)

Response: *The travel demand forecast model was not biased against BRT. The referenced statement from the Draft EIS Technical Report indicated that the characteristics of BRT were not part of the existing model set because it had not been a mode that had been modeled in the Washington area, and therefore the characteristics of this new mode had to be incorporated into the model. The demand for, and perception of, different modes of service was based on experience with transit systems throughout the United States as well as a large number of attitudinal surveys of transit riders from all over the United States. This was what was referred to in the statement "it was assumed BRT was a hybrid system, which at least for travel demand analysis, should generate a demand somewhere between and express bus system and Metrorail system. The scoping process was a public process open to all members of the public and therefore was open to both advocates of Metrorail, BRT, and existing bus services. The statement that most regional travel demand forecasting tools could not deal with BRT meant simply that a mode with the unique characteristics of BRT had to be incorporated into the model set.*

Rider perception of different modes is an extremely important and common part of modeling mode choice. Countless attitudinal surveys have been completed that show that people prefer certain transit modes relative to others. The factors playing a role in this perception were outlined in the Travel Demand Forecasting and Methodology and Results Technical Report (June 2002). Use of these 'bias factors' is standard practice in demand forecasting.

Confidence Interval of Model Forecasts

Public Comment: What is the +/- (confidence interval) around these [NVMISM] forecasts? What's the uncertainty? (0112, 0382-L –12)

Response: *The development of a regional travel model does not lend itself to a statistical estimation of error terms. The model is developed to match base year information at the greatest level of detail possible. Thus, the forecasts are made so as to predict the "most likely" outcome and to be used to assess the differences between alternatives in order to make "better" choices from the available data.*

Use of 1990 Census Data

Public Comment: Another fault in your study is reliance on 1990 census data. You state in the same report on page 61 that the reason you used 1990 census data was because "data from MWCOG's most recent travel surveys (1994) were not available at the time the model was developed." However, the 1997 U.S. Census provided updated journey-to-work data and other information that should have been factored into your studies. Why this was not done remains a mystery, especially when you made "refinements" to the Dulles rail model while the EIS was being done. It also appears you used the COG Patronage Study (conducted for WMATA) to derive baseline numbers (See "Travel Demand Forecasting Methodology and Results - Appendix I). I believe the 1997 census data was available in 1999 and should have been used. (0112, 0462-L –15)

> ***Response****: The 1990 data referenced was not census data but rather the MWCOG travel survey, which surveys travel preferences and origins/destinations for use as inputs into the regional model sets. With regard to the journey-to-work data, this is data that MWCOG must incorporate into its data sets. The Project Team did not have the resources to incorporate this data and thus relied on MWCOG. More current data was not available from MWCOG at the time the Draft EIS was prepared. The forecasts used for the Final EIS used 2000 Census data as an input.*

Use of Composite Impedance

Public Comment: Another major fault with model is reliance on "composite impedance" where you look at time and costs to go from Points A to B for every mode. This is probably why your travel times from station-to-station are extremely fast (see discussion of speeds). Understand that "composite impedance" is not used in other travel demand forecasting. (0112, 0462-L –16)

> ***Response****: The concept of impedance is the foundation of modeling, and is used in both the trip distribution and mode choice steps of the modeling process. Composite impedance is simply the combination of two key factors in distribution and mode choice, travel time and cost. Travel time is an input into the composite impedance, and thus has nothing to do with the calculation of travel times. The station-to-station travel times utilized in the model were developed using a detailed simulation package that takes into account station dwell times, number and radius of curves, allowable train speeds, vehicle acceleration times, number of stations, and distance between stations. Composite impedance is quite a common approach in travel forecasting for estimating trip distribution and mode choice.*

Traffic Analysis Zones Used

Public Comment: And, another problem are the fact your "traffic analysis zones," which appear to be a key ingredient in factoring ridership, were "recreated," as stated on page 61 of the "Methodology" technical report (See Exhibit 1). While you rely on Fairfax County subzones, you also state: "Since the number of subzones allocated to Fairfax County was less than the 62 additional zones required, zone numbers from ranges set aside for other Northern Virginia counties were used to make up the complete set. Zonal boundary files were recreated, zonal areas were calculated and various land use and related model inputs, such as densities, were updated for each year used in the analysis…"Again, this seems to be a potentially fatal flaw in your methodology because you are inventing TAZs to inflating land use densities in order to inflate ridership potential for rail, but not BRT. Plus, you state on page 380 of the "Traffic Analysis and Station Access Study" technical report, that you did not even have such TAZs for Loudoun County. Yet, you "assume" that "travel patterns in the county would still be affected by transit-related growth in Fairfax County." This could be a false assumption. (0112, 0462-L –18)

> ***Response****: Transportation Analysis Zones (TAZs)were not recreated. The existing TAZs in Tyson Corner and Reston/Herndon are quite large. There is significant variation in land uses and employment and residential densities within Tysons Corner and Reston, and these same*

variations occur within the large TAZs in the area. The purpose of splitting zones was to allow for more detailed analysis and to more finely reflect land use and densities. An example of why this was done was that under the current TAZ structure, a single large TAZ might include large office concentrations along Route 7 in Tysons as well as low density uses such as an auto dealer. The result of all of these different uses in a large TAZ is that these uses are 'averaged' over the TAZ, thus providing an inaccurate description of what is really there as well as what the demand for travel to and from the TAZ really is. To allow for more detailed analysis, large TAZs were split so that the different uses would each be reflected. No changes to the original TAZ boundaries occurred. Instead existing TAZs were split. Further, no changes in the population and employment data in the TAZ was altered. Instead, the data was distributed among the split zones to more accurately reflect the land uses in the split zones. The Technical Report prepared in support of the Draft EIS stated that the MWCOG model has extra zone numbers that are not assigned to a current zone. This is because this sort of split zone analysis is a common technique when doing detailed sub-area analysis. The Technical Report simply states that these extra numbers were assigned to the new subzone structure for Tysons Corner and further states that some numbers from the extra numbers assigned to Loudoun County also had to be used.

The reference to the Traffic Analysis and Station Access Technical Report (June 2002) refers to the analysis of increased land use densities around transit stations allowed under Fairfax County's Comprehensive Plan. Analysis was completed for Reston/Herndon and Tysons Corner in Fairfax County to determine secondary impacts from the allowable increase in densities (completed for the Draft EIS but not re-assessed for the Final EIS) However, the travel demand forecasts in the Final EIS are based on the Metropolitan Washington Council of Governments' Round 6.3 Cooperative Land Use Forecasts. The Round 6.3 forecasts represent the regionally adopted population and employment forecasts through 2025, for the metropolitan Washington area, including Fairfax and Loudoun County. By federal regulation, such regionally approved land use forecasts must be used in the travel demand analysis of each alternative studied in an EIS. As noted, the Project Team did calculate ridership based on density bonuses in the Tysons Corner and Reston/Herndon areas for the purpose of assessing secondary traffic impacts in support of the Draft EIS, but these demand figures were not included in the Final EIS.

Concerns About Model Consistency With COG TPB

Public Comment: Lastly, if your ridership forecasts are not in line with what the COG TPB derives, how can WMATA and VDRPT expect to receive federal funding for this project and include it in the TPB Constrained Long Range Plan (CLRP) when the official MPO model was not even considered or run in your contest (Version I)? In order to get federal funds, a project must be part of the regional CLRP and meet the Air Quality Conformity Determination of the regional Transportation Improvement Program. What are DRPT and WMATA going to do if patronage forecasts for Dulles Rail conducted as part of the regional transportation planning and air quality conformity efforts result in lower or much lower ridership projections? (0112, 0462-L –19)

Public Comment: Hence, reliance on the Dulles rail model is risky. But another problem with this model is the lack of public involvement in its preparation. In contrast, COG Versions 1 and 2 are being scrutinized in public. In fact, they have been under attack from environmental groups for years and some TPB members. COG TPB has approved subjecting Version 2 to peer review. Version 1, at least, has undergone public scrutiny. In contract, the Dulles Rail/NVMISM model has never, to my knowledge, been peer reviewed, calibrated, validated or used in other DEIS endeavors, except the I-66 Multimodal study where it was substantially revamped. The Dulles rail model should be discarded and never again be used for forecasting work in Northern Virginia or anywhere else. (0112, 0462-L –20)

***Response**: The NVMISM model used for ridership estimation was an adaptation and refinement of the Version 1 Model, not a replacement. This approach was used because the Version 1 model was region wide and was meant to describe regional travel flows. The NVMISM model refined this model in terms of a more detailed highway and transit network, smaller transit analysis zones that more closely reflect the differences in land use, and the incorporation of BRT into the model.*

In addition, the Version 1 model did not estimate mode of arrival accurately at a station area level, thus making it difficult to plan for park-and-ride capacity and other station area improvements. The Travel Demand Forecasting Methodology and Results Technical Report (June 2002) was a public document and therefore this comprehensive description of the modeling process was available for detailed scrutiny. The NVMISM model has been used twice before and the adaptations to the model between uses have been publicly documented.

Modal Split for Metrorail and BRT

Public Comment: That modal split for rail to Dulles Airport is only one percentage point higher than BRT. (0446, 0218-M –9)

Public Comment: That modal split for rail to Dulles in 2025 is only one percentage point lower - I'm sorry, higher than BRT. (0446, 0146-T –9)

Response*: The Draft EIS outlined mode share by sections of the Dulles Corridor (Tysons Corner, Reston, Herndon/Dulles, and Loudoun East). In Tysons Corner, the difference in mode split between BRT and Metrorail ranges from 6.1 to 6.6 percent (with Metrorail having the higher mode share). In Reston, the difference ranges from 1.9 to 3.3 percent. In Herndon/Dulles, the difference ranges from 1.2 to 3.0 percent and in Loudoun East, the differences range from 0.1 to 0.3 percent.*

Difference Between New Trips and New Riders

Public Comment: That the terms "new trips" and "new riders" are used interchangeable, when in fact new riders refer not to new individuals using a facility, but new trips. Under the existing definition, a new transit rider traveling to work and back is counted as two new riders. (0446, 0146-T –7), (0446, 0218-M –7)

Response: *Table 6.3-9 of the Draft EIS did use the terms new riders and new trips interchangeably. The 'New Riders' column in the table did not refer to a new person or individual using transit (a person would presumably make two trips per day) because of implementation of the BRT or Metrorail Alternative. Rather the column refers to the additional trips beginning or ending in the Dulles Corridor over and above the trips of the No-Build Alternative.*

Model Version, Calibrations, and Confidence Interval

Public Comment: Consultants working for DRPT and WMATA should be instructed to redo the entire travel demand forecasting analysis using the current COG/TPB Version II models set, or at least generate some ridership projection based on Version 1, which is the official MPO model. Why it was not even considered for this DEIS needs to be explained in detail. This analysis should include a new set of express bus routes connecting neighborhoods in the Dulles Corridor with "downtown" areas of Arlington County and the District of Columbia - fashioned after the original bus-on-freeway concept used in the Shirley Highway Corridor (but without buses from American Motors). There should be extensive documentation of the original Shirley Express bus service available in the archives of VDRPT or the U.S. Department of Transportation. When complete, the results (all of the results) should be released to the public without charge via the World-Wide Web. Other questions that must be answered are:

1. Has the NVMISM/Dulles rail model been calibrated? I understand it cannot be due to the "deep nesting" method it relies on to determine trip generation. Is that so?
2. What is the +/- (confidence interval) around these forecasts? What's the uncertainty? (0112, 0462-L –21)

Response*: The NVMISM model used for ridership estimation was an adaptation and refinement of the Version 1 Model, not a replacement. This approach was used because the Version 1 model was region wide and was meant to describe regional travel flows. The NVMISM model refined this model in terms of a more detailed highway and transit network, smaller transit analysis zones*

that more closely reflect the differences in land use, and the incorporation of BRT into the model. In addition, the Version 1 model did not estimate mode of arrival accurately at a station area level, thus making it difficult to plan for parking capacity and other station area improvements.

Other than certain Loudoun County routes, express routes from the Dulles Corridor to the downtown areas of Arlington and the District of Columbia are not part of the Build Alternatives of the Final EIS, and therefore were not be modeled. The model was calibrated as well as possible given the level of data available at the time of its development (1996). A lack of adequate travel data has been a problem for the Washington area and has plagued all model development efforts for at least 30 years, including the most recent MWCOG Version 2 efforts. The level of data was not sufficient then (nor is it now) for a full, detailed statistical calibration of all components. In lieu of the availability of detailed travel data, travel behavior was stratified in logical patterns, ridership "targets" for each strata were assembled from a variety of sources, service elasticities were set based on national practices, and market-specific constants to represent the "other" factors in travel choice were estimated to match the ridership targets. This is the state of the practice throughout the country

The development of a regional travel model does not lend itself to a statistical estimation of error terms. The model is developed to match base year information at the greatest level of detail possible. Thus, the forecasts are made so as to predict the "most likely" outcome and to be used to assess the differences between alternatives in order to make "better" choices from the available data. Also, the structure of the modal choice model, which is usually the source of most of the comments concerning statistical validity, is actually only a relatively small part of the overall uncertainty in the process. Items which are likely to create at least as much uncertainty include the projection of population and employment in total magnitude and distribution by small area; changes in travel behavior due to socioeconomic trends such as labor force participation rates by women; impacts of technology such as telecommuting; actual changes in the transit "competition"(i.e., the construction of highway facilities); and the true costs of travel due to fuel prices, fuel efficiencies, technology trends, transit operating efficiencies.

Overly Optimistic Ridership Estimates for Metrorail

Public Comment: The DEIS projects overly optimistic ridership estimates for rail (as high as 73,000 when factoring in high-density development near proposed stations), and low balls BRT, largely because it fails to provide stops in Tysons Corner - a major jobs destination and activities center. The methodology used to project these inflated ridership estimates for rail was the "Northern Virginia Major Investment Study Model" (NVMISM). WMATA and VDRPT chose to base their study on this model instead of the approved modeling techniques of the National Capital Region Transportation Planning Board (TPB), known as Versions 1 and 2. The NVMISM model was based on "the Dulles rail model," developed in the early 1990s primarily to build a case for rail to Dulles Airport. This model has never been discussed in public and was never accepted for use by the TPB, which is the official metropolitan planning organization (MPO) for the Greater D.C. area, including Fairfax and Loudoun counties. (0112, 0462-L –3)

***Response**: In the Dulles Corridor Transportation Study (June 1997) and in initial analysis of alternatives in the Draft EIS, bringing BRT into Tysons Corner and developing additional stations in the area was examined. Based on the goals of BRT, specifically rapid trip times and a 'rail like experience' it was determined that running BRT vehicles on local congested streets within Tysons Corner would detract from the goals for BRT. For this reason it was determined that a single station served from the Dulles International Airport Access Highway was the most appropriate BRT alignment.*

The NVMISM model used for ridership estimation was an adaptation and refinement of the Version 1 Model. This approach was used because the Version 1 model was region wide and was meant to describe regional travel flows. The NVMISM model refined this model in terms of a more detailed highway and transit network, smaller transit analysis zones that more closely reflect

the differences in land use, and the incorporation of BRT into the model. In addition, the Version 1 model did not estimate mode of arrival accurately at a station area level, thus making it difficult to plan for parking capacity and other station area improvements.

Version of Regional Travel Demand Model Used for the Analysis

Public Comment: The project team continues to use the Northern Virginia Major Investment Study (NVMISM) "Dulles Rail Black Box" model for this SDEIS rather than the current release of the COG/TPB Version 2 travel demand forecasting model, which you pledged to use in the final EIS. (0016 0122-18)

Public Comment: I did not get answers to my questions from John Dittmeier about what modeling technique he used in this round. In the supplement hearing report on the first EIS, the project team said they would use a more-credible model - the COG Version 2 model - in the final EIS. I believe that model should be used now. (0016 0122-9)

Response: *DRPT and WMATA did not commit to use the MWCOG Version 2 model in the Final EIS. When the EIS process began approximately four years ago, the decision to use the NVMSIM model was based on the fact that only an early version of the Version 2 model had been developed and was not yet available in a calibrated form. This decision is documented in the Travel Demand Forecasting Methodology and Results Technical Report (June 2002), prepared in support of the Draft EIS.*

Federal Government/MWAA Ownership of DIAAH

Public Comment: Is it necessary that the Federal Government/MWAA retain title to the Dulles Airport Access Road (DAAR)? (See Attachment B). (0427, 0427-E –10)

Public Comment: Given the traffic patterns that have emerged or been developed for access to the DIA, there is little or no justification or rationale for the Federal Government/MWAA to continue to hold title and control the DAAR. The current situation merely transfers the vehicular traffic management problem sixteen (16) miles to the east of the entrance of the DIA and then becomes a Commonwealth of Virginia responsibility. DIA entry and egress traffic then enters/exits three ways, a portion continues to I-66 and points east. The remaining traffic divides between north and south on I-495 or leaves/enters the DAAR from/to the DTR for local destinations. During high-volume traffic periods, many of the taxis, limousines, and vans go north on I-495 to the George Washington Memorial Parkway and thence into the District of Columbia rather than experience the delays on I-66 inside the Beltway (I-495). It is recommended that title to the land and control of the DAAR currently held by the Federal Government/MWAA be transferred to the Commonwealth of Virginia as a provision of the Rail-to-Dulles Project authorization/appropriation bill. This action would facilitate the design of the rail and/or BRT and other mass transit facilities, reduce expenditures for both the MWAA and the Commonwealth of Virginia, and permit the development of a well-planned and engineered Dulles Corridor mass transit/traffic management facility. To continue the existing arrangement would unnecessarily involve the MWAA and most likely, complicate the design and engineering of the Dulles Corridor mass transit facility. (0427, 0427-E –12)

Response: *The Metropolitan Washington Airport Authority (MWAA) was created by an act of Congress to manage National Airport and Dulles Airports in the Capitol Region. The Dulles International Airport Access Highway was built to ensure efficient access to Dulles Airport from Washington, D.C. and the entire region. The Dulles Toll Road was later constructed to increase mobility in Northern Virginia. MWAA as authorized by the Federal Aviation Administration controls the DIAAH to ensure continued efficient transportation to and from Dulles Airport. There are currently no plans for this Project to request a transfer of ownership of the DIAAH from MWAA and the U.S. Department of Transportation to the Commonwealth of Virginia.*

B. Supplemental Draft EIS Comments

State Agency Comments

Minimize Impacts to Roadway Operations

State Comment: "These modifications would require taking some of the I-66 right-of-way." Please ensure that these plans and agreements are well-coordinated with VDOT, so that current roadway operations and potential future improvements to I-66 are not affected. (0091 0106-19)

> ***Response:*** *DRPT and WMATA will continue to coordinate with VDOT during preliminary engineering and final design.*

Traffic Impacts at Park and Ride and Stations

State Comment: "Parking at Tysons West Station would be reduced to 500 spaces and be constructed as part of a joint development project. The specific location and design of the park-and-ride facility is not known at this time, but the anticipated cost of the facility is assumed as part of the Dulles Corridor Rapid Transit Project. Vehicles accessing the stations would use local roads." Please explain how the traffic impacts of the proposed future 500 space park-and-ride facility and station access will be addressed. (0091 0106-3)

State Comment: "The implementation of the proposed LPA, and, specifically the provision or expansion of park-and-ride and Kiss & Ride facilities, would result in increased traffic on local roadways around stations." Please indicate in the Final EIS the measures required to mitigate traffic impacts on local roadways around stations and identify which measures will be completed by the Project and which measures will not be part of the Project. (0091 0106-8)

> ***Response:*** *The traffic analysis for the Tysons West Station are presented in Chapter 6 of the Final EIS and in the Traffic Analysis Technical Report.*

State Comment: "Based on the mode of arrival data presented in Table 6.2-3, the 2025 park-and-ride person-trips that would be generated at the [Wiehle Avenue] station under the proposed LPA and proposed LPA Phase 1 are expected to change minimally compared to the Metrorail Alternative. Therefore, it can be assumed that the general traffic impacts expected in the vicinity of the station area would be similar to those documented in the Draft EIS for the Metrorail Alternative T6/Y15)." During the period when the Wiehle Avenue Station operates as the interim terminus of the LPA Phase 1, traffic patterns will differ substantially from those that can be anticipated when this station becomes an intermediate station. It can be anticipated that more riders will access the transit system at this location, since this will be the most convenient rail access option for potential riders to the west of Wiehle Avenue. (0091 0106-10)

State Comment: Since FTA is only considering funding for Phase 1 at this time, please indicate the measures the Project will take to minimize level of service degradation at the station entrance and its vicinity as a result of the Wiehle Avenue Station being the interim terminal station. For example, indicate how the Project will address the possibility of extensive queuing from the eastbound DTR ramp to northbound Wiehle Avenue in the AM and possibly the opposite movement in the PM. In the sentence "…extensive queuing thus making the westbound…," the word westbound may be incorrect. Queuing is expected on the eastbound ramp. (see above) (0091 0106-11)

State Comment: "The additional traffic entering the station via Isaac Newton Drive would have negligible effect on traffic operations." Traffic balances itself out and when the traffic is congested on the Wiehle Avenue corridor and the toll road ramps, drivers will use Sunset Hills Road. Therefore, a possible approach to balancing traffic may be to build a right turn only lane on Sunset Hills Road at the entrance to the station. (0091 0106-13)

State Comment: "Proposed mitigation strategies for traffic impacts at Wiehle Avenue include adding turn lanes at intersections, parking management techniques, preferential treatment for rideshares, financial/time incentives, and information and marketing campaigns." Adding turn lanes at intersections does not seem adequate to address the traffic impacts that will occur as a result of the interim terminal station located at Wiehle Avenue. Also, please provide background analysis as to how these proposed mitigation measures were determined, and identify roadway improvements that would fully address the traffic impacts. (0091 0106-5)

> ***Response:*** *With Wiehle Avenue as the interim end-of-line station for the Wiehle Avenue Extension, there will be more bus and Kiss & Ride activity in the morning and evening peak periods than with the station as an intermediate station. The park-and-ride traffic for the 2,300 space structure would, however, be identical to that when Wiehle Avenue Station is an intermediate station along the full 23-mile extension of Metrorail. Moreover, the park-and-ride will likely be full before the local peak hour of Reston; in other words, the final park-and-ride customers of Metrorail would arrive before 7:30 a.m. while the local peak hour would be between 7:30 a.m. and 8:30 am. Additional analysis of traffic effects for both the Full LPA and the Wiehle Avenue Extension has been conducted in support of the Final EIS and are included in Chapter 6. Mitigation measures for anticipated effects have also been identified.*

Clarifications Regarding Proposed Traffic Mitigation

State Comment: The proposed traffic mitigation measures listed [Section 6.2.3] do not fully address the impacts on the existing transportation system. Please provide technical analyses that validate and document the completeness of this list. (0091 0106-17)

> ***Response:*** *The Project Team reanalyzed traffic effects in support of the Final EIS. The Team will provide the Traffic Analysis Technical Report to VDOT.*

State Comment: Vol II, p. 081 It is unclear whether the intersection improvements (Lengthen SB Route 7 dual left) proposed with the DEIS are still proposed with the preferred LPA. (0093 0109-9)

> ***Response:*** *Because of the reduced park-and-ride capacity of the Tysons West Station, this improvement would no longer be part of the Project. This conclusion is based on a traffic re-analysis conducted in support of the Final EIS.*

State Comment: This table [Table 2.2-2] indicates that the number of intersections at LOS F (am or pm) does not change from existing conditions, or gets worse. This information is not shown for the "LPA Phase 1 Opening Year" cell – please include. Also, please include the specific intersections (as listed in traffic mitigation section of SDEIS) and the proposed mitigation measures to address the traffic impacts at these intersections as a result of this project. (0091 0106-2)

> ***Response:*** *Chapter 6 of the Final EIS contains the requested information.*

Construction Impacts and Mitigation

State Comment: This chapter [Chapter 6] should include a commitment to develop and implement a Congestion Management Program to operate during the construction of this project, especially in the Tysons Corner and Wiehle Avenue areas. (0091 0106-20)

> ***Response:*** *Congestion management measures for incidents during and due to construction of the Metrorail Extension will be developed during preliminary engineering and final design.*

Suggested Tysons West Circulation Improvements

State Comment: Option E site plan of Tysons West Station entrance and facilities
The Project Team may want to consider a left-turn pocket at the proposed Station Entrance on westbound Tyco Road (heading toward Route 7) to accommodate left-turn movements into the station. Also, appropriate traffic studies and any other documentation must be provided to VDOT in support of the proposed signal on Tyco Road. This needs to accompany any formal request to VDOT for such signal installation. (TE) (0149 6-1)

> ***Response:*** *The Project Team will consider the recommendation of a left-turn pocket and of a signal warrant analysis during preliminary engineering.*

Local Agency Comments

Clarify Responsibilities for Transportation Improvements

Local Comment: Clarify which transportation improvements will be done as a part of the project, and which are "mitigation" that may be completed by others. (0093 0109-1)

> ***Response:*** *Chapters 2 and 6 of the Final and the final General Plans describe and depict the transportation improvements that will be developed as part of the Project. All measures proposed to mitigate anticipated effects of the Project will be implemented by DRPT.*

Clarifications Regarding Proposed Traffic Mitigation Measures

Local Comment: The traffic mitigation measures identified in the SDEIS should be programmed by the Virginia Department of Transportation at the earliest possible date so that they are constructed before the rail system begins operation. (0083 0098-3)

> ***Response:*** *The traffic analysis in support of the Final EIS process identified roadway mitigation measures for the two Build Alternatives. DRPT and VDOT will program these improvements in order to complete their construction by the opening year of the Wiehle Avenue Extension.*

Local Comment: TRANSPORTATION MITIGATION IMPROVEMENTS. Two issues should be clarified with regards to Chapter 6 - Transportation Effects, 6.2.3 Transportation Mitigation, Table 6.2.7 presented on page 6-22 and 6-23. Specifically, the table provides a summary of proposed mitigation options to include construction of an additional through lane on Northbound (NB) and Southbound (SB) approaches to the westbound (WB) Dulles Toll Road ramp at Fairfax County Parkway and construction of an eastbound (EB) right turn lane onto Herndon-Monroe Parkway/Van Buren Street intersection. According to the Table 6.2.7, these proposed mitigation measures are required by 2025. We believe that both of the measures are warranted and should be completed prior to the opening of the Herndon-Monroe Rail Station, rather than by 2025. A northbound right turn lane at Van Buren Street and Herndon Parkway is also a critical need prior to the opening of the Herndon Monroe Station. (0132 0171-5)

> ***Response:*** *The traffic analysis conducted in support of the Final EIS process identified roadway improvements proposed as mitigation measures for the two Build Alternatives as detailed in Chapter 6 of the Final EIS.*

Public Comments

Public Comment: How will construction of rail during Phase 1 affect buses and qualifying cars that seek to use the Access Road? Will they be prevented from doing so? When? Will the trip be impeded? (0068 0173-7)

Response: *Construction of the Wiehle Avenue Extension will include realignment of portions of the DIAAH and construction of one median Metrorail station and track. To complete this, there may be closures of shoulders and possibly one lane of the DIAAH during non-peak periods. If safety concerns warrant, a brief closure of one direction of the DIAAH could occur in an overnight period to transport materials and equipment if traffic conditions allow. All lanes of the DIAAH will be kept open during peak periods.*

Roadway Level of Service Analysis

Public Comment: Please project the Level of Service (A to F) along the Dulles Toll Road according to AASHTO methodology for the major interchanges from I-495 to Route 772, both for year of opening of Phase I (2009) and year of completion (2025). Do this estimate both for 1) Dulles Rail in operation, and 2) Dulles Rail not in operation. (0061 0117-2)

Public Comment: We'd like to see a level of service projections for both the toll road and the Greenway through 2025 both with and without Dulles Rail in place. (0061 0136-3)

Response: *Chapter 6 of the Final EIS presents the anticipated levels of service on the Dulles Toll Road and the Dulles Greenway.*

Access/Egress Concerns

Public Comment: Our chief concern is our exit next to your proposed exit on to Tyco Road. We must keep a second exit from our premises as required by Fairfax County Fire and Rescue for the safety of our tenants. Our other exit is primarily an entrance, due to the sight distance on Tyco Road. Your proposed exit eliminates some of our much-needed parking. Fairfax County is very strict about required parking in the Tysons area. The loss of parking spaces would mean the loss of tenants. The proposed exit traffic light causes an egress problem inasmuch as we cannot exit on green or red. These could all be eliminated by moving your proposed exit to the east, leaving our exit and parking in place, but still allowing you to exit onto Tyco Road perpendicularly but with a shorter bus stacking distance. Fewer buses will also enhance our sight distance to the east, probably required by VDOT. (0157 6-1)

Response: *These issues will be addressed during preliminary engineering, as the design and vehicular circulation of the Tysons West Station facilities are refined.*

Traffic Impact Study at East Falls Church Station is Needed

Public Comment: The East Falls Church Metro Station will be the last station on the Silver/Orange line, and will have a significant increase in service frequencies. We believe it is contradictory to assume, as the EIS does, that there will be no traffic impacts at, and around, this station.

We take this opportunity to request once again that the EIS for the Dulles Corridor Rapid Transit Project must include a traffic impact study for the area around the East Falls Church Metro Station. (0145 6-1)

Response: *Implementation of the Project would result in increased off-peak Metrorail service at the East Falls Church Station. However, operating plans for the Wiehle Avenue Extension and Full LPA assume no additional feeder bus service, nor any new park-and-ride capacity for the off-peak period for this station. Because the station's existing park-and-ride facilities are typically full by 8:00 AM on most weekdays and parking is controlled on local streets, it is not anticipated that increased off-peak Metrorail service would generate additional traffic in and around the East Falls Church Metrorail Station. Based on the analysis of the forecast ridership volumes for the East and West Falls Church Metrorail Stations, the Project Team does not feel that overflow parking onto residential streets will be a problem. Moreover, since completion of the Draft EIS analysis, WMATA has programmed a 960-space parking facility at West Falls Church to be completed in early 2005. This new facility is part of the analysis in support of the Final EIS. The Project Team*

did initiate meetings with the City of Falls Church to discuss the issues of overflow parking and cut-through traffic.

Minimize Impacts to Roadway Operations

Public Comment: t. The location of a proposed LPA Phase 1 alignment ending approximately 2000 feet west of the Wiehle Avenue Station would place it too near the exit ramp for Reston Parkway (at 2-25). The impact of that proximity needs to be evaluated in the SDEIS. (0068 0173-37)

Response: *The Metrorail alignment and station will be entirely within median of the Dulles International Airport Access Highway and will not interfere with Dulles Toll Road operations at the Reston Parkway ramps.*

Traffic Impacts at Park and Ride and Stations

Public Comment: The traffic impact of the new rail service will be further compounded by a multi-story park-and-ride structure being built at the WFC Metro station. (0026 0027-3)

Public Comment: Improving the Great Falls/Haycock intersection with turn lanes. (0087 0102-9) (0089 0104-9) (0099 0115-9) (0104 0121-7)

Public Comment: The Dulles rail public hearings report states on page 273 that traffic impacts from the WFC park-and-ride facility will be addressed by that project, and therefore, the higher traffic volume created by the park-and-ride facility is included in the Dulles rail baseline. Yet there has been no study done of traffic impact of the park-and-ride project on the neighborhood streets outside the immediate vicinity of the station or planned mitigation in the staff reports prepared by either the Fairfax County Planning Commission or the Washington Metropolitan Area Transit Authority for the park-and-ride facility. Somewhere, this traffic impact needs to be addressed by either the rail or garage project. (0026 0027-13)

Public Comment: The buck is being passed between the WFC park-and-ride and Dulles rail projects. The traffic impact on our community needs to be addressed by either the rail or the garage project and the Virginia Department of Transportation. (0099 0115-3) (0089 0104-3) (0087 0102-3)

Response: *Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church Station will return to its former level.*

For the purposes of this project, mitigation measures were suggested for those intersections that would have unacceptable levels of service (LOS E or F) and delay times five or more seconds or five percent greater than those experienced for the No-Build Alternative. Based on the analysis in support of the Final EIS, which included the new park-and-ride structure at West Falls Church Station, mitigation would not be warranted at Route 7/Haycock Road, Great Falls Street/Haycock Road or at the Haycock Road/Park-and-Ride entrance under the two Build Alternatives, as levels of service and delay times are improved or only slightly more than those for the No-Build Alternative.

Public Comment: The SDEIS fails to assess the impact of "conversion of the 830-space surface lot to a 2,000-space parking structure" at the Route 606 Station. The impact on arterial feeder roads, as well as residential neighborhoods needs to be adequately and objectively assessed. (0068 0173-14)

Response: *The traffic analysis in support of the Final EIS estimated the impacts of a 2,750-space park-and-ride facility at Route 606 Station in 2025; this represents a 2,000-space expansion of the existing facility.*

Public Comment: Highway traffic around stations will not be a major problem. After the Vienna MetroRail station opened and drew about 17,000 weekday passengers on plus off, VDOT found only five percent more traffic, less than natural growth. What traffic fears overlook is that cars that park stop generating VMT, reducing congestion at all of the intersections they no longer drive through. (0054 0090-3)

> ***Response:*** *Comment noted. Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region were important to us while preparing the Final EIS.*

Clarifications Regarding Proposed Traffic Mitigation Measures

Public Comment: Please don't forget that Wiehle in the Lake Anne old section doesn't meet VDOT standards, and any funding should include ancillary improvements to the actual rail-depot-parking funding. (0045 0046-2)

Public Comment: Wiehle Avenue between Sunset Hills Road and Baron Cameron Avenue is built to an earlier standard, with narrower lane widths and greater vertical and horizontal curvature than is permitted today. This section of Wiehle Avenue will carry the majority of traffic from the north. It is already overwhelmed, and I am not aware there are any plans for its improvement. (0096 0112-2)

> ***Response:*** *The recommended improvements are not proposed as part of the Project. These improvements would be the responsibility of VDOT and the Project Team has shared your comment with VDOT.*

Change in Character of Roadways

Public Comment: VDOT will only consider making changes to abatement measures on VDOT-run roads such as the Connector Road, if there has been a change in the "character" of the road. What are the legal standards for determining whether the addition of the Dulles Toll Road and the Dulles Greenway (which feed traffic to the Connector) constitute a change in the "character" of the Dulles Connector? (0025 0026-7)

> ***Response:*** *VDOT's noise abatement policy is summarized below:*

> ***STATE NOISE ABATEMENT POLICY***
> *It is the policy of the Virginia Department of Transportation (VDOT) to employ the following criteria and procedures in determining the need for and the reasonableness and feasibility of noise abatement measures along Virginia's highways. The U. S. Code of Federal Regulations Part 772 (23 CFR 772) will be the guiding document for the analysis and abatement of highway traffic noise.*
>
> ***TYPE I PROJECTS***
> *A Type I project involves the construction of a highway on new location or the physical alteration of an existing highway which significantly changes the horizontal or vertical alignment or increases the number of through traffic lanes. When the abatement criteria contained in this policy are satisfied in conjunction with a Type I project, noise abatement must be provided.*
>
> ***TYPE II PROJECTS (RETROFIT)***
> *A Type II or retrofit project involves the construction of noise abatement along an existing highway when not in conjunction with an improvement of that highway. VDOT does not participate in Type II or retrofit noise abatement.*

Need for Traffic Calming Features

Public Comment: [Our community needs] speed bumps (for the cut through speeders) and sidewalks. (0121 0155-2)

Public Comment: Traffic calming based on anticipated future volume of traffic and put into place before the new rail and WFC park-and-ride facilities open. Traffic calming measures for communities in the

vicinity of Metrorail stations impacted by the new line should be included in the project budget. (0026 0027-7) (0087 0102-8) (0089 0104-8) (0099 0115-8) (0104 0121-6)

> ***Response:*** *Traffic calming measures are tools made available to communities to alter traffic characteristics within that community. VDOT has a process through which individual communities can investigate and request the implementation of traffic calming measures which best suit their needs.*

Roadway Congestion Impacts

Public Comment: Our research has indicated that urban areas that invested in rail have worse traffic congestion than urban areas that haven't. The reason is the money is better spent in other ways. Please confirm or deny this conclusion. (0061 0069-11) (0061 0117-4)

> ***Response:*** *Over the next twenty years, congestion in the Dulles Corridor and the region will be increasing due to forecasted increases in population and employment growth. The two Build Alternatives of the Final EIS will provide an alternative mode of transportation within the region. While it is stated in the Final EIS that the project alone will not solve the current congestion problems, the Project would increase the capacity of the transportation system in the Dulles Corridor.*

Public Comment: The most intractable problem, north-south travel, is made worse with Dulles Rail. (0061 0069-12)

> ***Response:*** *The traffic analysis completed for the Draft EIS and Final EIS has not shown that north-south travel in the Dulles Corridor will be worsened under the two Build Alternatives, relative to the No Build Alternative.*

Public Comment: our research indicates that the complete 22-mile project will only take about 5,000 cars off the road by the time it is finished in 2025. 5,000 cars a day is about the annual of traffic growth along the Dulles Corridor. Accordingly, we do not believe the Dulles Rail will have a significant impact on traffic congestion. In fact, it will have almost no effect. Please confirm these numbers or provide a comparable analysis. (0061 0069-2)

Public Comment: Our research indicates that the complete 22-mile project will only take about 5,000 cars off the road by the time it is finished in 2025. Now, 5,000 cars a day is about the annual rate of traffic growth along the Dulles Toll Road. (0061 0136-2)

Public Comment: Our research indicates that the complete 22-mile project will only take about 5,000 cars off the road by the time it is finished in 2025. 5,000 cars per day is about the annual rate of traffic growth along the Dulles Corridor. Accordingly, we do not believe that Dulles Rail will have a significant impact on traffic reduction, in fact, it will have almost no effect. Please confirm or modify these numbers. (0061 0117-1)

> ***Response:*** *As presented in Chapter 6 of the Final EIS, the total number of new transit trips estimated for the entire region as a result of the implementation of the Full LPA is approximately 48,000.. With assumed average vehicle occupancy of 1.1, this translates into 43,000 fewer automobile trips regionally. However, congestion is still expected to continue due to expected population and employment growth, as it is in the No Build Alternative.*

Public Comment: The project team failed to provide data on intersection levels of service in the planned opening year (2009) either. Congestion relief is by far the most important “need” in the D.C. area (0016 0122-13)

> ***Response:*** *The Traffic Analysis Technical Report prepared in support of the Final EIS contains the requested information.*

Public Comment: h. The claim that some 257.4 million VHTs will be eliminated needs to be revised and based on realistic ridership data, as well as straightforward traffic modeling that accounts for motorists who will congest arterial routes rather than pay either increased tolls (i.e., tolls that will rise substantially as partial payment of a local or state funding share), or the hefty cost of a Metrorail ride to/from/beyond/within this Dulles Corridor area. (0068 0173-25)

> ***Response:*** *The Dulles Toll Road toll structure and the Metrorail fares were inputs to the travel demand forecast model. The model's output was the basis for the analysis of traffic effects for both the Full LPA and the Wiehle Avenue Extension presented in the Final EIS.*

Air Quality Impacts

Public Comment: The purpose and need says that the purpose of this is because the toll road is going to exceed capacity. It talks about the degradation of air quality, however, if you look in the details, you will see this quote: "The implementation of the proposed LPA and specifically the provision or expansion of Park & Ride and Kiss & Ride facilities would result in increased traffic on local roadways around stations." In fact, there are going to be six Stanley (ph) intersections with this LPA, and you didn't even provide, as far as I can tell, what the no build would do for this phase. (0016 0140-3)

> ***Response:*** *The air quality analysis provided for the Dulles Corridor Rapid Transit Project evaluated several of the "worst case" intersections within the project corridor in order to determine whether the potential for exceeding the National Ambient Air Quality Standards (NAAQS) was likely to occur. As reported in the Chapter 4 of the Final EIS, no non-conformance with those standards is anticipated to occur at any of the intersections in the Project corridor. In fact, in nearly all cases anticipated CO levels are predicted to be below the NAAQS.*

Concerns about Traffic Impacts in Vicinity of Wiehle Avenue Station

Public Comment: Wiehle Ave. and the adjacent arterials of Sunrise Valley Drive and Sunset Hills road are already operating at failing levels of service, but Phase I calls for a terminal station at Wiehle Avenue. This will have the effect of taking traffic off the Toll Road and increasing it on our local roads - roads which were designed years ago for much lower traffic volumes and frequently have serious accidents. Correcting these problems could literally be a matter of life and death for Reston's citizens. Given the safety concerns, what planned road improvements are proposed to mitigate these substandard conditions and where is the funding coming from? (0038 0039-1)

Public Comment: It can be very difficult today to turn in and out of parking areas along Wiehle and Sunset Hills Road. The Wiehle terminus will most certainly cause a dramatic increase in traffic volume at these entrances. Has a traffic study been conducted to determine if the minimal improvements proposed in the DEIS will solve these problems? And where will the money come from for these or other required improvements which might be revealed by a future traffic study? (0038 0039-2)

Public Comment: The eastbound exit off the Toll Road at Wiehle Avenue frequently backs up during the AM peak hour. And traffic is already bumper-to-bumper on the Toll Road between Wiehle and Reston Parkway. I'm concerned that the additional cars and buses exiting at Wiehle will cause east-bound traffic on the Toll Road to back up into the Reston Parkway on-ramp causing Reston Parkway itself to fail. Have you studied this potential impact? (0038 0039-3)

Public Comment: Wiehle Avenue is a four-lane road that terminates in a T-intersection at Sunrise Valley Drive. It is already a major rush hour bottleneck. We are concerned that our roads will fail with the added traffic created by a terminus station. (0039 0040-3)

Public Comment: Reston Association requests that Fairfax County initiate a comprehensive Planning Study to assess the traffic and parking impacts of ending the first phase at Wiehle Avenue and to make

recommendations for improvements to accommodate these impacts. Such study should include at a minimum:
- Impact of increased vehicular traffic on Reston roadway system and environment.
- Increase of the traffic capacity of access roadways within Reston and its approaches.
- Intersection improvements and traffic controls.
- Investigation of accelerating the expansion of Herndon/Monroe parking facilities.
- Limited parking at the Wiehle Avenue station to serve only the immediate Reston area.
- Commitment to policies that will limit parking demand at Wiehle Avenue.
- Consideration of permit parking for residents.
- Potential for cut-through traffic on residential streets/traffic calming considerations.
- Increase of bus service within the Reston area so that Reston residents can easily access the station without driving to it.
- Pedestrian and bicycle access in and around Reston to facilitate safe and efficient access to stations, especially provision of convenient, grade-separated, direct pedestrian and bicycle access from all four quadrants of the Wiehle Avenue interchange. (0039 0040-8) (0040 0041-5)

Public Comment: What provisions have been made to mitigate the impact on access thoroughfares? (0042 0043-6)

Public Comment: How will the nearby roads be impacted by a station at this location (Wiehle, Sunrise and Sunset Avenues, including the connecting intersections to these roads such as North Shore-Wiehle, and Fairway- Wiehle)? (0042 0043-7)

Public Comment: 2) Whiele Avenue is already overcrowded at rush hour and this plan would only draw in a heck of a lot more traffic that the existing road infrastructure could not handle - getting to and out of the Whiele Avenue facility would be a nightmare, and 3) that proposal does nothing to alleviate airport traffic at one of the country's fastest growing airports as it would not provide rail access to the airport. (0046 0047-2)

Public Comment: The Wiehle Avenue / Dulles Toll and Access Road interchange will fail as presently configured when it tries to serve all the traffic at the interim terminus. It needs to be reconfigured as a cloverleaf or some other design that reduces the number of stop lights (0064 0152-5)

Public Comment: The SDEIS fails to assess the impact of use of the Wiehle Avenue area as an “interim” terminus point. The environmental, social impact and financial impact needs to be evaluated in terms of incremental impact on arterial roads congestion, wasted time in the resulting additional gridlock due to drivers trying to reach the station, where turn-away parkers will park and impede normal uses, etc. (0068 0173-13)

Public Comment: That intersection, Wiehle and Sunset Hills, is already congested beyond belief. The proposal that is presented here is to add a lane into Kaiser, a left lane, a direct lane onto the expressway and a right-turn lane for westbound Sunrise Valley onto Wiehle. These are totally inadequate. They should be there now. Adding traffic to this will be even worse. (0073 0083-2)

Public Comment: Right now Wiehle Avenue between 7:30 and 9:00 a.m. is a parking lot from Lake Anne to the Dulles Toll Road! In the evening between 4:30 and 6:00 it is almost as bad, making it very difficult for cluster residents and all users of Wiehle to travel that short section in a reasonable time! As a result drivers are frustrated and are becoming more and more aggressive as they try to commute to and from work! Cluster residents also find it more and more difficult to exit onto Wiehle because these frustrated motorists come barreling around the curve just before our cluster entrance in their rush to make their commute just a little bit shorter. (0094 0110-2)

Public Comment: By making this station the end of the line, traffic will be impossible. Our emergency services are going to be impacted by traffic delays. The fire station at that intersection is one of the busiest in the county 7 and response times will increase as they try to get through the clogged intersections. (0098 0114-2)

Public Comment: I hope that in all your deliberations regarding the Rail to Dulles project you seriously consider the traffic patterns, and problems associated with having a terminal at Wiehle Ave. I am all for the rail and a station at Wiehle, however, I am at a loss as to what will be done with all the cars that will have to access the station. Are there any plans to either widen Wiehle, or create another road (I know not where!!)? (0103 0120-1)

Public Comment: I have seen traffic, congestion, pollution and dangerous driving increase in Reston, and on Wiehle specifically. Potentially widening Wiehle to accommodate commuters to drive to the Wiehle station will only make these factors worse, not better (0105 0123-2)

Public Comment: The short-term thinking behind the scheme to make Wiehle Avenue a "temporary" terminus for the Dulles Rail project is an absolute negative. The heart of Reston is NOT Dulles. Nothing would be accomplished other than to crowd the Dulles Toll Road even more as commuter would attempt to reach Reston and limited parking so as to board a metro train. (0056 0057-1)

> ***Response:*** *With Wiehle Avenue as the interim end-of-line station for the Wiehle Avenue Extension, there will be more bus and Kiss & Ride activity in the morning and evening peak periods than with the Station as an intermediate station. The park-and-ride traffic for the 2,300 space structure would, however, be identical to that when Wiehle Avenue Station is an intermediate station along the 23-mile extension of Metrorail. Moreover, the park-and-ride structure will likely be full before the local peak hour of the Reston; in other words, the final park-and-ride customers of Metrorail would arrive before 7:30 a.m. while the local peak hour would be between 7:30 a.m. and 8:30 am. Additional analysis of traffic effects for both the Full LPA and the Wiehle Avenue Extension has been conducted in support of the Final EIS and mitigation measures for anticipated effects have been identified.*

Public Comment: Also, these ridership estimates are based on road improvements in the Wiehle area as well and yet no one knows where that money will come from. (0062 0070-3)

> ***Response****: The planned roadway improvements of the region's Constrained Long Range Plan were inputs to the travel demand forecast model. By the term 'Constrained' it is meant that region has the financial capacity to fund the roadway improvements.*

Concern about Neighborhood and Cut Through Traffic Impacts

Public Comment: On page 276 the Dulles rail public hearings report admits that analysis was done only on intersections nearby the WFC station, not on neighborhood streets. There is therefore insufficient data to conclude that there will not be an increase in cut-through traffic impacting the Westhampton neighborhood. (0026 0027-12)

Public Comment: The Draft EIS did not adequately study or address the traffic impact on Westhampton associated with Metro patrons using either the WFC park-and-ride structure or the East Falls Church (EFC) station to access the new rail line. We continue to have concerns with the project's analysis of traffic impacts around the WFC station and its conclusion that there is no traffic impact of the Dulles rail project on Westhampton. (0026 0027-4)

Public Comment: More study on the traffic impact on Westhampton from Metro patrons driving to the WFC park-and- ride structure or the East Falls Church and Tysons stations to access the new rail line. (0087 0102-7) (0099 0115-7) (0089 0104-7) (0104 0121-5)

> ***Response:*** *Large increases in the number of vehicle trips are not anticipated in the West Falls Church Station area due to the Project. The Project will initially divert a number of Metrorail customers from this station to the Dulles Corridor stations. Over time, due to population growth and latent demand not directly associated with the project, the traffic activity at West Falls Church*

Station will return to its former level. Nevertheless, the Project Team does not anticipate any increases in project-related cut-through traffic in the Westhampton neighborhood.

Compatibility with High Occupancy Toll (HOT) Lanes

Public Comment: Explain how the Silver Line would be compatible with HOT lanes in the Dulles Corridor in terms of right of way availability. How will the proposed interchange with the I-495 HOT lanes be done? (0061 0117-21)

Response: *The issues associated with implementing a high-occupancy toll system in the Dulles Corridor and the possible benefits of such a system were explored as part of the Project Team's review of Dulles Plan B.*

Numerous physical, technological, and social issues may limit the ability to implement high-occupancy toll lanes in the Dulles Corridor. The analysis also showed that high-occupancy toll lanes might not have substantial mobility benefits in the corridor. If solo drivers were allowed to use the HOV lane for a fee, then it is very likely that a large percentage of the HOV lane users in the Dulles Corridor would be single-occupant vehicles, reducing the average vehicle occupancy in the HOV lane. Therefore, increased use of the HOV lane under a high-occupancy toll system would result in minimal increases in the lane's person-moving capacity, and could result in a reduction in the lane's person-moving capacity.

As the owner and operator of the Dulles Toll Road (and other major HOV facilities in the region), it would be VDOT's responsibility to fully evaluate and implement any proposals that allow travelers driving alone to use the HOV lanes during peak hours for a fee ("value pricing"). Such value pricing systems would require would require in-depth study. Issues include the lack of space for barrier-separation, technological challenges associated with a non-barrier-separated system, and equity considerations.

The Project Team's analysis relative to Dulles Plan B also showed that high-occupancy toll lanes might not have substantial mobility benefits in the Dulles Corridor. To remain an attractive alternative to the general traffic lanes, the HOV lanes on the Dulles Toll Road should not operate at their maximum level of capacity. If operated at 80 percent of their hourly capacity (a level that provides for congested, but relatively free flowing traffic), each lane could support 1,920 passenger cars in the peak hour—an increase of only 720 cars over the current and projected use of the HOV lanes in the peak hour (1,200 cars per hour in the peak). With average vehicle occupancy of 2.2 persons per vehicle, the HOV lanes currently support 2,640 persons per lane (2.2 X 1,200) during the peak hour. If realistic vehicle occupancy assumptions were applied for different high-occupancy toll scenarios (approximately 1.5 to 1.6 persons per vehicle if single-occupant vehicles are allowed to use the HOV lane), each lane would support approximately 2,880 persons per hour (1.5 X 1,920) to 3,072 persons per hour (1.6 X 1,920). This volume would only constitute an increase of 200 to 450 persons per hour over the current peak usage of the HOV lanes.

Moreover, it is very unlikely that incentives to increase HOV use would only appeal to people who previously used the general traffic lanes. It is much more likely that some of the new HOV users would be persons that would have otherwise used the transit system, reducing the demand for transit in the corridor.

Impact of Density Bonuses on Ridership

Public Comment: In the DEIS and SDEIS, analysis of regional transportation plan projections indicate that the planned rail system will not reduce congestion. Even ridership projections for 2020 indicate that in the long term, rail will have no significant impact on traffic congestion. Based on the projected residential bonuses and commercial bonuses around the rail stations in Tysons Corner and at the Wiehle station,

what is the projected number of rail users for each station? What is the projected number that will come by automobile? (0109 0128-6)

> ***Response:*** *The impacts of density bonuses on ridership were calculated for the Draft EIS but were not in the Final EIS. The travel demand forecasts in the Final EIS are based on the Metropolitan Washington Council of Governments' Round 6.3 Cooperative Land Use Forecasts. The Round 6.3 forecasts represent the regionally adopted population and employment forecasts through 2025, for the metropolitan Washington area, including Fairfax and Loudoun County. By federal regulation, such regionally approved land use forecasts must be used in the travel demand analysis of each alternative studied in an EIS. As noted, the Project Team did calculate ridership based on density bonuses in the Tysons Corner and Reston/Herndon areas for the purpose of assessing secondary traffic impacts in support of the Draft EIS, but these demand figures were not included in the Final EIS.*

6.3 Effects on Other Transportation Facilities and Services

A. Draft EIS Comments

State Agency Comments

Metrorail Extension in Dulles Greenway

State Comment: Dulles Greenway was recently widened to 6 lines from Mainline Barrier Toll Plaza to Route 659. This generally leaves a median of 40' beyond shoulder (20' each side). Rail plans should update base as some locations may require more extensive roadway work. (0421, 0421-A –29)

> ***Response:*** *The final General Plans (Final EIS Volume VI) uses recent digital aerial photography that depict the six-lane Dulles Greenway. For the proposed General Plans (June 2002) and for the Draft EIS (June 2002), the Project Team had evaluated the Project in a median of a future six-lane Greenway.*

Regional Agency Comments

Vertical Conflicts with Metrorail Profile

Regional Comment: Vertically, the Metrorail profile is in conflict with several of our proposed roadways, including EB-CD Rd., Ramp C and the entire Aviation Drive Ext./Rudder Rd. intersection. Each of these roadways have been set vertically to meet FAA airspace vertical clearances for Part 77 surfaces and proposed structures, so raising their profiles would not be feasible. (0440, 0440-A –15)

Response: *The Project's preliminary analysis did not indicate a conflict between the Metrorail Extension and the proposed Airport roadways. The horizontal Metrorail alignment intersects the proposed new roadways at five points and also intersects the detoured SE loop at three points. The only intersecting points not included in the analysis were the detoured SE Loops, which were assumed to remain near current elevations that pose no conflict with the vertical Metrorail alignment. The near horizontal intersection of Metrorail with Ramp B has a vertical separation of approximately 20 ft from the top of the underground structure to the top of the aerial structure (Ramp B). A detailed analysis would be conducted during preliminary engineering phase and modifications made, as required, to minimize the effect on proposed Airport roadways.*

Study Widening of DIAAH

Regional Comment: Preliminary engineering for this project should study the widening of the Dulles Airport Access Highway (DAAH) to six lanes in sufficient enough detail to determine what accommodations will be required to allow both projects to be accomplished. (0440, 0440-A –11)

Regional Comment: The Airports Authority, as stewards of the Dulles Corridor, has an interest in optimizing the throughput of the corridor while maintaining access to Dulles. Accordingly, the Airports Authority would like to emphasize our future plans to widen the DIAAH to six lanes and the need for the Dulles Corridor Rapid Transit Project not to infringe on the right-of-way for this future widening. (0440, 0440-A –2)

> ***Response:*** *The final General Plans of the Metrorail Extension do not preclude the construction of the third lane of the DIAAH in either direction. If the third lane of the DIAAH is constructed after construction of the Metrorail Extension, then there will be impacts to the westbound Herndon-Monroe Park and Ride access bridge and relocations required of the Dulles Toll Road in the vicinity of the Herndon-Monroe and Route 28 Stations. The DIAAH shoulder widths may be less than standard widths, especially at the bridge underpasses to allow for a six lane DIAAH.*

Tunnel Construction is Assumed

Regional Comment: The Airports Authority's expectation, though not specified in the documents, is that between both portals and the station, a tunneling construction method will be used which does not impact existing roads or facilities. (0440, 0440-A –14)

> ***Response:*** *The final General Plans for the underground section of the Metrorail Extension through Dulles Airport indicates a cut-and-cover construction. As part of the cost-reduction exercises undertaken in the summer of 2001, the profile of the underground section was raised to accommodate cut-and-cover construction. During past coordination with MWAA, the Project Team noted that the cut-and-cover alignment with the "higher" vertical profile would become part of the General Plans and included as part of the Final EIS. This method would require temporary disruptions to surface facilities and possibly warrant the construction of roadway decking, temporary roads and temporary facilities during the construction of the Metrorail Extension. Other construction methods that would minimize effects on the existing roadways may be considered during preliminary engineering.*

Coordinate With MWAA and FAA on Station Portal

Regional Comment: The eastern portal at station 1590+00 is within the runway protection zone of runway 1R-19L. Accordingly, extensive coordination with the Airports Authority and FAA will be required and height restrictions will be imposed on cranes and equipment during construction. (0440, 0440-A –16)

Response: *Consideration was given during preparation of the General Plans to the required height restrictions for cranes and equipment during construction of the Metrorail Extension. A portion of the Metrorail alignment is within the Glide Path for runway 1R-19L. Preliminary analysis determined the Glide Path elevations restrictions for this section ranged from 334 to 344 feet. Based on ground elevations at this section, cranes or other equipment could range from 20 to 40 feet high. During preliminary engineering, DRPT and WMATA will continue to coordinate with the Airport Authority and FAA to ensure compliance with these restrictions.*

Public Comments

Feeder Bus Services, Bus Service to Smithsonian Air and Space Museum, and CIT Station

Public Comment: It is essential to provide for effective bus linkage to the Dulles Center of Smithsonian Air and Space Museum and to employment centers throughout the Route 28 Corridor from the CIT / Dulles Station. Careful consideration must be given to bus service and access between this station and the Dulles Center of the National Air and Space Museum over and above usual feeder bus access. The planning for this station must give special attention to accommodating a future light rail or other permanent transit linkage with I-66 utilizing the Route 28 Corridor. (0088, 0211-M –17)

Public Comment: It is essential that we provide better -- or think out a bus linkage between probably the CIT station and the Smithsonian Air and Space Museum, which is nearly a reality in Dulles airport. That has not been given as much thought as it deserves. That's more than just a feeder bus. (088, 0172-T – 8)

Public Comment: Impact of the Air and Space Museum Annex annual visitor load requires additional clarification in terms of connectivity to DCRTF and a model (estimate) of visitor routes traveling to and from the facility; i.e.., the A&S Museum is projected to attract 3+M visitors a year. This equates to approximately 8,200 visitors per day.

- What mode of travel will these visitors use to the facility?
- How many may be expected to use a DCRTF?
- What are the expected routes to be used? (0427, 0427-E –4)

Public Comment: If we are really going to have a mass transit system that works, effective access to each station must be an essential element of design criteria. Each station must incorporate facilities for the use of present and future feeder systems so that there are minimal conflicts between and among the feeder buses, the cars and the pedestrians. Effective use of these stations is vital to their use by transit ridership. (0204, 0247-T –7)

Public Comment: We strongly support the construction of the CIT Dulles station. This is key if Route 28 is to have mass transit system which one day it assuredly must have, particularly with the Air and Space Museum opening to the public next year. (0204, 0247-T –8)

Public Comment: The Committee for Dulles supports the construction of the CIT/Dulles Station rail station near Rock Hill Road southwest of Herndon. The Committee for Dulles urges that careful consideration be given to bus access between this station and the Smithsonian Air and Space Dulles Center complex over and above usual feeder bus access. The planning for this station should give special attention to accommodating a future light rail or other permanent transit linkage with I-66 utilizing the Route 28 Corridor. (0204,0204-M –10) (0244, 0244-T-6)

> ***Response:*** *The Smithsonian Institution has established a shuttle bus service between the National Air and Space Museum's main building in Washington D.C. and the Udvar-Hazy Center. Buses run simultaneously from either location on the same departure schedule.*
>
> *Accommodating light rail transit along Route 28 was evaluated by the Project Team but was eliminated from further consideration because plans for a Route 28 LRT system have not been developed to a level that would make it appropriate or feasible to conduct detailed coordination efforts related to these improvements (see Chapter 2 and Appendix H of the Final EIS).*
>
> *Coordination with potential rail improvements in the Route 28 corridor was requested during the scoping process for the preparation of the Draft EIS. This alternative was evaluated during the early stages of the Dulles Corridor Rapid Transit Project, and was eliminated from further study. The reasons for the elimination of this alternative are fully detailed in the Final Alternatives Analysis Report (May 2001).*

Focus on Transit-Oriented Development and Pedestrian Access

Public Comment: So this transit oriented development has a significant impact on the number of riders that would use the system, and also happily we saw that the number of people that could walk or bike access to the stations dramatically increased. And I was particularly interested in that because the current EIS only shows 20 people walking to the station at Route 606. So we think that you will get a lot better use if you scale back the parking and focus on the transit oriented development at that particular site. (0141, 0243-T –6)

> ***Response****: As evaluated in the Supplemental Draft EIS as a revision to the selected LPA and further documented in the Final EIS and final General Plans, the Project Team reconfigured the*

park-and-ride program in Loudoun County. Route 772 Station increased from no park-and-ride facility to two structures of 3,300 spaces combined. Route 606 Station decreased from 4,750 spaces to 2,750 spaces.

During preliminary engineering, the Project Team will coordinate with Loudoun County and the owner/developer of the land north of the Route 606 Station to achieve efficient and pedestrian friendly connections between the proposed development and the station.

Transit Connectivity in Loudoun and Fairfax Counties is Needed

Public Comment: The main points I would like to make in terms of our needs here in Loudoun and commenting on public transit in general, and I would like to refer to a previous comment by one of the speakers who lived in Sterling is that in Loudoun County we do not have transit connectedness, and I think he used the word connectivity. We do have an accessible public transit system that goes into most of our neighborhoods. It is very rudimentary I guess is the best word for it. So in considering a Dulles Corridor Rapid Transit Project, it is very important that we have that connectedness and an expansion of transit within Loudoun County so that people who prefer not to drive or cannot drive can use a public transit system that is accessible in this county in order to access any rapid transit that is available. (0259, 0259-T –3)

Public Comment: My biggest concern at this point is that - and this has been echoed as well - that the connectivity for people in communities like Sterling park, like Cascades or Countryside, like those south of the Toll Road in Fairfax County, are considered, and that the design option that is chosen allows for adequate bus and feeder systems, whether they're WMATA buses or Loudoun County buses or Fairfax Connector buses. (0265, 0265-T –2)

Response*: The Dulles Corridor Metrorail Extension will significantly increase the opportunities for Loudoun County residents to make convenient and quick trips via transit. However, Loudoun County will have the responsibility for increasing the transit network in the county beyond the Metrorail station areas. This Project will support an expansion of the Loudoun County Transit network but the responsibility for implementing this expansion will rest with the county.*

Concern About New Riders, Congestion Relief, and Land Use Densities

Public Comment: WMATA and its consultants have not provided solid data on actual NEW riders for BRT or rail service, they have provided no data on congestion relief for the toll road and other roads, and there are assumptions about land-use densities to provide transit-serviceability that are questionable. (0112, 0269-M –2)

Response: *Table 6.1.3 in the Final EIS shows the estimated new trips for the two Build Alternatives. Section 6.2 of the Final EIS shows levels of service for key highway links and direction including the Dulles Connector Road, the Dulles Airport Access Road, and the Dulles Toll Road.*

The travel demand forecasts in the Final EIS are based on the Metropolitan Washington Council of Governments' Round 6.3 Cooperative Land Use Forecasts. The Round 6.3 forecasts represent the regionally adopted population and employment forecasts through 2025, for the metropolitan Washington area, including Fairfax and Loudoun counties. By federal regulation, such regionally approved land use forecasts must be used in the travel demand analysis of each alternative studied in an EIS.

Circulation Within Tysons Corner Area

Public Comment: The two largest employment centers where Kings Park residents work are D.C. and Tysons, and I would like to ensure Kings Park residents commuting by future beltway, HOV express

buses can rapidly circulate within Tysons once arriving in Tysons by express bus or future Purple Line beltway rail. (0134, 0134-T –6)

> ***Response:*** *Circulation within Tysons Corner via transit was a key focus of the Project Team when developing the feeder bus plans for the Wiehle Avenue Extension. This service includes both Fairfax Connector service as well as WMATA Metrobus service. In addition to existing services, new Tysons circulator services are recommended to provide internal circulation for Metrorail riders alighting at Tysons Corner stations. Intermodal facilities are also proposed at the Tysons East and Tysons West stations as well as at Tysons Central 123 Station. These facilities would be able to handle additional circulator services that may be implemented in the future.*

Stations and Service Frequency in Tysons Corner Area

Public Comment: I firmly believe that the number of stations and the frequency of service is critical to intra-Tysons Corner transit. This fact should be incorporated into the Dulles Rail design. (0178, 0178-T –7)

> ***Response:*** *The number of stations or stops and frequency of service are critical elements of design for all transit systems. These issues were taken into account when planning and designing the Dulles Corridor Rapid Transit Project. The Wiehle Avenue Extension includes four stations in Tysons Corner and will operate on 7-minute headways during the peak period.*

Travel Times Through Tysons Corner Area

Public Comment: Furthermore, the four proposed Tysons rail stations will add a significant amount of time to the running time of "rapid transit system" making it less "rapid" and will more than likely be a construction bottleneck delaying the actual opening of the rail system. (0233, 0426-M –29)

> ***Response****: The four Metrorail stations within Tysons Corner are more than one-half mile apart. This is not unreasonable for a dense urban area such as Tysons Corner. Since many people will be walking to or from the station, spacing stations any further apart than this could result in excessive walk times and distances, thus lowering transit ridership. Construction in Tysons Corner is not anticipated to delay the opening of the Wiehle Avenue Extension..*

Interim Bus Improvements Needed

Public Comment: It appears to us that the best transition to rail would be to further improve the existing bus service in the Dulles Corridor as the interim step towards rail. For example, we would like to see the #505 bus increased in frequency during off peak hours and on weekends from the present every thirty-minute schedule to every fifteen minutes. Ideally during off peak hours, a #505 bus should leave after every westbound train arrival at Metro's West Falls Church Station. With the improvements in frequency of the #505 bus, there should also be matching improvements in the Reston Internal Buses that are coordinated with it at the Reston Town Center transfer point. (0005, 0005-L –2)

> ***Response:*** *The bus operations plans included in the No-Build and the two Build Alternatives of the Final EIS reflect Fairfax County's current bus service expansion plans. In addition, the modifications of the Fairfax County plans were developed in consultation with technical staff from Fairfax County. The County's expansion plans are based on their estimates of demand for Fairfax Connector service on each route. The service frequencies on these routes, in turn, reflect this estimated demand. In addition to estimates completed by Fairfax County, bus ridership by route was forecasted for the No-Build and Build Alternatives using the Project's travel demand forecasting model. These ridership estimates were used to supplement Fairfax County estimates and acted as inputs into the final bus plans.*

Expand the Fairfax County Connector Bus Fleet

Public Comment: Further improvements in the frequency of Dulles Corridor buses is constrained now by the number of buses Fairfax County has in its Connector inventory. BRT funds would be better utilized to expand the number of buses Fairfax County has in its inventory and provide operating funds for them. The bus frequencies could be increased to provide actual ridership numbers to better guide planners of the future rail system. (0005, 0005-L –3)

> ***Response:*** *The elimination of BRT (as analyzed in the Draft EIS) would not have released more funds for the operations of the Fairfax Connector express service. Specifically, the Federal funds that would have been used to fund the BRT were different from the funds that would be used to purchase new buses for the Fairfax Connector. The BRT Alternative would have been funded under the Federal New Starts program, while County bus purchases would have no Federal funds.*

BRT Impacts to Corridor Bus Service

Public Comment: The non-stop BRT service between Herndon and West Falls Church would be no better than the present Bus Route 980 service. Reston service, however, would be severely degraded by BRT. Five direct-to-Reston bus routes would have to be eliminated and all of their riders would have to make an extra transfer. The first transfer may be possible to coordinate, but two transfers on one trip are very difficult to coordinate. (0013, 0013-L –17)

> ***Response:*** *BRT was eliminated from further consideration after the public and agency review and comment on the Draft EIS. BRT would have provided comparable service to the 950/980 services in the peak period but would have provided more frequent service (12 minutes frequency versus 30 minute frequency) during the mid-day. It would also have provided more frequent service to the Tysons area than the current 984 service.*
>
> *It is true some services from the Reston area that currently run directly to West Falls Church would have been modified to act as feeders to BRT. The high frequency of BRT service from Herndon-Monroe and Reston would have mitigated against a long wait for transferring passengers from these feeder routes, while BRT would have provided benefits such as higher passenger carrying capacity, higher frequencies to Tysons Corner, and better mid-day frequencies than exist under the current Fairfax Connector service.*

Route 7 Bus Service Needed

Public Comment: Serious consideration should be given to creating bus service on Rt. 7 West of garage at Tysons West. (0045, 0045-CC-1)

> ***Response:*** *Fairfax Connector Route 574 currently runs between Reston and Tysons Corner via Route 7 (Leesburg Pike). It is currently planned that this service would remain in place after the implementation of the Wiehle Avenue Extension.*

Add BRT Characteristics to Express Bus System

Public Comment: Many BRT characteristics should be incorporated in an improved express bus system, and I have a list of those. Strategies for reducing operating subsidy requirements and making the system profitable. (0173, 0173-T –9)

> ***Response:*** *Three BRT alignment options were considered in the Draft EIS. BRT 3 most resembled the existing express bus system, but with trips from more origins within the corridor than currently in place, as well as more trips oriented to Tysons than are currently in place. In addition, BRT 3 assumed a reduced number of BRT facilities. There would be only one median BRT station, located at Reston Parkway. Off-line stations were assumed at all other locations.*

The Herndon-Monroe and Wiehle Avenue stops would have been at the existing park and ride facilities. The total new transit trips resulting from implementation of BRT 3 would have been the lowest of the three BRT alignment options (10,900 versus 12,500 for BRT 1, which least resembled the existing express bus system). More detailed descriptions of each BRT option are contained in the Transit Operations and Maintenance Plan (June 2002) prepared in support of the Draft EIS.

Feeder Bus System Access to Stations is Important

Public Comment: A well developed feeder bus system with exclusive access lanes where feasible is essential to this rail transit extension. Each station must be carefully designed to assure that future expansion of feeder bus access can be readily implemented. Kiss and ride drop-off points must fit conveniently into this mix. Considerable care must be put forth to minimize potential conflicts between feeder buses, automobiles and pedestrians. Where feasible, exclusive feeder bus lanes must be developed in the vicinity of station sites. Transit ridership would be severely reduced by traffic congestion that makes the use of the feeder bus no more effective than the use of the private car. (0088, 0211-M –11)

Public Comment: An essential element of the design of each rail station in the Dulles Corridor is effective access via a well-developed feeder bus system. Each station must be carefully designed to assure that future expansion of feeder bus access can be readily implemented. Kiss and ride drop-off points must fit conveniently into this mix. Considerable care should be put forth to minimize potential conflicts between feeder buses, automobiles and pedestrians. To the extent possible, exclusive feeder bus lanes should be developed in the vicinity of station sites. Transit ridership would be severely reduced by traffic congestion that makes the use of the feeder bus no more effective than the use of the private car. Over time, it is possible that some form of internal shuttle bus/people mover system will become economically feasible to serve the urban centers. Close coordination among VDRPT, WMATA, VDOT and local planning officials is essential to assure that the feeder bus system works effectively. Local elected officials bear the primary responsibility in assuring that this close coordination exists. (0204, 0204-M –9)

Public Comment: Within each of these areas are multiple points of trip commencement and terminus that need to be serviced by a flexible surface system. A flexible surface system will be integrated to take a large portion of the surface congestion out of the transportation equation, while encouraging population circulation to the businesses, shopping and entertainment sites. (0148, 0148-T –4)

Public Comment: Traffic near the stations will increase. Saturation local bus service must be provided between the neighborhoods and transit stations to induce locals to stay away from their cars in getting to the Metro. Pedestrian routes and amenities must be enhanced. Consideration should be given to eliminating bus fares altogether for those using the busses to reach the stations. There should be similar consideration to eliminate the bus fares along the corridor to West Falls Church until Metrorail is available to reduce congestion, improve air quality, encourage transit use, begin to change commuting habits from SOV to transit. (0208, 0208-M –5)

Public Comment: And are there plans to make sure that the routes and schedules of local feeder bus systems are integrated with metro? Are there plans for local express bus service to the metro stations during rush hours, thereby reducing the need to build massive parking facilities? (0181, 0181-T –7)

Public Comment: Feeder bus system. We have made some references to it, but it is essential to making this process work. Not only do we need an effective feeder bus system, but it needs to be able to move to the transit stations, which means somehow building some type of exclusive busways in the vicinity of the transit stations. (088, 0172-T –6)

Public Comment: I realize that developing an adequate bus feeder system and controls on development along the corridor are not something your project team has any say in. But, having lived in Northern Virginia for many years and having visited large European cities that have a mix of bus, tram, and rail as

a way to move large numbers of people, it seems imperative that a complimentary feeder system is necessary to the success of rapid transit in the Dulles Corridor. (0401, 0401- L-5)

Public Comment: Feeder bus service to stations: The description in the draft EIS of the plans for feeder bus service to stations is completely inadequate. The EIS states that feeder bus service would be modified and refers to Chapter 6 and a separate technical study for details. However, Chapter 6 does not describe the changes or provide any details, and the technical study was almost impossible to obtain to review. The EIS should be revised to include specific information about the proposed feeder bus service for each alternative. (0392, 0392-L –10)

> ***Response:*** *The feeder bus network in the Dulles Corridor is an essential part of the overall corridor transit network. Station area planning and design included accommodating feeder buses (both access to the station and circulation within the station area) as an integral part of the overall process. Under the two Build Alternatives of the Final EIS, many of the stations in the Dulles project will become major intermodal centers within the corridor, and the planning and design of these stations reflects this. The bus service plans were developed in consultation with technical staff of Fairfax and Loudoun counties. The plans have been developed with a focus on providing service from multiple origins to multiple destinations in the counties, and are designed specifically to provide mobility options that are attractive relative to making a trip by private automobile. The Transit Operations and Maintenance Plan in support of the Final EIS contains detailed route descriptions.*
>
> *The ultimate responsibility for these feeder bus networks lies with the counties. The responsibility for determining the feasibility of the elimination of bus fares would ultimately reside with the three operating agencies: WMATA, the Fairfax Connector, and Loudoun County.*
>
> *Local express service to stations during rush hours was not considered as part of the plan because of the difficulty of providing express service from multiple origins. Feeder bus routes are generally short and have short trip times, thus making them attractive alternatives to the auto. Exclusive busways were not considered as part of the facility program for stations because it was determined that the positive impacts would be marginal relative to the cost and the difficulty of incorporating the busways into an already crowded street network.*

McLean / Tysons Corner Feeder Bus Services

Public Comment: McLean Access to Stations in Tysons Corner: All Build alternatives would provide Tysons Corner stations close to much of the McLean area. However, the EIS does not describe how McLean residents, especially residents east of the Dulles Toll Road, would be able to access these stations, since all proposed stations except Tysons West would not have any parking facilities. The EIS should be revised to described the feeder-bus system and the pedestrian and bicycle facilities that would be put in place to serve the McLean area. (0392, 0392-L –14)

Public Comment: I also think the issue of adequate feeder bus systems into these stations to reduce the amount of auto traffic and the amount of parking should be addressed in a more comprehensive way, with suggestions for possible solutions. (0284, 0284-T –3)

Public Comment: There is no mention of any feeder bus lines from my neighborhood [in McLean] towards Tysons, thus ensuring reliance upon our cars. (0233, 0426-M –25)

Public Comment: In the Tysons area, the rolling terrain area and the distances between the stations and some of the largest employers in the area (i.e. Gannett), it's highly unlikely that any of these stations will reach their full ridership potential without employee or residential shuttles or some other formal type of internal circulator system that may include buses, trams or some other mode(s) to link the entire area to the stations. However, for this internal circulator system to function properly, surface facilities need to be provided at each of the stations similar to what is proposed at Tysons East with the program of bus bays, shuttle bays, kiss & ride, taxi (and Flexcar?) spaces specifically tailored to the needs of the station service

areas for each alternative. A conceptual plan for an internal circulator system should be developed in conjunction with the Tysons community and should be a part of each alternative under consideration. (0387, 0387-L –11)

Public Comment: Address the increased need for feeder bus service centering on the 4 Tysons area stations, both for circulation access within Tysons and from McLean communities. (0392, 0392-L –3)

> ***Response:*** *Service between McLean and Tysons Corner is currently provided by the Metrobus 15, 23 and 24 Routes. These routes do not change under the Wiehle Avenue Extension. Route 15 would serve the Tysons East and Tysons Central 123 station. Route 23 would service the Tysons East, Tysons Central 123, and Tysons West Stations. Route 24 would serve the Tysons West Station. Comprehensive feeder bus plans have been developed for Wiehle Avenue Extension through Tysons Corner. These plans identify service frequencies throughout the day, number of trips, routings, and station/stops served. These plans were developed based on detailed consultation with technical staff from Fairfax and Loudoun counties. These plans also reflect county technical staff's estimates of demand for the feeder service as well as additional demand estimates developed by the Project Team.*
>
> *All station plans include on-and/or off-street passenger boarding space for private shuttle services and bicycle storage facilities.*

Tysons Center Remains an Important Bus Destination

Public Comment: We also note that the Center already is an important participant in the provision of transit service to and around Tysons Corner. The Center has several bus stops located on the private internal ring road of the Center between the Nordstrom parking structure and the neighboring Tycon Tower buildings located on Towers Crescent Drive. The buses that utilize this transit stop originate and terminate at various locations throughout Northern Virginia, including Arlington, Alexandria and existing WMATA facilities. We expect that these bus stops will remain active and utilized even with the extension of rail transit service, notwithstanding the additional bus service contemplated for the Tysons Corner area discussed below. (0406, 0406-L –2)

> ***Response****: With the Wiehle Avenue Extension, the existing bus stops in Tysons Corner Center would remain in place and continue to play an important intermodal role.*

Facilities for Feeder Bus System

Public Comment: Oh yes, I forgot about LINK and metro bus in Reston. Well if you ride LINK or metro bus, no bus stop tells you when the next bus is coming, you stand in the weather because there are no covered bus stops and you don't know what bus to take to where. I think it's called a feeder system. Is the improvement of that system covered in rail costs? It has to be improved or rail won't get many riders. (0233, 0426-M –17)

> ***Response****: The facility elements described by the commenter such as schedule information and shelters will remain the responsibility of the local transit operator, in this case, Fairfax County. All stations and stops would have bicycle racks and/or lockers adjacent to station entrances.*

B. Supplemental Draft EIS Comments

Public Comments

Clarification Regarding Premium Bus Service

Public Comment: The term "Premium Bus Service" still causes us concern. While we appreciate your email of February 17th on this subject, we still have concerns where the report speaks to this issue. We

need to fully address the concept of Premium Bus Service. The report has a limited definition on page 106, but to us this sounds very much like the service we are now providing.

Passengers will not be required to transfer to "Premium Bus Service" at the Rt. 606 station. Response should state Loudoun County is currently running service to Leesburg and that such service will continue. The wording in the Report appears to contradict your above referenced email.

"The premium bus service will replace express bus service currently run by Loudoun County into Roslyn and Downtown Washington". This is an incorrect statement. While we appreciate your email on this subject, this still needs to be corrected in the final document. (0084 6-1)

Public Comment: The Town Council appreciates the public outreach effort of the Virginia Department of Rail and Transportation on the Dulles Corridor Transportation Project. The town respectfully requests correction of error published in the draft EIS stating that premium bus service will replace current express bus service in Loudoun County. We understand from Loudoun County that the error will be corrected in the final publication and will reflect continued express bus service. (0142 6-1)

> ***Response:*** *The Final EIS ends the use of the phrase 'premium bus', since the service is a continuation of the existing express bus service of the two Counties and MWAA. The Project Team has recommended that until the opening of the Full LPA, the Wiehle Avenue Extension should retain this [bus] rapid transit service between Wiehle Avenue and Route 772. Where appropriate, routes would be reconfigured to optimize service to markets in the western portion of the Dulles Corridor. Loudoun County would, however, retain its current commuter service (Loudoun to Rosslyn and D.C.). Otherwise, all express bus services currently serving the West Falls Church Station will be directed to Wiehle Avenue Station.'*
>
> *The operators of this bus transit service in the Corridor, which the Supplemental Draft EIS described as premium bus service, would remain the two Counties. The two Counties would provide any additional vehicles for the service, purchasing them from funding sources other than the Project. MWAA will continue to use the Washington Flyer to provide bus service between the Airport and Wiehle Avenue Station.*

Retain Express Bus Service to West Falls Church

Public Comment: I wish to register my displeasure with the proposal to discontinue the express bus service between the Herndon Monroe Park and Ride and the West Falls Church Metrorail station under the Dulles Rail Proposal.

First of all, the buses that leave the Park and Ride currently are filled to capacity, more often than not with "standing room only." Assuming that the pending plan goes into effect (adding five more stops), how in the world are the vehicles expected to take on additional riders? And besides that, the plan for the rail line is to wind its way through the Tysons Corner area. Why are the bus stops, for all intents and purposes, a duplication of the areas to be serviced by rail?

The addition of an extra twenty minutes to our commuting time will be an additional burden. Having to get up even earlier than we do already is asking a lot of us commuters. In fact, right now it is just about dead even in commuting time between driving and using public transportation; the proposal to increase the daily commute by nearly four hours per week makes driving a lot more attractive. If enough citizens feel the same way, it will mean a drop in ridership (and revenue) for public transportation as well as an increase in pollution. (0143 6-1)

Public Comment: I am writing to express my dismay, and strong opposition, to the proposed discontinuation of express bus service between the Herndon-Monroe Park & Ride and West Falls Church Metro station as described in the Supplemental Draft Environmental Impact Statement, Hearing Report, February 2004 ("Report").

Thus commuters currently using Herndon-Monroe buses would have to 1) wait to board buses at Herndon-Monroe, 2) ride to the Wiehle Avenue Metro, 3) move from the bus to the Metro, 4) wait to board Metro, and 5) ride through, and stop at four Tysons Metro Stations. The existing commute between Herndon-Monroe and West Falls Church takes approximately 15-20 minutes. It is inconceivable that the proposed route of Herndon-Monroe --> Wiehle --> Tysons Corner --> East Falls Church would not considerably lengthen I would estimate that the proposed route would nearly double to 15-20 minute Herndon-Monroe to West Falls Church commute.

Of course, an alternative to such a route would entail commuters driving directly from their homes to the Wiehle Avenue Metro. This would: 1) increase traffic on the roads leading to the Wiehle Avenue station, and 2) require that the already inadequate parking at the Wiehle Avenue be greatly expanded. Such an expansion, should it occur, would have to be a multi-level garage in order to accommodate the diversion of riders from Herndon-Monroe to Wiehle. And of course, the Herndon-Monroe garage would be vastly under-utilized and result in a huge waste of resources.

If Metro were extended all the way out to Herndon-Monroe, then the proposed elimination of the express bus service between Herndon-Monroe and West Falls Church would make sense. Absent such extension, the proposal promises nothing but additional hassle for commuters. (0144 6-1)

> ***Response:*** *The Project Team has not stated that the travel time would increase by 20 minutes. The express bus service from Herndon-Monroe to Wiehle Avenue Station has been designed to be a very high frequency shuttle to Wiehle Avenue for those drivers who will not be able to find a park-and-ride space at Wiehle Avenue Station. The intent is to make Herndon-Monroe a viable satellite facility through the provision of a very convenient shuttle service providing direct service into Wiehle Avenue Station pavilions.*
>
> *The travel times for passengers that currently travel on the existing Fairfax Connector 980 service from Reston East (Wiehle Avenue) would be roughly similar to that of traveling by Metrorail from Wiehle Avenue Station to East Falls Church Station under the Wiehle Avenue Extension. For passengers that currently depart from Herndon-Monroe, it is expected that the travel time from Herndon-Monroe to East Falls Church would increase by approximately 2 minutes under the Wiehle Avenue Extension.*

Public Comment: Local officials must also make sure that the planning includes internal circulation systems that work with the transit stations. We also urge that a feeder system be strongly considered as an integral part of this. The stations must be considered and designed that future expansion of the feeder-bus access can be readily implemented. (0067 0075-3)

> ***Response:*** *An integral part of the project development will be the continued examination of the feeder bus systems serving specific stations. .*

Public Comment: Kiss & Ride drop-off points must be a part. Potential conflicts between feeder buses, cars and pedestrians must be minimized. Exclusive feeder-bus access lanes should be developed within at least a half a mile of station sites. (0067 0075-4)

> ***Response:*** *Comment Noted. The facility elements identified by the commenter have been considered in stations plans and will continue to be developed during preliminary engineering.*

Public Comment: In the future, some form of grade-separated internal shuttle bus, people-mover system, is possible in order to help provide quick access within these urban centers. (0067 0075-5)

> ***Response:*** *These types of improvements are not proposed as part of the Project and would be the responsibility of the local jurisdictions.*

Allow Express Service from Dulles Airport to Tysons Corner

Public Comment: Planning should also allow for express service between the Dulles Airport and Tysons Corner, thereby alleviating the conflict of rush-hour congestion and airport service. (0441, 0441-E –9)

> ***Response****: Express services between Dulles Airport and Tysons Corner was never a consideration among the alternative modes, their alignments and operating plans. The Locally Preferred Alternative is a Metrorail Extension with intermediate stations between Tysons Corner and Dulles Airport.*

Dulles Airport Growth Impacts

Public Comment: Impact of the Growth of Dulles International Airport (DIA) was not adequately documented nor was the impact of the anticipated passenger growth and commercial vehicular trips presented. It is recognized that the DIA represents an economic engine in the Dulles Corridor. Such economic engines have both a positive, as well as negative impact on the surrounding area. This impact needs to be documented and assessed. For example, the current projected passenger growth by the year 2020 may extrapolate to as many as 73.4K passengers per day transiting to and from DIA. Of that number, a portion may be expected to use a Dulles Corridor Rapid Transit facility (DCRTF). (See Attachment A.) (0427, 0427-E –3)

> ***Response****: The Project Team utilized a specific model that was developed during the original Dulles Corridor Transportation Study and refined for this Project for the forecast of Metrorail trips to and from Dulles Airport. Air passenger growth was factored into the forecasts. The model used was based on air passenger survey data collected at all three Washington airports by MWCOG and trips were estimated by all modes of arrival. The Dulles Airport forecasts are based on an extrapolation of the experience at National Airport because National Airport is the only regional airport with Metrorail access.*

Foster Transit-Oriented Development and Travel Demand Management

Public Comment: We need to assure that transit investments in the corridor will be accompanied by rapid investment to foster transit oriented development, walkable and bikeable neighborhoods around transit, high quality European and Japanese style bicycle access to transit throughout the corridor with Bikestations like those in California and bike paths leading to the stations, and appropriate incentives in the corridor that reduce the oversupply of free and subsidized car parking and encourage employer-provided transit benefits. (0444, 0444-E –7)

Public Comment: A wide variety of parking and travel demand management actions can and should be taken to foster transit use, reduce station area congestion, and achieve other private and public sector objectives related to transit development. Numerous examples of what can be achieved through such efforts exist around the country; however, there are few examples of success in Northern Virginia. Normally actions in these areas are left to the private sector or are limited to isolated public sector decisions, such as the establishment of one set of parking prices region wide by Metro. Fairfax County should take the lead in establishing a task force to investigate options for a more ambitious and comprehensive approach, involving community groups, property owners, major employers, and others. One particular component of a plan that should come out of such an effort is a set of rational parking prices in the station areas that would be designed to limit auto congestion in the station areas, assure the availability of some parking spaces at all hours, and create opportunities for the private sector to reduce its parking costs, reduce parking subsidies to employees, and create revenues from for-profit transit parking operations. Such parking prices and their impacts should be continually monitored to assure that these objectives are being achieved. (0478, 0484-E –17)

> ***Response****: Transportation demand management (TDM) is a useful tool for dealing with issues related to transportation, land use, economic development, and environmental quality in an urban context. TDM can be used to manage the transportation system better, which would increase*

mobility, and reduce pollution. TDM can also be used to mitigate negative consequences of development, most particularly increased traffic congestion and air pollution, while perhaps encouraging additional development to occur through the avoidance of traffic gridlock, if, when, and where TDM is implemented properly. Some employer-based TDM strategies, such as carpool/vanpool incentives, parking management, financial/time incentives, and information and marketing could also greatly reduce single occupant vehicle (SOV) traffic volumes.

The Fairfax Countywide Trails Plan and the Loudoun County Trails plan were consulted to determine future planned improvements to pedestrian and bicycle facilities. As part of the Project, pedestrian and vehicular access will be provided to each station from the nearest public rights-of-way. All other planned pedestrian and bicycle trails fall under the jurisdiction of the City of Falls Church, the Town of Herndon, Fairfax and Loudoun counties and VDOT. All stations would have bicycle racks and/or lockers adjacent to station entrances.

Potential Impacts of Telecommuting and Slug Commuting

Public Comment: How could technology - especially electronic technology, such as telecommuting - be used to reduce the need for travel in the corridor? (0235, 0235-E –4)

Public Comment: How could "non-traditional" transit such as the encouragement, and construction of parking, for "slug" commuting be used to reduce corridor travel? (0235, 0235-E –5)

Response: *Telecommuting can be used to reduce overall commuting and is promoted as an alternative to commuting. However, it would contribute only a fraction of the travel demand reduction needed within the Dulles Corridor to meet future commuting demands.*

Accommodate Intra-Reston Traffic

Public Comment: By 2005, we need to reserve aboveground for Reston, intra-Reston traffic to maintain our quality of life around the station areas. (0170, 0170-T –12)

Response: *Comment noted.*

Travel Demand Management Strategies Needed

Public Comment: Finally, I would like to point out that they say that transportation demand management strategies can make a significant difference. That's something Fairfax hasn't done very much of, but that will help mitigate the traffic congestion that will occur at the station areas. They include some recommendations in the plan, but they say once a Locally Preferred Alternative is selected, they will go back and develop far more detailed transportation demand management strategies. (0141, 0167-T –6)

Response: *Transportation demand management (TDM) is a useful tool for dealing with issues related to transportation, land use, economic development, and environmental quality in an urban context. TDM can be used to manage the transportation system better, which would increase mobility, and reduce pollution. TDM can also be used to mitigate negative consequences of development, particularly increased traffic congestion and air pollution, while perhaps encouraging additional development to occur through the avoidance of traffic gridlock, if, when, and where TDM is implemented properly. Some employer-based TDM strategies, such as carpool/vanpool incentives, parking management, financial/time incentives, and information and marketing could also greatly reduce single occupant vehicle (SOV) traffic volumes.*

Public Comment: How can the demand for transit along the corridor be reduced? (0235, 0235-E –2)

Response*: Demand for transit can be reduced by providing poorer service (less frequent service, less direct service), building residential and commercial areas at very low densities, and making access to transit difficult (i.e. no sidewalks, poorly designed and maintained bus stops, and poor*

access to park and ride lots). It should be strongly noted that this is contrary to every goal and objective of this project.

Better Headways on the Orange Line

Public Comment: The number of Blue line trains going to DC from Rosslyn needs to be decreased to allow better headway on the Orange line. (0043, 0043-CC-5)

Public Comment: The proposed routing of Dulles Rail trains on the Orange Line from East Falls Church to Stadium Armory seems wise & will increase the core capacity of the most used portion of the 103 mile Metrorail system. However, the re-routing of Blue Line trains to cross the Potomac near the 14th St. Bridge would sever the metrorail link between Rosslyn and the Pentagon. (0066, 0066-CC-4)

Response: *Re-routing of one-half of the Blue Line trains along the Yellow Line rather than through Rosslyn has been identified in the WMATA Core Capacity Study and Capital Improvement Plan as a possible means of increasing Orange Line service reliability but not frequency. This strategy has been incorporated into the Metrorail operating plans used to prepare the Final EIS.*

7.0 SECTION 4(f) EVALUATION

A. Draft EIS Comments

Regional Agency Comments

Impacts to the Washington and Old Dominion Railroad Regional Park

Regional Comment: As stated in the Draft EIS, the W&OD is a Section 6(f) protected property under the Land & Water Conservation Fund Act. In the early 1960's the federal government acquired an easement across the W&OD for the Toll Road overpass. However, rail uses do not appear to be included in the easement. Therefore, the Virginia Department of Conservation and Recreation has requested a determination from the National Park Service as to whether a conversion of use would be required for construction of an additional overpass for Metrorail within the easement area. To date, a determination has not been made by the National Park Service. Therefore, the Draft EIS should not state, "no conversion of Section 6(f) land would occur." Regardless of whether or not a conversion is required, the Park Authority must review and approve, in writing, any new construction within the easement. (0456, 0456-L –3)

> ***Response****: The Wiehle Avenue Extension will include a new three-span bridge structure over the Washington and Old Dominion Railroad Regional Park. In February 2004 the Virginia Department of Conservation and Recreation, after consultation with the National Park Service, made a determination that the proposed action would not result in a conversion of use under the Land & Water Conservation Fund Act because the Metrorail overpass will be within an existing transportation easement that includes highway overpasses for the DIAAH and Dulles Toll Road. A copy of this letter is located in Appendix K. DRPT will coordinate any construction activities in the vicinity of the Washington and Old Dominion Railroad Regional Park with the Northern Virginia Regional Park Authority.*

Public Comments

Impacts to the Washington and Old Dominion Railroad Regional Park

Public Comment: I understand that the draft environmental impact statement has ruled out transit stations at the Reston Town Center and at other locations outside the freeway median on the grounds that -- of impacts on the Washington and Old Dominion Trail. As a board member of the Friends of the W&OD Trail -- in fact, I was just patrolling the trail on my way over here -- I can't really see for the life of me why rail or bus transit couldn't overpass or underpass the W&OD Trail, just as the Dulles Access Toll Road does and the Reston Parkway, I-66, the Capital Beltway, and dozens of other transportation facilities. Of course, you know, you need to minimize park impacts, but it is certainly doable. (0066, 0254-T –3)

> ***Response:*** *The Wiehle Avenue Extension in the median of the DIAAH will include a new three-span bridge structure over the Washington and Old Dominion Railroad Regional Park. During the scoping process, there was a suggested alternative alignment that would have departed the DIAAH median and utilized the Railroad Regional Park. This alternative, known as Alignment D2, was eliminated from further consideration for the following reasons:*
>
> - *It was inconsistent with existing land use and future local and regional land use plans.*
> - *It would have required permanent use of the Railroad Regional Park, which is Section 4(f) resource. Alignment D1, which has become the LPA, provided a prudent and feasible alternative to Alignment D2 under the terms of Section 4(f).*

B. Supplemental Draft EIS Comments

No comments pertaining to this topic were received.

8.0 FINANCIAL ANALYSIS

8.1 Capital Funding Strategy

A. Draft EIS Comments

State Agency Comments

Need to Provide Maximum Value for Public Monies

State Comment: Furthermore, as a public official, I know we all share the interest that we get the maximum value for the public monies we spend. We don't want to in the short run simply be cheap. Cheap such that we make a solution today and we have to multiply that in the future. In the long run we have ended up spending more money, inconvenienced a number of people. We need to go forward with a working solution for the long run. (0131, 0163-T –5)

> ***Response:*** *Chapter 10 of the Final EIS (Evaluation of Alternatives Carried Forward) presents a comparative evaluation of the alternatives carried forward in the Final EIS. The intent of the evaluation is to demonstrate the relative effectiveness of the alternatives in meeting the stated goals and objectives, and to highlight the key differences between alternatives to facilitate the decision-making process.*

Public and Private Funding Sources

State Comment: Fortunately, there seems to be consensus that the necessary state, local and federal funding, along with substantial private funding, must be found to move the project to construction as soon as possible. Two important funding sources are within reach. Thanks to the initiative of the business community, LEADER has been created to help provide private funding. Governor Warner's leadership has put full funding for the local share before the voters this fall as a part of the sales tax referendum. (0012, 0468-L –1)

> ***Response****: The Project Team recognizes the important role that LEADER provided in the innovative financing mechanism for the Fairfax County capital funding share. The sales tax referendum of Fall 2002 did not pass; it would have allocated a minimum of $350 million for the Fairfax and Loudoun County shares of the Project capital funding. If it had passed, the Project's financial analysis would have been updated accordingly.*

Use of Innovative Pricing Strategies

State Comment: And finally, the final financial plan for using toll road revenues provides the opportunity to explore several innovative pricing strategies, including incentives to switch to the fast toll transponder to improve roadway capacity, high occupancy toll lanes, whereby single drivers can use the toll lanes for a price, the cost of which is determined by a pricing structure that controls congestion. (0131, 0131-T –11)

State Comment: The financial analysis in the plan should emphasize restructuring of the Dulles Toll Road to reduce congestion and enhance the vehicle throughput of the road thus increasing roadway capacity for drivers. Incentives should be provided to encourage more people to use transponders to enhance the capacity of the tollbooths, and to carpool and vanpool to enhance person throughput. The high occupancy vehicle lanes could be converted to a high occupancy toll lane to make better use of the lane to carry more people and more vehicles while using pricing to control congestion. This creative use of tolls would address some of the political concerns about the impact of increased taxes in Northern Virginia. (0131, 0434-E –6)

Response: *The Commonwealth of Virginia will consider the operation of its toll collection system when and if the tolls increase as part of the Project's capital funding plan. The availability of the HOV lane and the increased toll will assist to encourage ridesharing and carpooling. To operate as a true HOT lane, the current HOV lane would require separation from the HOV lane and the mixed-traffic toll plaza.*

Different pricing strategies and use of innovative technologies may be part of the long-range planning of the Commonwealth for the Dulles Toll Road. However, this aspect is outside of the scope of the Final EIS.

Need to Explore Equity Concerns

State Comment: It is completely inappropriate to increase tolls on the Dulles Toll Road to pay for the construction of rail. Commuters in the Corridor have been paying for the Dulles Toll Road for the past eighteen years. No other Virginians north of Richmond have been subjected to tolls. A typical commuter driving to work in D.C. from Reston fifty weeks a year is paying $375 each year. If that commuter has lived here for eighteen years, he has already paid $6750! In addition, these same commuters have paid for construction of the Metrorail system for the rest of the Washington Metropolitan area. (0298, 0298-L – 2)

State Comment: The proposals in the Draft EIS that would increase tolls either $0.50 or $0.25 in 2003 and then an additional $0.25 every three years until 2015 are neither fair nor equitable. As the Draft EIS demonstrates, the benefits of rail to Dulles are extensive and far-reaching, accruing to the entire metropolitan region and the state as a whole. To expect commuters paying increased tolls to generate between $725 and $800 million in funding for construction is unreasonable and simply wrong. These ill-conceived proposals to raise tolls should be discarded immediately. Fortunately, there is an alternative. A portion of the undesignated funds that will be generated if the transportation referendum passes could be earmarked for this purpose. (0298, 0298-L –3)

Response*: The basis for funding extensions to the existing Metrorail system, such as the Dulles Corridor Rapid Transit Project, is stated in the WMATA Board of Directors Resolution #2000-35 extension resolution: "All design, engineering, construction and financing costs of an Extension, including revenue vehicles and required facilities and equipment, which is added to the Adopted Regional System (ARS), including costs associated with delay in receipt of federal funding and extraordinary costs, would be funded by the jurisdiction in which the Extension is located with local, state, federal and other funds, without cost to the other Compact member jurisdictions." The Dulles Corridor Rapid Transit Project would be considered an "Extension to the Adopted Regional System," and therefore the WMATA compact member jurisdiction (in this case, the Commonwealth of Virginia) would be responsible for providing the required non-Federal funding for the project. The sales tax referendum of Fall 2002 did not pass; it would have allocated a minimum of $350 million for the Fairfax and Loudoun County shares of the Project's capital funding.*

For the Wiehle Avenue Extension, the Commonwealth is considering a toll of $0.75 at the main toll plaza and $0.50 at each interchange ramp toll plaza. This modest increase is expected to provide sufficient revenues to meet the Commonwealth's obligations for the Extension.

To fund construction of the remainder of the Full LPA, the Commonwealth may consider other sources, including transportation appropriations, in addition to the Dulles Toll Road revenues. Chapter 8 of the Final EIS also describes the financial participation of Fairfax and Loudoun counties, and the Metropolitan Washington Airports Authority in the Full LPA funding.

Consider Costs of Obtaining and Maintaining Environmental Permits

State Comment: NRO is unable to assess whether the cost of obtaining and maintaining environmental permits is addressed in the Operations & Maintenance costs estimates. Permit application fees were

raised as of July 1, 2002. Similarly, it is unclear if the possibility of paying for the cost of permit-driven sampling and analysis has been considered in estimates. Most VPDES permits require flow estimates and analysis for a variety of parameters, based on the activities conducted at a site and the reasonable potential for the discharge of pollutants. (0407, 0407-A –37)

> ***Response****: The cost of obtaining environmental permits for construction is contained within the capital cost estimate. The model for the estimate of operating and maintenance costs generates an estimate that contains the cost of environmental permits, but the model does not have a specific cost drive for such, since the cost is negligible in comparison to the drivers.*

Need to Address Currency Formatting

State Comment: Pg. 8-3: Table 8.2-2 - suggest adding: in $ million (0421, 0421-A –21)

> ***Response:*** *The capital cost tables of Chapter 8 of the Final EIS contain in their titles the phrase '(Millions YOE Dollars)'. The acronym 'YOE' represents Year-of-Expenditure and signifies that the costs have been inflated.*

Potential Local Funding Sources

State Comment: Fortunately, there seems to be consensus that the necessary state, local and federal funding, along with substantial private funding, must be found to move the project to construction as soon as possible. Two important funding sources are within reach. Thanks to the initiative of the business community, LEADER has been created to help provide private funding. Governor Warner's leadership has put full funding for the local share before the voters this fall as a part of the sales tax referendum. (0012, 0468-L –1)

> ***Response****: The Project Team recognizes the important role that LEADER provided in the innovative financing mechanism for the Fairfax County capital funding share. The sales tax referendum of Fall 2002 did not pass; it would have allocated a minimum of $350 million for the Fairfax and Loudoun County shares of the Project capital funding. If it had passed, the Project's financial analysis would have been updated accordingly.*

Regional Agency Comments

Need for Further Explanation of Capital Costs

Regional Comment: The capital costs in the Draft EIS do not reflect earlier professional estimates. The original MIS completed in 1996 estimated $1.4 billion to build rail from the Orange Line though the Dulles Corridor to Loudoun County with three stops at Tysons Corner and part of the Tysons Corner section underground. Guesstimates given by knowledgeable people to the Dulles Corridor Task Force were of the order of $1.8 billion to $2.2 billion. Good civil engineers typically know within about 10% to 15% what a project will cost, particularly when it is an extrapolation of existing work, as is the case here. A 15% contingency on a $2.2 billion project would bring the projected cost to $2.53 billion. Another $615 million has been added in the Draft EIS as "soft costs." These "soft costs" reflect a 27% increase in the $2.2 billion estimate. (0133, 0405- L-15)

> ***Response****: The increase in the capital cost estimate of the Full LPA from the MIS Supplement is due to escalation to year-of-expenditure dollars, increased project scope, increased land acquisition, increased soft costs, and greater design detail. The capital cost estimate was prepared independently of the MIS estimate. The level of soft costs within the capital cost estimate is within the industry norm for design and construction of a large civil project.*

Need to Define Project Cost Controls

Regional Comment: Frankly, it will be difficult to justify $3 billion plus for the Dulles Corridor Rail when the DEIS, in comparison to the highway baseline offers: No timesaving; No air quality improvement; No reduction in energy consumption; Recovers only 38% of O&M from the fare box compared to 70% plus for the existing rail system. Requested Action: Refine and justify the projected capital cost for the locally preferred alternative; Define the cost controls that will be put in place by Virginia to avoid further cost escalation. (0133, 0405- L-16)

> ***Response****: The capital cost estimates of the two Build Alternatives of the Final EIS will be updated during the Project's preliminary engineering phase, which is now commencing. Those estimates will serve as the basis for the negotiation of the Federal Full Funding Grant Agreement. Cost controls in addition to the estimating process to date will include a value planning process, a value engineering process, risk analysis, the use of design-build procurement through the Virginia Public-Private Transportation Act, and continued use of project contingencies to account for design unknowns.*

Local Agency Comments

Passage of Transportation Referendum Critical to Project's Success

Local Comment: Integral to any public project of this size is an intelligent and practical funding plan. For Fairfax County, the funding pieces have come together in an unprecedented way; we are now uniquely positioned to capitalize on new, dedicated funding sources that will reduce or replace the County's local contribution. The November transportation referendum includes $350 million specifically for the Dulles corridor transit project: its passage is critical for the success of the project. That funding coupled with the revenues from the proposed special tax district will fund most of the local share. (0130, 0289-L –2)

Local Comment: Integral to any public project of this size is an intelligent and practical funding plan. For Fairfax County, the funding pieces that have come together are coming together in an unprecedented way. We are now uniquely positioned to capitalize on new and dedicated funding sources that will reduce or replace our kind of use, and the transportation referendum includes $350 million specifically for this project. Its passage, in my opinion, is critical for the success of the project. That funding, coupled with the revenues from the proposed special tax district, will give Fairfax County our local share. (0130, 0130-T –2)

> ***Response:*** *The sales tax referendum of Fall 2002 did not pass; it would have allocated a minimum of $350 million for the Fairfax and Loudoun County shares of the Project capital funding. If it had passed, the Project's financial analysis would have been updated accordingly.*

Implement A Plan to Avoid Funding Delays

Local Comment: Loudoun County stands ready to support its share of this project financially and has a funding mechanism to accomplish this. We are concerned that other funding may not be available on the originally proposed schedule and strongly urge that all means necessary be taken to put a funding plan in place that will deliver this project on its current schedule. This project is too important to allow it to be delayed. (0240, 0240-T –2)

> ***Response:*** *The Project Team recognizes the significant financial commitment that Loudoun County has made to the Project and the need to maintain the Project schedule.*

Sales Tax Referendum is not a "Required" Element

Local Comment: Finally, we would like to note for the record that the proposed Virginia sales tax referendum does not incorporate the Dulles Corridor Rapid Transit Project and this project has a separate

funding mechanism. In other words, the sales tax referendum should not be held up as a required element in order to financially realize this project. This fact has been publicly noted by some of our local officials, and we want to emphasize this important point again. (0233, 0426-M –44)

> ***Response:*** *The commenter is correct in stating that the Project's Financial Analysis in the Draft EIS did not include the then sales tax referendum as a funding source, but did acknowledge that it was a potential additional source that could have offset some of the proposed local funding sources. The capital funding strategy for the Full LPA also requires contributions from MWAA and Loudoun County, neither of which is currently proposing sales tax revenues or special tax districts.*

Need for Detailed Explanation of Funding Mechanisms

Local Comment: Every session has included statements that "the funding mechanisms are in place for funding of the rail system", however, no one ever goes into detail of what those funding mechanisms are. (0233, 0426-M –11)

> ***Response****: Chapter 8 of Final EIS identifies the capital cost funding mechanisms proposed for each jurisdiction. The specific funding instruments, timing and amounts are still subject to final agreements that DRPT, the project sponsor, will negotiate and execute prior the Project's Federal Full Funding Grant Agreement.*

Need for Further Explanation of Subsidies

Local Comment: Who pays for the subsidies that are going to be necessary for each ride taken on the rail (you have either heard or will hear about the subsidies that will be necessary for rail ridership (some have estimated that subsidy to be $26.00 per ride…some say higher). (0233, 0426-M –15)

> ***Response****: The WMATA Compact jurisdictions would pay the annual subsidy of the Project. Chapter 8 of the Final EIS lists the operating costs, revenues, subsidy and the subsidy allocation among the Compact jurisdictions for the Wiehle Avenue Extension and Full LPA In opening year and forecast year.*

Need Further Explanation of Federal Contribution Payments

Local Comment: There are two rumors floating around town (mind you I said they are rumors but I think they beg some answers if for no other reason than to stop them…if they are rumors): That the federal government's portion of the financing for rail will not come (if it comes) in a lump sum, but in appropriations over more than a fifteen year period. Gee, how does this rail thing get financed now, at what long term financing cost and at whose expense? (0233, 0426-M –19)

> ***Response****: The Project would be constructed in two phases in order to reduce annual Federal funding needs by spreading the construction costs over a longer period of time. As documented in the Final EIS, the first phase of 11.6 miles would commence from a seamless connection with the existing Orange Line near West Falls Church, serve Tysons Corner and reach Reston at Wiehle Avenue. It is anticipated that this first phase, named the Wiehle Avenue Extension, would begin operations in 2011. The second phase of 11.5 miles would continue westward from Wiehle Avenue and serve Reston, Herndon, Dulles Airport and eastern Loudoun County by year 2015. Thus, the period of time of all capital funding would be fourteen years, from fiscal year 2004 through 2017. The capital funding strategy in Chapter 8 of the Final EIS does not include the cost of financing for the Full LPA, since the Federal government is currently advancing only the Wiehle Avenue Extension in its New Starts program.*

Need to Address Equity Concerns

Local Comment: Too much State and County funding is coming from the Corridor itself. The benefits are shared throughout the region and the state, and funding must be equitable. (0233, 0426-M –5)

> ***Response****: The capital cost amounts and percentages shown in Chapter 8 of the Final EIS are based on a preliminary agreement among the funding partners. The capital funding strategy in Chapter 8 derives from the WMATA Board of Directors Resolution #2000-35 stating that "All design, engineering, construction and financing cost of an Extension, including revenue vehicles and required facilities and equipment, which is added to the Adopted Regional System (ARS), including costs associated with delay in receipt of federal funding and extraordinary costs, would be funded by the jurisdiction in which the Extension is located with local, state, federal and other funds, without cost to other Compact member jurisdictions." In this case, the responsible WMATA compact jurisdiction is the Commonwealth of Virginia. The incremental annual subsidy of the Project's operating and maintenance costs is allocated among the WMATA Compact jurisdictions (Virginia, Washington D.C. and Maryland), based on the WMATA subsidy allocation formula outlined in Chapter 8 of the Final EIS.*

Local Comment: Doubling the current Dulles Access Toll Road toll to pay for rail rapid transit is unfair since the project will provide no direct benefits to residents of McLean and the indirect benefits, additional commuting capacity, is probably at least ten years away. (0233, 0426-M –26)

> ***Response:*** *The Commonwealth of Virginia will be responsible for 25 percent of the Project's capital costs. For the Wiehle Avenue Extension, the Commonwealth will use revenues from the Virginia Transportation Act of 2000 and Dulles Toll Road revenues. A planned toll increase would raise tolls at the main toll plaza to $0.75 and at each ramp toll plaza to$0.50. For the Full LPA, in addition to the two sources of the Wiehle Avenue Extension, the Commonwealth may consider other sources, including future transportation appropriations.*

Need Further Explanation of Public-Private Partnership Option

Local Comment: A project based on finding money that plainly is not going to be appropriated is not a solution to transportation in the Dulles corridor. Neither is a secret public-private partnership option, the details of which are negotiated without meaningful citizen involvement, but stick the taxpayers with increased payments, in this case higher tolls on the Dulles Toll Road. (0151, 0151-T –3)

Local Comment: A project based on finding money that plainly will never be appropriated is not a solution to transportation in the Dulles Corridor. (0151, 0297-E –3)

> ***Response:*** *The Public-Private Transportation Act (PPTA) requirements are contained in the 1995 legislation, as amended. 1995. The status of the PPTA consortium is described DRPT's web site, www.drpt.virginia.gov.*

Need to Explore Impacts of Increased Tolls

Local Comment: Could it be that no one pushing rail wants to talk very much about the additional toll increases that will be necessary "forever" to pay for rail??? $2.00 in each direction. Conversations I have had with many people on this subject have stated they will avoid the toll road if tolls go up (they can't afford more costs). That means more traffic on alternate routes…they very thing you are trying to stop. (0233, 0426-M –13)

> ***Response:*** *As described in Chapter 8 of the Final EIS, the Commonwealth of Virginia will be responsible for 25 percent of the Project's capital costs. For the Wiehle Avenue Extension, the Commonwealth will use revenues from the Virginia Transportation Act of 2000 and Dulles Toll Road revenues. A planned toll increase would raise tolls at the main toll plaza to $0.75 and at each ramp toll plaza to $0.50. For the Full LPA, in addition to the two sources of the Wiehle*

Avenue Extension, the Commonwealth may consider other sources, including future transportation appropriations.

Need to Remove Increased Tolls from the Financial Analysis

Local Comment: Urge Virginia Department of Public Rail and Transportation to remove from the financial analysis the increased tolls, at least until the construction of the earliest phase of the project. (0437, 0437-E –8)

***Response**: As described in Chapter 8 of the Final EIS, the Commonwealth of Virginia will be responsible for 25 percent of the Project's capital costs. For the Wiehle Avenue Extension, the Commonwealth will use revenues from the Virginia Transportation Act of 2000 and Dulles Toll Road revenues. A planned toll increase would raise tolls at the main toll plaza to $0.75 and at each ramp toll plaza to$0.50. In addition to the two sources of the Wiehle Avenue Extension, the Commonwealth may consider other sources, including future transportation appropriations. Any approved toll increases would be implemented in advance of construction to begin building reserves for the Project, perhaps as early as January 2005.*

Need for Further Explanation of Project Costs

Local Comment: The overarching problem is cost. $3.2 billion is simply unacceptable. Our independent experts are perplexed at this price tag for this project. The project should cost half this amount at most. The current cost projection is a red flag demonstrating that the whole project needs to be subjected to serious reexamination. We are heading for a train wreck of massive proportions if we launch this project with these inflated projections, knowing full well that the cost is going to escalate further as time goes by. (0151, 0151-T –2)

Local Comment: The overarching problem is cost. $3.6 billion is simply unacceptable. Our independent experts are perplexed at this price tag for this project. The project should half this amount at most. The current cost projection is a red flag demonstrating that the whole project needs to be subjected to serious re-examination. Those figures tell us in clear terms that we are NOT at one stage and need to focus on moving to the next. Those figures tell us that we need to go back and look at previous stages to find out what's already off the track. We are headed for a train wreck of massive proportions if we launch this project with these inflated projections, knowing full well that the cost is going to escalate further as time goes by. (0151, 0297-E –2)

***Response:** The project's capital cost estimates are comparable with projects of this size and are based on a methodology appropriate with the design stage of the Final EIS and the final General Plans. It should be noted that the medians of the Dulles Connector Road, Dulles Toll Road, and Dulles Greenway were reserved for high-capacity transit, saving the project significant money for right-of-way and access. The next phase of the project, preliminary engineering, will prepare an independent estimate of the capital costs of the two Build Alternatives.*

Description of Local Jurisdictions' Funding Plans

Local Comment: This is in response to your request for information and an update of the local jurisdictions' funding plans for the Dulles Corridor Rapid Transit Project (Project). I understand that other funding partners will also be providing information specific to their portion of the project cost. At the request of the Fairfax County Board of Supervisors, the Virginia General Assembly approved legislation in 2001 to allow the creation of a special transportation improvement district in the Dulles Corridor to help fund the County's portion of the Project. The landowners' group, Landowners' Economic Alliance for the Dulles Extension of Rail (LEADER), has been formed to push for the establishment of the tax district in the corridor. In addition to the transportation improvement district and county general obligation bonds, another possible revenue source is the upcoming transportation referendum this fall. The Board has endorsed the Transportation Sales Tax Referendum to increase the sales tax rate by one-half percent to fund important transportation projects in the region. In the list of projects to be funded by the sales tax

revenue, the Dulles Corridor Rapid Transit Project is prominently featured with $350 million set aside for the Project, to be used for the locality share of the project capital cost. (0233, 0233-L –1)

Response: *Section 8.1 of the Final EIS describes the creation of the Fairfax County Dulles Rail Transportation Improvement District as the County source of revenues for its capital funding share. The sales tax referendum of Fall 2002 did not pass; it would have allocated a minimum of $350 million for the Fairfax and Loudoun County shares of the Project capital funding.*

Need to Explore Innovative Pricing Strategies

Local Comment: As the financial plan for the project is finalized, we suggest the Project Team consider Dulles Toll Road revenues to provide incentives for using the Fastoll transponder instead of paying cash; provide discounts for carpool and van pool drivers, and provide a demonstration of the high occupancy toll or HOT lane concept, which uses variable tolls to regulate use of the HOT lane. (0233, 0426-M –35)

Local Comment: What about paying for use of HOV lanes by those with LOV vehicles? Works great in LA. (0233, 0426-M –22)

Response: *The Commonwealth of Virginia will consider the operation of its toll collection system when and if the tolls increase as part of the Project's capital funding plan. The availability of the HOV lane and the increased toll will assist to encourage ridesharing and carpooling. To operate as a true HOT lane, the current HOV lane would require separation from the HOV lane and the mixed-traffic toll plaza.*

Need Further Explanation on Tax District Boundaries and Rates

Local Comment: But the only way this ever gets to a conclusion is if the local group takes initiative that was actually started by the Board with legislation that was passed by the General Assembly and welcome back to you next time and this effort…Governor Holton and I are pleased to serve as Co-Chairs…. and present you with a petition. Which would….according to the law that was passed by the General Assembly and was in effect suggested mandated by this Board some time early next year after this process has been completed locally preferred alternative has been selected. And we'll come back to you at that point with a specific proposal as to what the particular boundaries of any tax district that might be created to fund such a project might be, and what the particular tax rate (this might be a district, it might be districts) but those decisions won't be made until after this part of the process has been completed. (0233, 0426-M –1)

Local Comment: Could it be that no one pushing rail wants to talk about raising the taxes on the commercial property by an additional .30 to .50 centers per $100 dollars of value?????? Is that good for my business??? The answer is NO!!! I will have to charge more for rent to keep up with taxes at a time when there is more vacancy in the corridor (and at Tysons) then there was during the early 90's. Some experts say the corridor recovery could take as long as 3 to 5 years (I hope not) but…now is not the time to raise my taxes. (0233, 0426-M –12)

Response*: Section 8.1 of the Final EIS describes the creation of the Fairfax County Dulles Rail Transportation Improvement District as the County source of revenues for its capital funding share of the Wiehle Avenue Extension. As stated in that section, Fairfax County and the landowners group have structured the district to provide sufficient revenues to cover the County's share of costs for the Extension. Although payments will not be due until December 2004, on July 1, 2004, Fairfax County began charging commercial landowners an additional 22 cents per $100 of assessed value for their properties on top of the base real estate tax rate of $1.13. Fairfax County projects that the tax rate could eventually increase to 29 cents per $100 of assessed value once a Full Funding Grant Agreement is executed. The actual levy will be established each year based on current assessments and the amount of outstanding debt. The district, which had an assessed value of $6.8 billion in June 2004, is expected to generate up to $400 million for the construction of the Wiehle Avenue Extension.*

Need Explanation on Source of Funding for Maintenance Costs

Local Comment: Could it be that no one is pushing rail wants to talk about the additional taxes that will have to be raised from private citizens and businesses to pay for the annual estimated $125,000 to $185,000 in maintenance costs for rail…do you think businesses…which are already hurting because of the downturn in this economy are going to be pleased to get additional tax bills for rail which most of their employees won't use? (0233, 0426-M –14)

> ***Response****: The incremental annual subsidy of the Project's operating and maintenance costs is allocated among the WMATA Compact jurisdictions (Virginia, Washington D.C. and Maryland), based on the WMATA allocation formula. As presented in Section 8.2 of the Final EIS, the incremental annual subsidy of the Wiehle Avenue Extension in its opening year of 2011 is $20 million in year-of-expenditure dollars. Of this subsidy amount, the Fairfax County share is $7.5 million. There are no plans for the Transportation Improvement District revenues to be used for operation and maintenance subsidy assistance.*

Need for Cooperative Funding Approach

Local Comment: The Town of Herndon supports federal, state and local officials working together to achieve full funding for the Metrorail Alternative from federal, state and local sources. (0409, 0409-L –5)

> ***Response:*** *Comment noted.*

Public Comments

Need Further Explanation on Average Cost Per Rider

Public Comment: Because the ridership estimates are inflated, the average cost per rider also is suspect. (0112, 0462-L-7)

> ***Response:*** *The ridership estimates are based on the Metropolitan Washington Council of Governments' Round 6.3 cooperative land use forecasts of the region. This travel demand forecast model of the Final EIS contains these land use forecasts and mechanisms for estimating roadway and transit ridership with and without the Dulles project.*

Need Further Explanation on Subsidy Costs Per Rider

Public Comment: Very few people are projected to use Amtrak to Dulles in spite of the outrageous costs that are projected, initial costs that are probably twice what it should cost to do either rail or Bus Rapid Transit, and crippling annual subsidies for the rest of our lives. (0162, 0162-M-5)

Public Comment: The reason Virginia has out competed Maryland for commercial development is simply the fact that Virginia has been a lower tax environment overall, an advantage which the proponents of this public-private partnership are threatening. The actual numbers for rail confirm what we at Dartrail suspected 15 years ago: a subsidy of $40 per ride, equivalent to an annual subsidy per taxpayer in Fairfax of $400 per year, for the indefinite future. These annual subsidies assume that $3.3 billion is magically available for this project - and we know the money is not there. (0162, 0162-M-8)

Public Comment: So those of you in the political sphere that are thinking of voting for rail now, just remember every time people pay for the Toll Road, they pay sales tax, and they pay the property taxes, they are paying for something that is of no extra benefit. It amounts to a $40-per-ride subsidy, which is obviously way too high. (0184, 0184-T –7)

Public Comment: In looking at your numbers and ridership on the rail, we're guesstimating by your numbers that there will have to be a subsidy per ride of $43 per subsidy ride on the rail, as opposed to

BRT. The reason we got to that is you look at the metro system in Washington now currently and has always run in a deficit position and has currently gone back for additional funding. (0252, 0252-T –3)

Public Comment: We also believe that in looking at your numbers again that there is going to have to be an additional subsidy of somewhere between 110 and 185 million dollars per year in subsidies for maintenance on the system. Where does that money come from? (0252, 0252-T –5)

> ***Response:*** *The Federal Transit Administration has established two cost-effectiveness measures as part of its equitable evaluation of New Starts projects. As presented in Section 10.2 in the Final EIS, for the Wiehle Avenue Extension in year 2025 in comparison to the New Starts Baseline, the cost per new transit trip is $24.73 and the cost per user benefit hour is $18.69 to $21.08.*

Need Further Explanation on Committed Federal Funds

Public Comment: I want to understand how much federal money is committed to this project, and have some idea whether it is likely to be forthcoming. If it is likely to be cut, what is our plan to replace these funds? (This question is why I copied Rep. Tom Davis). (0114, 0114-E –6)

> ***Response:*** *As stated in Chapter 8 of the Final EIS, DRPT and its funding partners are seeking $760.7 million in Federal funding for the Wiehle Avenue Extension through FTA Section 5309 New Starts program. This funding level represents 50 percent of the estimated project costs, consistent with FTA's recent practice for major transit capital investments. A total of $163.5 million in Federal New Starts funding has been appropriated for the Project through fiscal 2004 to support project planning, environmental review, and engineering activities. An additional $20 million of New Starts funding for the project is expected in FY 2005. In addition to these appropriations, DRPT has requested that $600 million in additional New Starts funding be authorized for the Dulles Corridor Rapid Transit Project in the pending transportation reauthorization. A Full Funding Grant Agreement will be required to secure any authorized federal New Starts funding for construction of the Wiehle Avenue Extension. The terms of the FFGA, including the level and timing of federal funding participation, will be finalized following completion of preliminary engineering activities.*

Need Further Explanation on Sales Tax Increase

Public Comment: Their entire project should be on hold until we see how the people vote re the sales tax increase. (0006, 0006-L –2)

Public Comment: I think this project is vital to improved economic health in the Dulles Corridor. But I (and my fellow voters) need to be shown that the sales tax increase will get us there. (0114, 0114-E –8)

Public Comment: I want to have enough plans in place, and publicly available (with an "executive summary" that we normal MBAs can read) so that I can have confidence that the organizations in place can make it happen. If that means requiring VDOT to have their budgets, estimates and schedules reviewed by someone with a better planning track record, then please get that review done before I vote on the tax. (0114, 0114-E –4)

> ***Response:*** *The sales tax referendum of Fall 2002 did not pass; it would have allocated a minimum of $350 million for the Fairfax and Loudoun County shares of the Project capital funding. If it had passed, the Project's financial analysis would have been updated accordingly.*

Need Further Explanation on Transportation Improvement Districts

Public Comment: Most of the burden should be borne by major employers in Tysons who import the workers. (0049, 0049-CC-2)

> ***Response:*** *Section 8.1of the Final EIS describes the creation of the Fairfax County Dulles Rail*

Transportation Improvement District as the County source of revenues for its capital funding share of the Wiehle Avenue Extension. As stated in that section, Fairfax County and the landowners group have structured the district to provide sufficient revenues to cover the County's share of costs for the Extension. Although payments will not be due until December 2004, on July 1, 2004, Fairfax County began charging commercial landowners an additional 22 cents per $100 of assessed value for their properties on top of the base real estate tax rate of $1.13. Fairfax County projects that the tax rate could eventually increase to 29 cents per $100 of assessed value once a Full Funding Grant Agreement is executed. Most of the commercial landownership of the district is in Tysons Corner.

Need to Explore Equity Concerns

Public Comment: Residents in Tysons should not be taxed to subsidize the cost of commuters. Many commuters are from MD. How long before rail is available along the beltway to service them & reduce such congestion. (0049, 0049-CC-1)

Response: *The Dulles Rail Transportation Improvement District does not apply to owner-occupied residential properties in the Tysons area, or anywhere else along the corridor. Other proposed funding sources, including the revenues from the Dulles Toll Road, would not be specific to Tysons residents, and would apply to Maryland commuters and visitors. Rail along the Capital Beltway to connect Maryland and Virginia is not yet programmed project.*

Need Explanation on Allowable uses of Tax Increase Funds

Public Comment: I want to know that the money I'm voting to pay will be spent for this purpose. No more "it may be used by other road projects." Other projects are fine, but for me this is the most important, and if I'm not confident it will happen, I can't support increased taxes. (0114, 0114-E –5)

Response: *The sales tax referendum of Fall 2002 did not pass; it would have allocated a minimum of $350 million for the Fairfax and Loudoun County shares of the Project capital funding. If it had passed, the project's financial analysis would have been updated accordingly.*

Need Explanation on Tax Increase Level

Public Comment: Increases sales tax 1% to help transportation funding in the NOVA region. Compared to other major metropolitan areas (NY, Chgo, LA) who are all ~7.5%, VA is unusually low. (0079, 0079-CC-3)

Response: *The sales tax referendum of Fall 2002 did not pass; it would have allocated a minimum of $350 million for the Fairfax and Loudoun County shares of the Project capital funding. If it had passed, the Project's financial analysis would have been updated accordingly.*

Need Further Explanation of Contributions by Jurisdiction

Public Comment: Dulles Airport must contribute more money to rail option. (0092, 0092-CC-2)

Public Comment: The cost -- the Airports Authority I don't think is kicking in enough. I saw in the paper 134 million versus 152 million for Loudoun County residents, yet about 4500 of the riders are going to come from Dulles airport, which is not far ahead of the 3800 for BRT. And once again, BRT is just much cheaper. (0112, 0245-T –9)

Response: *The project does benefit from the Metropolitan Washington Airports Authority proffer of the median of the Dulles International Airport Access Highway and Connector Road for Metrorail right-of-way at no cost to the Project. The amount and percentage of capital funding of the two Build Alternatives by jurisdiction are based on the preliminary allocation agreement among the non-federal funding partners.*

Need Funding Plan to Address Shortfalls

Public Comment: A more fundamental problem is the funding plan. There is no firm assurance that there will be a tax district to help in funding. The beneficiaries of the new system must provide adequate support. The specific contribution must be established. Based on the experience with the Route 28 Tax District (where VDOT was required to use funds from other Northern Virginia projects to cover the Districts shortfall in debt servicing). The sales tax increase in not ensured, the Federal contribution is not established, from a toll increase on the toll to help provide state support has many opponents. With cost increase examples of the Wilson Bridge and the Mixing Bowl interchange, it is very likely that the stated costs are understated. Specific plans should be advanced to cover this contingency because of the multiple agencies contributing to any finally approved project. (0119, 0119-L –3)

> ***Response:*** *Chapter 8 of the Final EIS presents the capital cost estimate and funding strategy for the two Build Alternatives. The estimates include a change order contingency, a design allowance, a complexity factor and inflation to year of expenditure. DRPT will prepare a final financial plan and risk assessment during the project's next phase, preliminary engineering.*

Need to Explore "More Equitable" Source of Funding

Public Comment: If there are insufficient funds "up front", Virginia Railway Express has proven that transit revenue bonds can be sold at favorable rates with no guarantees other than bond insurance against fraud. Fare revenues will support a bond issue of about $600 million. (Metrorail did get a letter of credit from local banks for $600 million to fund the construction of the final segments of the Green Line but by the time construction was completed, grant funds had become available to fully fund the completed project without drawing on the letter of credit). This is a more equitable source of funding than a tax district where abutting property owners would be double taxed for the project, once by the tax district and once by the appreciated property values. Over the life of the project, MetroRail will save more than it costs, for sure. (0013, 0013-L –29)

> ***Response:*** *Since the Metrorail system and any Metrorail extension operates at a deficit, there are no excess fare revenues for capital financing. Section 8.1 of the Final EIS describes the successful creation of the Fairfax County Dulles Rail Transportation Improvement District as the County source of revenues for its capital funding share of the Wiehle Avenue Extension. As stated in that section, Fairfax County and the landowners group have structured the district to provide sufficient revenues to cover the County's share of capital costs for the Extension.*

Need for Public Distribution of Sales Tax Increase Details

Public Comment: I would like to say that I will vote for the sales tax increase for transportation in Northern Virginia. And I hope I'll be able to do so, I really do! However, I hope that before the election day you'll be able to provide me with enough credible information and plans that it makes sense. I'm sure many of my fellow Northern Virginians are in the same boat so hopefully you'll take my list seriously. (0114, 0114-E –1)

> ***Response:*** *The sales tax referendum of Fall 2002 did not pass; it would have allocated a minimum of $350 million for the Fairfax and Loudoun County shares of the Project capital funding. If it had passed, the Project's financial analysis would have been updated accordingly.*

Need for "What-If" Scenarios in the Financial Analysis

Public Comment: How can we afford their Rail with surprise deficits and other problems in Virginia, as mentioned in newspapers. (0006, 0236-L –2)

Public Comment: What about the - what happens if the Federal funding doesn't come forward? The metrorail requires that the Congress put up $200 million a year for the project, and yet our congressmen,

Wolf and Moran, have both warned that it is unlikely that even half that amount is going to be available. And that was before the war on terrorism, homeland security program, and the rapid increase in the national debt began to take so much of the money that will be necessary. (0138, 0241-T –10)

> ***Response:*** *The Project would be constructed in two phases in order to reduce annual Federal funding needs by spreading the construction costs over a longer period of time. As stated in Chapter 8 of the Final EIS, DRPT and its funding partners are seeking $760.7 million in Federal funding for the Wiehle Avenue Extension through FTA Section 5309 New Starts program. This funding level represents 50 percent of the estimated project costs, consistent with FTA's recent practice for major transit capital investments. A total of $163.5 million in Federal New Starts funding has been appropriated for the Project through Fiscal Year 2004 to support project planning, environmental review, and engineering activities. An additional $20 million of New Starts funding for the project is expected in FY 2005. In addition to these appropriations, DRPT has requested that $600 million in additional New Starts funding be authorized for the Dulles Corridor Rapid Transit Project in the pending transportation reauthorization. A Full Funding Grant Agreement will be required to secure any authorized federal New Starts funding for construction of the Wiehle Avenue Extension. The terms of the FFGA, including the level and timing of federal funding participation, will be finalized following completion of preliminary engineering.*

Need for Further Development of Financial Plan

Public Comment: The next thing we are really concerned about is the financial plan. The financial plan for this $3.3 billion undertaking is extremely short. It's just 24 pages out of 3000 pages total in the EIS, attempting to cover all of the following: The design and construction costs; capital funding issues; subsidy requirements; and financial risk management. And you're doing it for five alternatives, which - with a bunch of sub alternatives. We believe that this level of analysis is grossly inadequate for such a massive undertaking in such uncertain times. (0138, 0241-T –8)

Public Comment: WMATA's financial plan is incredibly speculative. The DEIS devotes only 24 pages in a 3,000 page study to cover all of the following: design and construction costs, capital funding, subsidy requirements, and financial risk management. That is grossly inadequate, especially since there are so many variations being considered. (0112, 0462-L –31)

> ***Response:*** *The financial analysis presented in the Final EIS summarizes the estimates of capital costs, operation and maintenance costs, revenues, and subsidy allocation for the two Build Alternatives. NEPA requires the environmental impact statements to succinctly describe the data and analyses used to understand the effects of the alternatives. In this case, it is a summary of the estimated costs and proposed funding sources. DRPT prepared a preliminary financial plan for the Wiehle Avenue Extension as part of its Request to Enter Preliminary Engineering (August 2003), and will prepare the final financial plan for that extension during preliminary engineering.*

Public Comment: All of the money - local, state, and Federal - dedicated to this project will be money that cannot be spent on other transportation projects; and, This project stands the likelihood of being the first, or among the first, in the nation ever to be presented to the Federal Transit Administration as a candidate for a Full Funding Grant Agreement with its local and state funding plans in place. (0154, 0225-M –9)

Public Comment: All of the money, local, state and Federal, dedicated to the project will be money that cannot be spent on other transportation projects. This project stands the likelihood of being the first in the nation ever to be presented to the Federal Transit Administration as a candidate for a full funding grant agreement with its local and state funding plans in place, thus enhancing its standing in the competition for federal funds. In the mind of LEADER's cochairman and board of directors, the huge environmental, social, and economic benefits of building Dulles rail now makes the project vital and the role of LEADER critical. (0154, 0182-T –5)

Public Comment: During the FEIS and rail PE process we need hard work on…Development of a plan

for funding these and other improvements from the economic growth that will occur. (0173, 0213-M –11)

Response: *DRPT prepared a preliminary financial plan for the Wiehle Avenue Extension as part of its Request to Enter Preliminary Engineering (August 2003) and will prepare the final financial plan for that extension during preliminary engineering.*

The Project Team recognizes the important role LEADER had in forming the Transportation Improvement District and in meeting the federal requirement to secure local funding in advance of federal commitment.

Need Further Explanation of Federal Funding

Public Comment: Moreover, there is no money to build the Dulles Expansion. The federal government did not even have enough money to replace the Woodrow Wilson Bridge, which it owns. It will have even less money in 2010 when social security costs will begin to exceed social security tax revenues. (0140, 0200-E –2), (0140, 0140-T-2)

Response: *The Federal funds for the Dulles Corridor Rapid Transit Project will come from Federal New Starts program. The Woodrow Wilson Highway Bridge is not eligible to compete for these funds. How the Federal government will address its budget needs in the context of Social Security funding is beyond the scope of the Final EIS.*

Need Further Explanation on State Funding

Public Comment: The state of VA has no money for the Metrorail expansion. It cannot even pay for overdue road improvements. There are no plans to increase the state's transportation revenue stream. The transportation fund is what the state raids to pay for schools and welfare during economic slowdowns. Transportation is government's lowest priority. (0140, 0200-E –3), (0140, 0140-T-3)

Public Comment: Believes that the response on page 366 of the *Public Hearings Report* is based on a misunderstanding of their recommendation because the opening phrase ("If these recommendations are accepted…") of their actual recommendation was omitted from the comment on page 365. They recommended a funding scenario that involves several toll increases, beginning about 2006, which would raise an estimated amount of bond revenue in excess of a half billion dollars. (0494 08)

Response: *The Commonwealth of Virginia will be responsible for funding 25 percent of the Wiehle Avenue Extension capital costs, approximately $380.4 million (YOE), using Virginia Transportation Act (VTA) of 2000 and Dulles Toll Road revenues.*

To fund the Commonwealth's share of the Dulles Corridor Rapid Transit Project with available revenues and limited use of short-term financing, a toll increase is planned. Based on an initial analysis of current traffic and growth projections, a toll of $0.75 at the main toll plaza and $0.50 at each interchange ramp toll plaza provides sufficient revenues to meet the Commonwealth's obligations for the Wiehle Avenue Extension.

Need Further Explanation on Sales Tax Referendum

Public Comment: The $5 billion in bond revenues that tax-referendum supporters cite is fraudulent. An annual revenue stream of $140M can support only $1.4 billion of bonds. Perhaps in another 10 years, another $1 billion could be floated, for a maximum of $2.4 billion. The remainder of the $5 billion would be paid for by our grandchildren. (0140, 0200-E –5)

Response: *The sales tax referendum of Fall 2002 did not pass; it would have has allocated a minimum of $350 million for Dulles as part of the Fairfax and Loudoun County local shares of the Project capital funding. If it had passed, the Project's financial analysis would have been updated accordingly to reflect the sales tax referendum funds.*

Public Comment: I think the cost to the taxpayers is really abominable. I really can't understand how members of the Loudoun supervisors and their financial backers and the Piedmont Environmental Council and other environmental groups can oppose the sales tax referendum, which is going to cost about $90 a year to the average family, but these rail transit proposals will cost each commuter, by my estimate, about $480 to $500 a year. Because if you work 240 days out of the year and you've got to pay $2 more each day, just do the math. (0112, 0245-T –8)

Response: *Additional sources of revenue for the project beyond the use of the Dulles Toll Road revenues will be examined by the Commonwealth through the development of a preliminary financial plan for the remainder of the Full LPA.*

Need Further Explanation of Transportation Revenue Sources

Public Comment: The solution of building the Dulles Metrorail? And all other transportation improvements? Is to defeat the tax referendum and force government to let transportation compete with ineffective school and welfare programs for real estate and income tax revenues. (0140, 0200-E –7)

Public Comment: This year the [Fairfax] County is getting $270 million more than it would have if residential taxes had increased no faster than inflation. Where is the money going? It is going to public schools and welfare. There has been no significant increase in academic achievement in our schools, and our growing welfare spending is teaching citizens to depend on government handouts rather than to become self-sustaining. The basic problem is that state policy forbids the spending of income taxes on transportation. None of your state income taxes are spent on transportation. And county policy does not allow spending real estate taxes on transportation. These big buck revenue streams are off limits to transportation, they are monopolized by education and welfare, whose programs subsidize problems rather than solve them. The solution to building the Dulles metrorail and all other transportation improvements is to defeat the sales tax referendum and force government to let transportation compete with ineffective school and welfare programs for real estate and income tax revenues. (0140, 0140-T –7)

Response: *Section 8.1 of the Final EIS describes the creation of the Fairfax County Dulles Rail Transportation Improvement District as the County source of revenues for its capital funding share. The sales tax referendum of Fall 2002 did not pass; it would have allocated a minimum of $350 million for the Fairfax and Loudoun County shares of the Project capital funding.*

Need for "Third Party" Review of Cost Assessment

Public Comment: The DEIS envisions a 50% federal commitment or about $1.7 billion. However, the federal government won't commit to any percentage, only a dollar amount. If our estimates are low, the bill to local taxpayers will be substantially higher. (0446, 0218-M –13)

Public Comment: Cost must be a major concern. While the EIS estimates may pass Federal transit muster, the alliance recommends an independent third party cost assessment be conducted in advance of any final funding package that is sent to Congress or the people of Northern Virginia. The study envisions a 50 percent Federal commitment, or about $1.7 billion. However, the Federal government won't commit to a specific percentage, only a dollar amount. If our estimates are low, the bill to local taxpayers will be considerably higher. (0446, 0146-T –12)

Public Comment: Cost must be a major concern. While EIS estimates may pass Federal Transit Administration muster, the Alliance recommends an independent third party cost assessment be conducted in advance of any final funding package that is sent to Congress or Northern Virginia residents. (0446, 0218-M –12)

Response: *The capital cost estimates of the two Build Alternatives of the Final EIS will be updated during the Project's preliminary engineering phase.. Those estimates will serve as the basis for the negotiations of the Federal Full Funding Grant Agreement. Cost controls in addition*

to the estimating process to date will include a value planning process, a value engineering process, risk analysis, the use of design-build procurement through the Virginia Public-Private Transportation Act, and continued use of project contingencies to account for design unknowns.

Need to Avoid a "Rail Only" Strategy

Public Comment: Establish realistic expectations in terms of implementing and phasing a Locally Preferred Alternative. Do not adopt a "rail only" strategy for which adequate funding is far from certain and that would stand in the way of more immediate, flexible and affordable transit systems. Remember, no member of our congressional delegation has expressed optimism that the proposed total for federal matching dollars is available in the next decade. (0446, 0218-M –14)

Response: *The selected LPA is the Metrorail Extension. It would be constructed in two phases in order to reduce annual Federal funding needs by spreading the construction costs over a longer period of time. As stated in Chapter 8 of the Final EIS, DRPT and its funding partners are seeking $760.7 million in Federal funding for the Wiehle Avenue Extension through FTA Section 5309 New Starts program. This funding level represents 50 percent of the estimated project costs, consistent with FTA's recent practice for major transit capital investments. A total of $163.5 million in Federal New Starts funding has been appropriated for the Project through Fiscal Year 2004 to support project planning, environmental review, and engineering activities. An additional $20 million of New Starts funding for the project is expected in FY 2005. In addition to these appropriations, DRPT has requested that $600 million in additional New Starts funding be authorized for the Dulles Corridor Rapid Transit Project in the pending transportation reauthorization. A Full Funding Grant Agreement will be required to secure any authorized federal New Starts funding for construction of the Wiehle Avenue Extension. The terms of the FFGA, including the level and timing of federal funding participation, will be finalized following completion of preliminary engineering activities.*

Need for Further Explanation on Tax District

Public Comment: The cost of the system is approaching three to four billion dollars, not including debt services, which could be another two billion dollars. In addition, we are faced with a projecting annual operating budget deficit of one hundred and eight million per year. Regarding the cost of building the rail, Reston will bear an unfair amount of the construction, which will be over a billion dollars, with the federal government picking up the rest. Eight hundred million is projected from tolls and two to four million projected from a newly to be established tax district, which will include multi family. The tax district will most likely be expanded to include single families to offset the operating deficit. (0189, 0201-L –1)

Public Comment: There are two costs: The cost of building and operating this system, and the cost of our quality of life, both of which this rail proposed will have devastating impact as presently being presented. The cost of the system is approaching $3-4 billion, not counting debt service, which could add another $2 billion, as well as a projected annual operating budget of $108 million deficit. Regarding the costs of building the rail, Reston will have to bear the unfair amount of construction which will be over $1 billion, with the Federal government picking up the rest. $800 million is projected from tolls and $400 million projected from the newly established tax district, which will include multi-families and the tax district will most likely be expanded to include single families to offset the operating deficit. (0189, 0189-T –1)

Response: *The Dulles Rail Transportation Improvement District, as created by Fairfax County in February 2004 based on a petition of commercial landowners, does not allow the district's tax levy to be applied to single-family owner occupied homes. Section 8.1 of the Final EIS presents the capital funding strategy of the two Build Alternatives. Section 8.2 of the Final EIS presents the operating costs, revenues and subsidy allocation of these alternatives.*

Need for Further Explanation of Funding Sources by Jurisdiction

Public Comment: The newspaper says that is the only source of funds [tolls] to pay for rail to Dulles. Suggestion - how about the Commonwealth allocate 100% of the funds that Northern Virginia sends to Richmond to come back to Northern Virginia instead of the 49% Richmond currently sends back. This would pay for rail and a whole lot more in road improvements here in Northern Virginia. (0203, 0203-L –8)

> ***Response:*** *As described in Section 8.1 of the Final EIS, the Commonwealth of Virginia will be responsible for funding 25 percent of the Wiehle Avenue Extension capital costs, approximately $380.4 million (YOE), using Virginia Transportation Act of 2000 and Dulles Toll Road revenues. For the remainder of the Full LPA, in addition to the Virginia Transportation Act of 2000 funds and Dulles Toll Road revenues, the Commonwealth may consider additional sources, including future transportation appropriations, to fund construction.*

Need to Further Explore Equity Among Jurisdictions

Public Comment: The rest of the County and the State benefit by the transit friendly growth in the corridor, and should help fund it. The current emphasis on the Toll Road for state funding and small tax districts for county funding fails to recognize that all the environmental risks are borne by the Corridor, but the benefits are shared widely. (0210, 0210-M –5)

Public Comment: 2010 is a long time to wait for service. We may run out of money before we get there. Too much state and county funding is coming from the corridor itself since the benefits are shared throughout the region. (0170, 0170-T –3)

Public Comment: The rest of the county and the state benefit by the transit-friendly growth in the corridor and should help fund it. (0170, 0170-T –9)

Public Comment: The current emphasis on the toll road for state funding and small tax districts for county funding fail to recognize that all the environmental risks are born by the corridor but the benefits are shared widely. (0170, 0170-T –10)

> ***Response:*** *In addition to the Virginia Transportation Act of 2000 funds and Dulles Toll Road revenues that are planned to fund the Wiehle Avenue Extension, the Commonwealth may consider additional sources, including future transportation appropriations, to fund construction of the remainder of the full LPA. Section 8.1of the Final EIS describes the creation of the Fairfax County Dulles Rail Transportation Improvement District as the County source of revenues for its capital funding share.*

Dulles Rail Not Dependent on Sales Tax Referendum

Public Comment: We also want to distinguish Dulles rail from the sales tax debate. As Delegate Plum has noted, and contrary to public perception, Dulles rail has its own comprehensive financing plan that is independent of the sales tax funds. He has stated, "The financial analysis included in the draft environmental impact statement indicates that the project, as far as state and local governments are concerned, is essentially self-funded. A combination of Federal funds, excess toll revenues and receipts from a special tax district, make the project possible. It is not affected by the recent cutbacks in the state transportation budget. It can go forward regardless of the outcome of the fall sales tax referendum." (0251, 0251-T –5)

Public Comment: We are also want to distinguish Dulles Rail from the sales tax debate. As Delegate Plum has noted and contrary to public perception, Dulles Rail has its own comprehensive financing plan that is independent of the sales tax funds. He has stated: "The financial analysis included in the draft environmental impact statement indicates that the project as far as state and local governments are concerned is essentially self-funded. A combination of federal funds, excess toll revenues, and receipts from a special tax district make the project [Dulles Rail] possible. It is not affected by the recent cut-backs

in the state transportation budget; it can go forward regardless of the outcome of the fall sales tax referendum." (0149, 0205-M –3)

Response: *The sales tax referendum of Fall 2002 did not pass; it would have allocated a minimum of $350 million for Dulles as part of the Fairfax and Loudoun County its local shares of the Project capital funding. If it had passed, the Project's financial analysis would have been updated accordingly to reflect the sales tax referendum funds.*

Need for Further Explanation of Special Tax Districts

Public Comment: We request a financing plan which would have the bonds on the toll road paid off no later than 2016, but preferably this decade, and without the necessity of any full time tolls on the Access Road beyond the bond payoff date, and without the necessity of any special tax districts outside Tysons Corner. (0162, 0162-M –18)

Public Comment: We request a financing plan which will have the bonds and the Toll Road paid off no later than 2016, which we think is quite possible. (0184, 0184-T –15)

Public Comment: A number of comments have been made concerning special [tax] task districts. I'm not sure the public understands what that actually means. It means that people along the Toll Road, where there are mostly businesses, and you're talking about promoting businesses, are actually going to suffer as a result of additional taxes coming up. We have heard as much as 30 to 50 cents per hundred in additional taxes for each building, for instance, that we own. That's a heck of a lot of money. (0252, 0252-T –4)

Response: *DRPT prepared a preliminary financial plan for the Wiehle Avenue Extension as part of its Request to Enter Preliminary Engineering (August 2003) and will prepare the final financial plan for that extension during preliminary engineering. To fund the Commonwealth's share of the Dulles Corridor Rapid Transit Project with available revenues and limited use of short-term financing, a toll increase is planned. Based on an initial analysis of current traffic and growth projections, a toll of $0.75 at the main toll plaza and $0.50 at each interchange ramp toll plaza provides sufficient revenues to meet the Commonwealth's obligations for the Wiehle Avenue Extension. A final decision on the revised toll structure would be made by the CTB after the completion of a formal traffic and revenue study and its administrative review process.*

Section 8.1of the Final EIS describes the creation of the Fairfax County Dulles Rail Transportation Improvement District as the County source of revenues for its capital funding share of the Wiehle Avenue Extension. As stated in that section, Fairfax County and the landowners group have structured the district to provide sufficient revenues to cover the County's share of costs for the Extension. Although payments will not be due until December 2004, on July 1, 2004, Fairfax County began charging commercial landowners an additional 22 cents per $100 of assessed value for their properties on top of the base real estate tax rate of $1.13. Fairfax County projects that the tax rate could eventually increase to 29 cents per $100 of assessed value once a Full Funding Grant Agreement is executed.

Need Further Explanation on Federal Share of Funding

Public Comment: Now I don't know why that wasn't done. You can only get 60 percent Federal funding with BRT now. Maybe someone has an explanation for that. I don't know. But I'd like to know what it is because money doesn't grow on trees, we don't have the Tooth Fairy in Washington like we did when we built the Metro with 80, 90 percent Federal money. (0136, 0136-T –1)

Response: *The project is following Federal guidance for projects requesting New Start funding. The Conference Report accompanying the FY 2002 Department of Transportation Appropriations Act directs "FTA not to sign any new full funding grant agreements after September 30, 2002 that have a maximum federal share of higher than 60%". Federal commitments to fund New Start*

Projects are made by a Full Funding Grant Agreement (FFGA) between FTA and the project sponsor.

Need Further Explanation on Availability of Federal Funds

Public Comment: The second concern I have is since the Los Angeles subway was bagged a few years ago, the Federal DOT is not building underground - not funding underground transit systems any more. So I don't know whether the Tysons underground is going to be funded or not. Moreover, I haven't heard anyone guarantee there's going to be $100 million over the next 10 years to fund this project. Now maybe someone has something, more information than I have about that, and if they do, I would appreciate knowing about it. So these are two concerns. (0136, 0136-T –2)

Public Comment: So, you know, maybe this is a great thing, but let's at least get all the facts and information and let's wonder why we didn't go ahead and get the 80 percent Federal funding in 1999 when the project was only $1.9 billion and now it's 3.3 or thereabouts. How about the Federal funding? Is that available? I doubt it. When I hear the talk of the congress people, it's not. (0136, 0136-T –4)

Public Comment: There are two fundamentals I believe we have to look at: First of all, the availability of Federal money. This idea of the tooth fairy bringing $1.8 billion of Federal money in 10 years to Fairfax County and Loudoun County to build this system is just that, it's not going to happen, folks. And the people in Congress and the people in the Federal Transportation Administration will tell you that. So we ought to stop planning around something that is probably not going to happen. (0136, 0168-T –2)

Public Comment: The [Draft] EIS assumes the Congress will appropriate $200 million per year for this project, yet Congressmen Wolf and Moran both report that it's quite unlikely that even half that annual amount will be available. The congressmen's concerns were apparent even before the war on terrorism, the Homeland Security program, and the rapid increase in the national debt became such major issues. There's going to be a lot more competition for funding in the future. And if Federal funding is not forthcoming when scheduled, there are three possible outcomes, of course. Virginia and Fairfax County can make up the difference. We don't think that's likely, but if it were going to be the case, I think the taxpayers will want to know about it. Second, the project can be delayed until funding is available, and then you have the cost of delay, which I have mentioned before. (0138, 0138-T –4)

Response: *The Federal Transit Administration (FTA) does not have a policy against building underground, but does use a cost-effectiveness measure for New Starts projects, which considers the additional cost of building underground vs. a project's ridership.*

In 1999, the Project had not prepared an EIS as required under NEPA and could not have proceeded. Even in 1999, 80 percent of funding from FTA was not a given. The $1.9 billion estimate of the MIS did not have the benefit of more detailed engineering analysis, General Plan development, cost estimation, design contingencies, and updated year of expenditure escalation.

The selected LPA is the Metrorail Extension. It would be constructed in two phases in order to reduce annual Federal funding needs by spreading the construction costs over a longer period of time. As stated in Chapter 8 of the Final EIS, DRPT and its funding partners are seeking $760.7 million in Federal funding for the Wiehle Avenue Extension through FTA Section 5309 New Starts program. This funding level represents 50 percent of the estimated project costs, consistent with FTA's recent practice for major transit capital investments. A total of $163.5 million in Federal New Starts funding has been appropriated for the Project through Fiscal Year 2004 to support project planning, environmental review, and engineering activities. An additional $20 million of New Starts funding for the project is expected in FY 2005. In addition to these appropriations, DRPT has requested that $600 million in additional New Starts funding be authorized for the Dulles Corridor Rapid Transit Project in the pending transportation reauthorization. A Full Funding Grant Agreement will be required to secure any authorized federal New Starts funding for construction of the Wiehle Avenue Extension. The terms of the FFGA, including the level and

timing of federal funding participation, will be finalized following completion of preliminary engineering activities.

Need to Address Equity and Reliability of Funding Mechanisms

Public Comment: The proposed rail funding mechanisms are not equitable nor reliable. (0139, 0139-T –3) (0139, 0280-T –3)

Public Comment: What we have, is the state and the county once again taking advantage of us. Whereas, the projects of this size such as the Chesapeake, Monitor/Virginia, Hampton Road tunnels, Route 58 in South West Virginia and even the Manassas Commuter Train, were are all funded by the Commonwealth of Virginia, why not us? And, to further reinforce that fact, it only shows how inapt our local politicians are. But, in essence the method of funding which you propose, is not only unfair, it is immoral. And to mention your failure to have a full public hearing on the funding as you had stated that you would hold. (0189, 0201-L –2)

Public Comment: What we have is a state and a county is once again taking advantage of us, whereas projects such as the size as a Chesapeake, the Hampton Road tunnels, and Route 58 in southwest Virginia, and even the Manassas commuter rail, are funded all by the Commonwealth of Virginia. Why not us? In essence, the method of funding which is being proposed is not only unfair, it is immoral. (0189, 0189-T –2)

Response: *The amount and percentage of capital funding of the two Build Alternatives by jurisdiction outlined in Chapter 8 of the Final EIS are based on the preliminary capital cost allocation agreement among the non-federal funding partners. The Commonwealth of Virginia will be responsible for funding 25 percent of the Wiehle Avenue Extension capital costs, approximately $380.4 million (YOE), using Virginia Transportation Act (VTA) of 2000 and Dulles Toll Road revenues.*

Project Funding is Independent of Sales Tax Funds

Public Comment: I want to step aside for a second and talk about distinguishing Dulles rail from the sales tax debate. I think that is important. We learned today that Dulles rail does have its own comprehensive financing plan that is independent of the sales tax funds. For those who don't know, the Coalition for Smarter Growth has had a real problem with the sales tax being a new wish list for which the total costs have not been identified and includes an awful lot of road projects we have real concerns about and really no hook to better land use. Dulles rail, in contrast, has a good hook to better land use, has a specific funding plan that is independent of sales tax. (0149, 0149-T –9)

Public Comment: I also want to distinguish Dulles rail from the sales tax debate. For those who don't know, we have been opposed to the sales tax. I think it is important to note that Dulles rail has its own comprehensive financing plan that is independent of the sales tax fund, a plan that relies on a variety of sources including the special tax district. A special tax district seemed appropriate to us because local landowners, commercial landowners will realize significant land use value increases from the arrival of Dulles rail. Unlike the sales tax project list, which does not have a full cost assigned to it, and has very few -- has no links to land use, Dulles rail - we are working on the land use links and has a full funding formula. So we should not confuse the two. (0149, 0180-T –6)

Response: *The sales tax referendum of Fall 2002 did not pass; it would have allocated a minimum of $350 million for the Fairfax and Loudoun County shares of the Project capital funding. If it had passed, the Project's financial analysis would have been updated accordingly.*

Need to Further Explain Funding Partners

Public Comment: You could use the surplus from the Reston Community Center toward this if you can get it before they think up something else new to spend it on. (0082, 0082-CC-2)

Response: *The Reston Association is not a Project funding partner.*

Need to Explain Capital Repair Funding Sources

Public Comment: The other thing that is not being considered is that Metro says that it's going to need up to 9 billion in capital repairs over the next 20 years just for the existing 103-mile system. So where is the money going to come from? It's going to come from me. (0112, 0245-T –10)

Public Comment: Virtually no one believes that the referendum will solve our transportation crisis. Remember the existing Metrorail has an unfounded capital requirement over the next 25 years of $4.5 billion. Where is the planning for this? The reckless financial planning that brought us Enron and WorldCom are what is bringing us the sales tax referendum and the planning for the Dulles rail project. The referendum legislation now allows government to sell tax-supported bonds without having to hold a bond referendum. (0140, 0200-E –6) (0140, 0140-T-5)

Response: *DRPT and WMATA recognize that the infrastructure renewal and capacity improvements of the existing Metrorail system must be funded under the WMATA Capital Improvement Plan, of which the present Metro Matters program is the first element. Each WMATA Compact member jurisdiction will decide on the funding mechanism for its share of the Metro Matters program.*

Cost Estimates Inconsistent with Purple Line study

Public Comment: The cost estimates do not gel with Maryland's Purple Line study, which I'm quite familiar with, because I fought the inner Purple Line and the outer Purple Line when I lived in Montgomery County, and now I've become a passionate supporter of the inner line, and that's because what Maryland did in its Purple Line study was to determine, one, that it admitted that it offered no relief to traffic congestion. (0112, 0245-T –2)

Public Comment: The cost estimates do not gel with Maryland's Purple Line and Corridor Cities Transitway data. (0112, 0269-M –3)

Response: *The project capital costs are compatible with projects of this size, and are based on a methodology appropriate with the design stage of the Final EIS and the final General Plans. The Purple Line is presently undergoing definition as to its alignment, type of service (bus or light rail), schedule, and operation. These factors do not allow for a one-to-one comparison with the Dulles Corridor Metrorail Project capital cost estimates.*

Need to Investigate Project Cost Effectiveness

Public Comment: Prentiss Properties supports public transit being bought to the Dulles-Tysons corridor, as long as it is done in a fiscally responsible manner. After review of the EIS, we are very concerned about a number of issues. We understand that rail will likely move the most people, but it does not appear to be the best solution in terms of dollars invested per passenger. Rail may move double the passengers, but it will cost at least seven times as much. (0139, 0139-T –1)

Public Comment: Prentiss Properties supports public transit being brought to the Dulles/Tyson's Corridor, as long as it is done in a fiscally responsible, well conceived manner. After review of the EIS, we are very concerned about a number of issues. We understand that rail will likely move the most people, but it does not appear to be the best solution in terms of dollars invested per passenger. Rail may move double the passengers, but it will cost at least seven times as much! (0139, 0280-T –1)

Response: *The selection of the Metrorail Extension as the Locally Preferred Alternative was based on a number of objectives, among these being cost-effectiveness. Other goals and*

objectives include increasing transportation services, transit ridership, supporting future development, supporting environmental quality, and serving diverse populations.

Need to Further Explore Willingness to Pay

Public Comment: Have you surveyed those in the special tax district to determine how much they would be willing to pay for being near the system? Only with their contribution do you have any hope of reducing the fares to an attractive level. (0166, 0166-T –3)

Response: *Section 8.1 of the Final EIS describes the creation of the first Fairfax County Dulles Rail Transportation Improvement District as the County source of revenues for its capital funding share of the Wiehle Avenue Extension. As stated in that section, Fairfax County and the landowners group have structured the district to provide sufficient revenues to cover the County's share of costs for the Extension. A new landowner's group, called the Western Alliance for Rail to Dulles (WARD), has formed to explore the potential of developing another tax district, similar to the Dulles Rail Transportation Improvement District, which would include properties within Fairfax County west of Wiehle Avenue. WARD has drafted a petition and began circulating it among landowners in July 2004.*

Need Further Explanation on Public-Private Funding

Public Comment: Page S-28 Funding Needs and Strategy lists the Capital Costs and the Operating and Maintenance Costs for the various alternatives. It also states that funding for these costs could be provided through a combination of public and private sector funding. However, no information is provided as to how this funding translates to increased tolls, additional real estate taxes, or special taxes levied. Before any judgment as to selection of an alternative can be made, specific data needs to be provided in this regard for each alternative. (0228, 0228-E –1)

Response: *Section 8.1 of the Final EIS describes the funding partners, their proposed funding sources, and the current status, availability, and capacity of the funding sources. The section also presents a discussion on the resulting increase or change in rate to support the funding obligation..*

Tax Burden Will Constrain Other Projects

Public Comment: The Federal government is not going to support this project beyond $100 million per year, if that, and they probably shouldn't even step up at that level. This type of crippling tax burden will place severe constraints on the ability of our area to improve the Beltway, I-66, Route 28, Route 1, and other areas. I cannot see why supervisors from districts not served by this system would not vigorously oppose this wasteful expenditure of public money that will constrain the ability to solve transportation bottlenecks in their districts. (0162, 0162-M –9)

Response: *The regional Transportation Planning Board (TPB) approves the long-range plan of transportation projects in accord with available funding over twenty-five years. The TPB has approved the Full LPA to be part of the region's long-range plan.. Members of the TPB include representatives of local governments; state transportation agencies; the Maryland and Virginia General Assemblies; the Washington Metropolitan Area Transit Authority; and non-voting members from the Metropolitan Washington Airports Authority and federal agencies,*

The Full LPA would be constructed in two phases in order to reduce annual Federal funding needs by spreading the construction costs over a longer period of time. As stated in Chapter 8 of the Final EIS, DRPT and its funding partners are seeking $760.7 million in Federal funding for the Wiehle Avenue Extension through FTA Section 5309 New Starts program. This funding level represents 50 percent of the estimated project costs, consistent with FTA's recent practice for major transit capital investments. A Full Funding Grant Agreement will be required to secure any authorized federal New Starts funding for construction of the Wiehle Avenue Extension.

Follow Up On Rail Initiatives by Congressmen

Public Comment: As a result of the events of September 11th, our three congressmen, Wolf, Davis and Moran, wrote to the Secretary of Transportation, Norman Mineta, in October, requesting that the Secretary work on developing a financial plan that would expedite the bringing of rail service to Dulles airport. With the closing of Reagan National Airport following the attack on our city, the Congress was confronted with the difficulty in getting to Dulles, which became the primary functioning airport at that time. In light of these recent experiences, I think it is far more likely that Congress will appropriate funds for rail to Dulles than has been expressed tonight. What is absolutely certain is that if we do not follow up on the initiatives that our congressmen have started and request funding for Dulles rail, then certainly we will not see rail built. (0144, 0190-T –2)

Public Comment: My only other note that I wish to say is the fact that, since I live in Reston, the new tax that they're going to be doing as far as the Toll Road, possibly, and a sales tax-- we're paying for the rail, we've been paying for the rail through the tolls. We need to build it now. (0081, 0285-T –2)

> ***Response:*** *The selected LPA is the Metrorail Extension. It would be constructed in two phases in order to reduce annual Federal funding needs by spreading the construction costs over a longer period of time. As stated in Chapter 8 of the Final EIS, DRPT and its funding partners are seeking $760.7 million in Federal funding for the Wiehle Avenue Extension through FTA Section 5309 New Starts program. This funding level represents 50 percent of the estimated project costs, consistent with FTA's recent practice for major transit capital investments. A total of $163.5 million in Federal New Starts funding has been appropriated for the Project through Fiscal Year 2004 to support project planning, environmental review, and engineering activities. An additional $20 million of New Starts funding for the project is expected in FY 2005. In addition to these appropriations, DRPT has requested that $600 million in additional New Starts funding be authorized for the Dulles Corridor Rapid Transit Project in the pending transportation reauthorization. A Full Funding Grant Agreement will be required to secure any authorized federal New Starts funding for construction of the Wiehle Avenue Extension. The terms of the FFGA, including the level and timing of federal funding participation, will be finalized following completion of preliminary engineering activities.*

Need Further Explanation on Cost Share by Jurisdiction

Public Comment: As outlined in the draft environmental impact statement, the Dulles rail is estimated to cost approximately $3.3 billion. Fairfax County's share of the cost is presently estimated at $514 million, or 15.6 percent of the total project's cost. All or a portion of this will be addresses by the LEADER initiative, but only if there is rail in the corridor. As part of the 25 percent local match required by the Federal Transit Administration, Fairfax County's share will be combined with Loudoun County's and a share from the airports authority. The combined local share will be matched with $800 million from the Commonwealth of Virginia, and this combined local state share will be matched with the Federal government's 50 percent share for the project's total cost. (0154, 0182-T –4)

> ***Response:*** *Section 8.1 of the Final EIS discusses the capital funding strategy of the selected LPA – the Metrorail Extension - including funding shares of the capital costs. The Full LPA would be constructed in two phases in order to reduce annual Federal funding needs by spreading the construction costs over a longer period of time.*

Need More Information on Project Funding

Public Comment: We do not have enough information available to state that we support the taxation required to pay for the project, therefore, at this time we do not support the DCRTP. We will not support any alternative unless it is fully funded. (0021, 0021-L –1)

> ***Response:*** *Section 8.1 of the Final EIS discusses the capital funding strategy of the selected*

LPA – the Metrorail Extension - including funding shares of the capital costs. Section 8.1 of the Final EIS describes the creation of the Fairfax County Dulles Rail Transportation Improvement District as the County source of revenues for its capital funding share of the Wiehle Avenue Extension. As stated in that section, Fairfax County and the landowners group have structured the district to provide sufficient revenues to cover the County's share of costs for the Extension. Although payments will not be due until December 2004, on July 1, 2004, Fairfax County began charging commercial landowners an additional 22 cents per $100 of assessed value for their properties on top of the base real estate tax rate of $1.13. Fairfax County projects that the tax rate could eventually increase to 29 cents per $100 of assessed value once a Full Funding Grant Agreement is reached..

Draft EIS Not Competitive Under FTA Criteria

Public Comment: THE DEIS FAILS TO BE COMPETITIVE UNDER THE FEDERAL TRANSIT CRITERIA FOR FUNDING UNDER THE NEW STARTS PROGRAM. If a rapid transit proposal does not receive the 52% Federal share of funding, which in this case is up to $1.8 billion, it cannot be built. It's that simple. The competition for funds is intense and becoming more so each year as budget pressures mount. The Federal Transit Administration receives ten to twenty times more applications for funding each year than it can recommend for funding. Given that circumstance, wouldn't it have made sense to organize the DEIS and the local evaluation process around the criteria the FTA uses? We don't believe many of the people concerned with this issue have ever seen these criteria. We have copies of them and of two recent GAO reports to Congress for your review today. Bottom line: when reviewed against the FTA criteria, this DEIS fails to make a winning case for the MetroRail alternative, and it will take a lot of additional work to make the BRT proposal competitive as well. (0138, 0476-L –3)

***Response**: Several of the criteria used in the New Starts evaluation process can be used as measures to evaluate a project. However, it should be noted that the purpose of the evaluation of projects under the New Starts criteria does not directly correlate with the requirements for alternatives evaluation under the NEPA process, which is the intent of the Final EIS. The New Starts criteria are used to provide a consistent evaluation basis to compare very different technologies in very different regional settings, not to distinguish between multiple alternatives within the same corridor. As such, the New Starts process does not contain nearly enough information to satisfy the legal sufficiency requirements of NEPA or address all of the local issues identified during the scoping process. Information from the Final EIS is used to prepare the New Starts data for the selected Locally Preferred Alternative - the Metrorail Extension - and the financial analysis in Chapter 8 of the Final EIS is a component of those evaluations.*

Need for More Thorough Financial Analysis

Public Comment: The DEIS treated the financial analysis in a very superficial manner. (See pp 8-1 to 8-24) For a transit project of this magnitude and for a lack of funding sources, it is important to ensure that the planning process gives fully objective financial data that is available for citizen review and comment. Based upon the experiences of other major transit projects in the area as well as rail projects in other cities, what is expected cost overruns for each of the core transit sites to include Tysons Corner, Reston, Herndon-Monroe, Dulles Airport, and Loudoun? (0147, 0459-L –24)

***Response**: Chapter 8 of the Final EIS discusses the capital cost estimates and capital funding strategies of the two Build Alternatives. Every effort is being made to avoid cost overruns. The recent completion (January 2001) of the original Metro 103-mile system was done on or ahead of schedule and considerably under budget.*

Public Comment: For WMATA and the elected officials to select the Locally Preferred Alternative without first doing a much more thorough analysis of the financial aspects is extremely risky. Realistically, MetroRail service to Dulles will not start until at least 2015. That is because rail can't carry the first passengers until the last piece of track is laid and the last station finished, and big projects always take longer than projected. BRT saves time. BRT builds on the existing express bus system. Nothing gets

discarded. Heavy construction is minimized. Significant improvements will occur in months, with full service to Dulles within two years. (0112, 0462-L –32)

> ***Response**: The selected LPA is the Metrorail Extension. The revised implementation schedule shows a 2015 opening year for the full LPA, dependent of the availability of funding. The existing Corridor express bus service will continue and be enhanced during the two phases of construction of the Full LPA.*

Public Comment: WMATA and VDRPT need to provide more than 24 pages of financial analysis to determine the true costs of the project. The project team provides no break down on the estimated $111 million subsidy for rail by county. It boldly proclaims a $1.1 billion benefit for the local economy, but provides no details on who benefits. Could it possibly be ONLY those owners of properties right at rail stations, plus WMATA and its unionized work force? What is the benefit to Loudoun County and Fairfax? (0112, 0462-L –50)

> ***Response**: The allocation of operating subsidy for the opening year and forecast year, by WMATA Compact member jurisdiction, is presented in Tables 8.2-1 and 8.2-2 of the Final EIS.*
>
> *As described in Section 5.1 of the Final EIS, the selected LPA would have a positive effect on the local economy as a result of capital expenditures, namely construction costs, vehicles, and systems. These effects include impacts on employment, output and earnings as these funds are spent and re-spent throughout the economy. These temporary effects vary for each alternative, based on the amount of construction expenditures, the type of expenditures and timing of the expenditures. Measuring these effects provides a measure of the relative effects of two Build Alternative as compared to the No-Build Alternative. While the analysis does account for funds that would have been spent within the counties whether a Build Alternative is implemented or not, it is important to note that these effects represent the redistributive economic effects of increased federal and state funding within Fairfax and Loudoun counties. These are one type of economic impact, and do not necessarily reflect the full cumulative effects of the project on the regional economy.*
>
> *The Project Team applied multipliers from the US Department of Commerce, Bureau of Economic Analysis' Regional Input-Output Modeling System (RIMS II). These multipliers, which reflect the industrial base of the region, are multiplied by the direct capital expenditures in order to calculate the total effects on the regional and state economy. The multipliers used reflect the economic base of Fairfax and Loudoun Counties combined, and as such the total effects cannot be broken out by County.*

Public Comment: Financing details are sketchy at best. Devoting only 24 pages of more than 3,000 in the EIS to financing is not good, particularly when the FTA's "new starts" program has only $6 billion to dole out. WMATA and VDRPT have not met the FTA criteria for having a "evidence of stable and dependable financing sources to construct, maintain and operate the proposed system or extension." However, there is sufficient funding to put express buses on the Dulles Access Road right now. (0112, 0462-L –8)

> ***Response**: The financial analysis presented in the Final EIS summarizes the estimates of capital costs, operation and maintenance costs, revenues, and subsidy allocation for the two Build Alternatives. NEPA requires the environmental impact statements to succinctly describe the data and analyses used to understand the effects of the alternatives. In this case, it is a summary of the estimated costs and proposed funding sources. DRPT prepared a preliminary financial plan for the Wiehle Avenue Extension as part of its Request to Enter Preliminary Engineering (August 2003), and will prepare the final financial plan for that extension.*

Public Comment: In your cost factors and in projecting ridership, as I understand it, in some of your models in terms of people using cars and people using mass transit, if you are anything like VDOT, which I think your models are, you use a standard inflation factor to project the cost of petroleum for fuels for

cars. I would recommend that you do some sensitivity analysis and that you look out over the next 20 to 25 years and adjust your gasoline costs to say as much as 10 percent increase per year. (0258, 0258-T –3)

> ***Response:*** *The travel demand model used sensitivity tests as part of its calibration and validation procedure. Automobile costs are reflected in the model using a number of inputs, including highway costs, toll costs, and parking costs.*
>
> *For consistency with Metropolitan Washington Council of Government (MWCOG) regional planning assumptions, the project has used the regional assumptions on future costs, land use, and socioeconomic makeup. If the model were adjusted to reflect gasoline costs increasing at 10 percent per year for 25 years, the result would be gasoline costs that were $1.50 a gallon in 2000 would be $16.25 a gallon in 2025. This high gasoline cost would change the mode split and ridership results, likely resulting in higher transit ridership. The high gasoline costs over such a length of time would likely spur development of alternative fuels technology that would partially offset the increased gasoline costs, making the long range year 2025 results inconclusive.*

Need for Further Clarification of Proposed Funding Sources

Public Comment: What percent of the county's financial resources available for transit strategies will be consumed by each transit alternative? (0147, 0459-L –27)

> ***Response****: Each of the capital funding partners will decide on the funding mechanism for its share of the capital costs. Likewise, each WMATA Compact member jurisdiction will decide on the funding mechanism for its allocation of the operating subsidy of the Metrorail system. These funding agencies and jurisdictions conduct their own financial capacity analyses. During preliminary engineering of the Wiehle Avenue Extension, DRPT will prepare the Extension's final financial plan, which FTA will review for financial capacity as part of negotiations for a Federal Full Funding Agreement.*

Public Comment: Financing of Metro Rail would not only be a strong financial burden on the citizens in the corridor and particularly Reston, but it is unfair since the Virginia Commonwealth's portion is from the Dulles corridor (Dulles Toll Road and Dulles Corridor Tax District) instead of from the entire Commonwealth. In fact I believe this proposed funding plan in overly discriminatory and violates the civil rights of the citizens in the corridor, particularly those in Reston. (0189, 0448-E –6)

> ***Response****: As described in Section 8.1 of the Final EIS, the Commonwealth of Virginia will be responsible for 25 percent of the Project's capital costs. For the Wiehle Avenue Extension, the Commonwealth will use revenues from the Virginia Transportation Act of 2000 and Dulles Toll Road revenues. A planned toll increase would raise tolls at the main toll plaza to $0.75 and at each ramp toll plaza to$0.50. For the Full LPA, in addition to the two sources of the Wiehle Avenue Extension, the Commonwealth may consider other sources, including future transportation appropriations. Section 8.1.2.3 of the Final EIS also describes the creation of the Fairfax County Dulles Rail Transportation Improvement District as the County source of revenues for its capital funding share of the Wiehle Avenue Extension. As stated in that section, Fairfax County and the landowners group have structured the district to provide sufficient revenues to cover the County's share of costs for the Extension.*

Public Comment: Why were there no full public hearings held as promised on the proposed funding? Financing the Metro rail is expected to cost 3 1/2 billion dollars. What is the debt service on this amount? What is the annual operating deficit? And who will have to pay it? Why is this project proposed not being decided by a public referendum? Who is the responsible public official(s) and final decision-maker on this proposed project? Who will own the system if built? How much longer will the tolls remain on the Dulles toll road to fund the rail? (0189, 0448-E –7)

> ***Response****: Three Public Hearings were held on the Draft EIS in July 2002 and two public*

hearings were held on the Supplemental Draft EIS in December 2003. At these Public Hearings the capital cost estimates and operating subsidies were presented for each Build Alternative. Chapter 8 of the Final EIS provides the capital and operating funding strategies. The project itself is not subject to a public referendum; however, individual jurisdictions may have hearing requirements for their share of the capital funding. The decision-making bodies are the Virginia Commonwealth Transportation Board (CTB), the WMATA Board of Directors, and the Federal Transit Administration. Commitment by individual funding partners to specific funding sources is not required until the project enters into a Full Funding Grant Agreement (FFGA) with the FTA. The duration of increased tolls as a source of revenue for the Wiehle Avenue Extension is through 2016, as presented in DRPT's preliminary financial plan of August 2003. However, the Commonwealth is currently conducting a rate adjustment study for the Dulles Toll Road. The results of the study and formal recommendations are expected in late 2004. Following this, a final decision on a revised toll structure would be made by the CTB in late 2004.

Public Comment: Counting on Congress to appropriate the required amount for MetroRail is unrealistic, too. MetroRail requires Congress to appropriate $200 million annually, yet Congressmen Wolf and Moran have warned that not even half that annual amount will be available. The War on Terrorism, the Homeland Security program, and the rapid increase in the National Debt are setting new priorities, and spending an extra $3 billion to get the same rapid transit results will not survive the appropriations process. (0112, 0462-L –36)

Public Comment: Primary concerns have been and continue to be the lack of any definitive federal funding commitment and of transit supportive densities/land use patterns. In terms of funding, the reality is that the timing and magnitude of the federal government's contribution will dictate what expanded transit services are provided and when. To date, no federal commitment has been made to anything other than BRT, and no member of our congressional delegation has expressed optimism that anything approaching $1.5 billion in federal money will be available in the foreseeable future. (0446, 0446-E –2)

***Response**: The selected LPA is the Metrorail Extension. It would be constructed in two phases in order to reduce annual Federal funding needs by spreading the construction costs over a longer period of time. As stated in Chapter 8 of the Final EIS, DRPT and its funding partners are seeking $760.7 million in Federal funding for the Wiehle Avenue Extension through FTA Section 5309 New Starts program. This funding level represents 50 percent of the estimated project costs, consistent with FTA's recent practice for major transit capital investments. A total of $163.5 million in Federal New Starts funding has been appropriated for the Project through Fiscal Year 2004 to support project planning, environmental review, and engineering activities. An additional $20 million of New Starts funding for the project is expected in FY 2005. In addition to these appropriations, DRPT has requested that $600 million in additional New Starts funding be authorized for the Dulles Corridor Rapid Transit Project in the pending transportation reauthorization. A Full Funding Grant Agreement will be required to secure any authorized federal New Starts funding for construction of the Wiehle Avenue Extension. The terms of the FFGA, including the level and timing of federal funding participation, will be finalized following completion of preliminary engineering activities.*

Public Comment: Regarding funding availability, we know that, in reality, the funding plan presented in the DEIS is dependent on a number of future actions including the passage of the Transportation Sales Tax referendum in November. Another even more significant concern is whether the authorization and appropriation of adequate level of federal funding will be approved by Congress and the President, no sure thing given the propensity of this administration to short change every program it undertakes. (0387, 0387-L –2)

***Response**: The sales tax referendum of Fall 2002 did not pass; it would have allocated a minimum of $350 million for the Fairfax and Loudoun County shares of the Project capital funding. If it had passed, the Project's financial analysis would have been updated accordingly. With respect to Federal funding, please see the response to the comment above.*

Public Comment: The EIS process is an exercise in futility if funding for the federal, state and local shares of providing some type of rapid transit system through the corridor cannot be expected. Funding should be reasonably assured before a Locally Preferred Alternative is selected. Rationale: There is currently no assurance of funding to fulfill the federal, state or local financial shares of providing rail in the corridor. (0402, 0402-L –2)

> ***Response****: The NEPA evaluation of alternatives and the New Starts evaluation of Wiehle Avenue Extension are two separate Federal processes. Under the New Starts program, DRPT has prepared a preliminary financial plan that justified the entry of the Extension into preliminary engineering. The preliminary financial plan and the Final EIS describe the capital and operating funding strategies.*

Public Comment: Fairfax County should take the lead in developing a financial program for implementing these recommendations. Three sources of funds should be seriously investigated and implemented in the appropriate manner: (a) use of windfall property tax receipts that will be realized from increases in commercial and residential property tax assessments in the station areas, (b) parking fee revenues, and (c) air-rights lease and sales revenues. The windfall property tax receipts will occur in the station areas, as has been realized in well-planned transit station areas throughout the country. For several years after a Full Funding Grant Agreement is negotiated, property assessments in the station areas will almost certainly increase at a significantly greater rate then the countywide average. Each year, all of the increase above the countywide average, or a portion thereof, can be put into a newly created Dulles Corridor Station Area Development Fund. This should be done in accord with a short- and long-range financial development and implementation program for the station areas, based on all the above recommendations. Part of the task of developing this program should be sufficient analysis of the impacts of such a program on overall County revenues and costs. It should not be difficult to demonstrate convincingly that many of above recommended programs will significantly increase net County revenues (i.e., revenues in excess of expenditures). For example, better pedestrian station access and air-rights development will both increase property values (and tax receipts) and decrease transit operating subsidies. Over the course of implementing this program, these impacts should be continuously and carefully monitored. Specific forecasts of expected impacts on County revenues and expenditures should be made and documented, so that the monitoring process can be refined each year with experience. This process will provide assurances that the policy and program is a significant net financial gain to all County taxpayers. Parking charges at park-and-ride facilities should be initiated at appropriate dates in the future, based on the work to be done in accord with recommendations above. The resulting parking revenues are likely to provide significant earlier amounts greater than the other two sources. However, the property tax windfall revenues are likely to provide greater amounts in years after Dulles rail operations begin. We recommend that air-rights lease and sale fees be set at a low level, perhaps just high enough to cover little more than administrative costs, in order not to discourage desirable forms of such development. Perhaps such fees should be waived in some cases (e.g., affordable housing) in order to encourage such development. (0478, 0484-E –26)

Public Comment: Who will profit from huge transit investments in the area - how will they contribute to the costs, how can they mitigate the costs (donate land, money, etc.) and how will they influence the decisions. (0235, 0235-E –6)

> ***Response:*** *Section 8.1 of the Final EIS describes the creation of the Fairfax County Dulles Rail Transportation Improvement District as the County source of revenues for its capital funding share of the Wiehle Avenue Extension. As stated in that section, Fairfax County and the landowners group have structured the district to provide sufficient revenues to cover the County's share of costs for the Extension. In effect, the landowners have elected for the County to tax their properties in order to establish a revenue stream for the County share of the capital costs. There is no expectation of net parking revenues nor are there plans for air rights development at the Project's stations.*

Public Comment: The costs to build the Tysons Corner DCRTP segment represents about 65% of the total costs of the rail option. It appears that the contribution of monies coming from the Tysons Corner

area will cover about 50% of those costs leaving the remaining to be made up from Toll Road increases. (0427, 0427-E –7)

> ***Response**: The preliminary financial plan for the Wiehle Avenue Extension describes the Federal share of capital costs at 50 percent, the Commonwealth of Virginia share at 25 percent and the Fairfax County share at 25 percent.*

Concern for Cost Overruns

Public Comment: WMATA says MetroRail will cost $3.3 billion, but WMATA's projects average an 83% cost overrun, according to the Urban Mass Transit Fact Book. More than likely, Dulles Rail's complete buildout could exceed $5 billion. I make this assertion based on the gargantuan construction cost overruns that WMATA incurred in constructing the 103-mile Adopted Regional System (ARS), where costs balloons from an estimated $2.5 billion to more than $12 billion (or more than $20 billion in constant year 2000 dollars). Additionally, in research subject to peer review (unlike the Dulles Rail Model), published in the respected Journal of the American Planning Association, an international survey of 58 rail projects revealed an average cost escalation of nearly 45% (these are enormous cost overruns, but still smaller than those WMATA has managed to rack up in 30 years of building rail lines - see http://c1.planning.org/japa/pdf/japaflvvbjerg.pdf for the Journal of the APA article). (0112, 0462-L –33)

Public Comment: WMATA says Metrorail will cost $3.3 billion, but WMATA's projects average an 83% cost overrun, according to the Urban Mass Transit Fact Book, which is based on FTA data. More than likely, Dulles Rail's complete buildout could exceed $5 billion. (0112, 0462-L –9)

Public Comment: Cost - We are concerned that the estimated $3.3 billion cost for the proposed Dulles Corridor rail transit system will undoubtedly increase, perhaps appreciably, by the time a Locally Preferred Alternative is approved, funding is expected, and construction proceeds. Rationale: Recent examples of greatly underestimated project costs are the Mixing Bowl (95/495) and the Wilson Bridge. This necessitates borrowing from other projects to fulfill financial obligations. (0402, 0402-L –10)

Public Comment: I know from my own experience in real estate and construction, rarely do large projects get completed on time and on budget. There's always something unexpected about that arises. And the same will be true for the metrorail project. It will take longer to build, it will end up costing more than we think. Look at the Wilson Bridge and the Springfield interchange project as examples of that. (0183, 0183-T –3)

Public Comment: Members of this panel, I worry. I worry when I read that it is common for major transit projects to have 100 to 125 percent cost overruns. (0147, 0177-T –2)

Public Comment: The EIS projects metrorail to cost $3.3 billion to build, but that estimate contains no contingency, we understand, for costs incurred if Metro fails to meet the very ambitious deadline to commence service. In such event, revenues will not start when projected, costs will continue to escalate with inflation, and interest costs will run, whether those interest costs are recognized formally or not. Also, it's impossible to predict the cost of capital in these turbulent times, which makes a contingency even harder to come by. We believe the actual cost of the system will be at least 100 percent higher than the estimate which, by the way, is quite common with large infrastructure, transportation infrastructure projects in the United States. We have been told that the actual costs of the existing metrorail system, the 103-mile system now in effect, ended up being well in excess of double the original estimate back before the system was started. We are trying to find out how the actual costs of the recently opened Brentwood Line compares to the original estimate. This information should be made public before the decision is made to go forward. BRT, on the other hand, will cost $300-500 million, according to the EIS, but we believe that sum can be value-engineered to be more in line with similar systems built in the U.S. and elsewhere, and we believe it will be under $300 million. If there is a funding crisis, the system can adjust much more easily with BRT than metrorail. (0138, 0138-T –3)

Public Comment: The Dulles Corridor Transit project could be significantly under costed. Historically, cost overruns on projects of such significant scope are fairly routine. Cost overruns above 100 percent are not unusual. At the project information meeting at the CTI location, Mr. Hill stated that the financial analysis was still in process and was not available for community review. Citizens should have access to all the information, including the financial analysis. (0147, 0459-L –23)

Public Comment: States that all Metro projects cost 78% over budget, which means that this project will likely cost $5 billion. FTA would have to grant $200 million per year, using a 50-50% federal/state/local-matching ratio, to be open by 2025. (0112 8-2)

> ***Response**: The selected LPA is the Metrorail Extension. It would be constructed in two phases in order to reduce annual Federal funding needs by spreading the construction costs over a longer period of time.*
>
> *The ultimate cost of the LPA relies on a number of assumptions, including project schedule, major cost drivers, inflation rates, expenditure forecast, funding availability, and financing requirements. During the project's next phase of preliminary engineering, DRPT will prepare the final financial plan, which will include an update of the capital cost estimate and a formal risk assessment. Section 8.3 of the Final EIS provides an initial discussion of risks and uncertainties.*
>
> *The Urban Mass Transit Fact Book is published by a public policy consulting firm and contains a number of independent assumptions regarding construction costs. The most recent WMATA construction program is the Fast Track Program adopted in December 1991 and competed in January 2001. The Fast Track Program included construction of the last 13.5 miles of the Adopted Regional System for $2.1 billion. By using an accelerated construction program with strategies designed to compress schedules and reduce costs, the program segments were completed on schedule or earlier, at or below budget. The $420 million in assured savings has been reserved for construction of the Branch Avenue Yard and procurement of additional rail cars.*

Need to Satisfy New Starts Funding Criteria

Public Comment: Also, Metrorail does not appear to satisfy the FTA "new starts funding" criteria. According to recent General Accounting Office (GAO) reports and testimony to Congress, BRT expansion is needed to expand the limited new starts funding under TEA 21. According to John Anderson, managing director, physical infrastructure issues for GAO, FTA will calculate "evidence of stable and dependable financing sources to construct, maintain and operate the proposed system or extension." (GAO-02-840T, page 4) It is my view that relying on a special taxing district and toll increase is not "stable and dependable financing." Most developers in the special taxing district are not going to be prime beneficiaries of "bonus densities." Furthermore, to raise $152 million in Loudoun County from the BPOL tax is absurd. Lastly, DRPT and WMATA have assumed that fares do not increase with inflation. Page 61 of the "methodology" special report states: "Early in the study, a decision was made to use a fare inflation rate equivalent to a third the rate of the consumer price index (CPI)." (0112, 0462-L –37)

> ***Response**: WMATA is unusual among the urban transit systems insofar as it does not have a dedicated source of funding; each WMATA Compact member jurisdiction has its own source of funding. The U.S. Secretary of Transportation determined on August 13, 1982 that these sources were stable and reliable. As part of the review of DRPT's final financial plan of the Wiehle Avenue Extension, FTA will likely evaluate the stability and reliability of the WMATA Compact jurisdictions to fund the infrastructure renewal of the Extension.*
>
> *Section 8.1 of the Final EIS describes the creation of the Fairfax County Dulles Rail Transportation Improvement District as the County source of revenues for its capital funding share of the Wiehle Avenue Extension. As stated in that section, Fairfax County and the landowners group have structured the district to provide sufficient revenues to cover the County's share of costs for the Extension.*

Loudoun County presently funds the local share of transportation projects through the use of the local gasoline tax and the Business Professional and Occupancy License (BPOL) revenue. In FY 2004, the adopted six-year Capital Improvement Plan (CIP) allocated $1.9 million from the County Public Transportation Fund and $23 million from BPOL pledge bonds for FY 2005-2010 to the Dulles Corridor Rapid Transit Project. Loudoun County is proposing the use of these funding sources for its share of the Full LPA capital costs..

The commenter is correct that the escalation of fares has been held to a rate one-third the rate of inflation. The fare escalation outlined in the Final EIS is based on current fare levels and recent WMATA fare increases. Metrorail fare revenues presently generate the highest fare recovery rate of any major transit system at over 70 percent of operating and maintenance cost.

Public Comment: During this last part of the planning phase, please put forth every effort to resolve outstanding design and operational issues described above and brought up by others during this public hearing process. You should also strive to maximize the potential of the transit proposed for this corridor, whichever mode it is. Emphasize the positive aspects of transit in the corridor. For the Dulles project to compete favorably against other possible transit projects nationwide for new starts money, it's important that the transit alternatives and particularly the locally preferred alternative are presented in the most favorable possible light. (0387, 0387-L –48)

***Response**: FTA has approved the DRPT Request to Enter Preliminary Engineering for the Wiehle Avenue Extension. Thus, the Project has entered the New Starts program. Moreover, DRPT received a Federal grant to fund the phase of preliminary engineering. DRPT will submit annual New Starts updates to FTA.*

The Final EIS and final General Plans have fully described the LPA in all aspects and prepared the Project for preliminary engineering.

Use of Toll Revenues to Fund Transit Improvements

Public Comment: Support the Commonwealth's use of toll revenues to provide transit improvements in the corridor in a timely manner. Use of toll revenues from the Dulles Toll Road should be limited to use in the corridor. (0396, 0396-L –5)

***Response**: The Commonwealth Transportation Board Policy is to direct toll revenues for highway and transit use in the corridor. The Commonwealth Transportation Board amended their policy in September 2001 to dedicate a minimum of 85 percent of excess Dulles Toll Road Revenue to public transportation in the corridor.*

Public Comment: As a former regular user of the Dulles Toll Road who is now a casual user of it, I wanted to add these comments to my suggestion that increased toll revenues should not be counted on as part of the financing package. Many of the people who use the Toll Road would not be using either the BRT or one of the rail options currently proposed for the corridor. I don't mean this to sound rude, but it is almost as if those who prepared the Draft EIS did not travel the Toll Road during the morning or afternoon rush hours. If they had, they would have observed that a goodly number of the cars using the Toll Road are traveling to/from Maryland or are traveling elsewhere in Virginia using the Outer Loop of the Beltway. Also, quite a few people use feeder roads that are perpendicular to the Toll Road and then use the Toll Road as part of their drive to their final destination. During the evening hours, there are quite a few people who exit at Route 7 and head to points west. Also, I'm certain there is a certain percentage of Toll Road use by people using it as part of a non-commuter related trip and for whom neither the BRT nor a rail option is something they would find useful in making such a trip. Increasing the toll to help fund the rapid transit project would be an inequitable solution to finding money for the rapid transit project. This is especially true because it appears an unelected group of people would be making this decision with, what appears to be, very little recourse for those who use the road and would not use BRT or a rail option. I'm

sure those who use the Toll Road did not envision that revenue from it would be treated as a nearly unending supply of money for various other transportation projects. (0401, 0401- L-3)

Public Comment: What is the proposal for funding? I read in the Post you were talking about either raising tolls on the Dulles Toll Road by $1 or to $1 and over what period of time. Would the Greenway fares have to increase too? (0112, 0112-E –5)

Public Comment: Do Not raise our tolls. We are the only people in the metro area paying tolls now. Until all the other roads are charging $0.75, it is just not fair to make us pay more. (0082, 0082-CC-1)

Public Comment: In the last few weeks a new specter has arisen: a plan to double or triple the Dulles Toll Road tolls to pay for the same transit project that we're supposed to pay for with the sale tax. The worst thing you can do is to tell people they may have to pay twice for the same project, or just let hints in the newspaper stand…and see how many vote for the for the tax. Please clarify what this is all about, and whether we are expected to pay two different ways for the same project -- before the elections. (0114, 0114-E –7)

Public Comment: Increasing tolls on the Dulles Toll Road and creating a Dulles Corridor tax district will place a $1.3 billion tax burden on the Dulles corridor. This will drive businesses away from the new rail line, when we should be attracting businesses there. However, it may be just the thing to revitalize the Route 1 corridor. (0140,0200-E –4), (0140, 0140-T-4)

Public Comment: Please do not support the proposed expansion of Metrorail to Loudoun County via increasing tolls on the Dulles Toll Road. This expansion will cost billions and benefit only a few thousand residents of Loudoun County. Most of my neighbors in Ashburn work in either Loudoun or Western Fairfax County and would gain zero benefit but pick up the majority of the cost via the increased tolls. This is insane! (0295, 0295-E –1)

Public Comment: The cost to the taxpayers for this rail proposal, particularly the proposed $1 increase in tolls on the toll road, I think is going to lead to a taxpayer revolt. I'm finding that taxes here are rivaling what I paid in Montgomery County. (0112, 0245-T –4)

Public Comment: We are also concerned that the rail options will likely require tolls on the Dulles toll road to be raised substantially in order to fund the state's component of the capital costs. Raising these tolls may be theoretically feasible, but it will make the toll road corridor a less desirable place to locate businesses, thereby lowering property values as well as creating unmanageable congestion on alternate routes. Again, our competitive position versus other Virginia counties and Maryland may be further weakened. (0139, 0139-T –7)

Public Comment: If you must have rail, do it with no increase in the now unjustified toll. (0155, 0155-T –5)

Public Comment: I represent the users of the toll road who are fed up with the toll, long after the road has been paid for. I commute daily on my way to Columbia and back. We are the only commuters in the area who have to pay for the privilege of going to work. Now they want us to pay double for a train that we won't ride, subsidizing people who are as well off as we are. (0155, 0155-T –1)

Public Comment: The rail financing plan calls for turning the Dulles Toll Road into a bank by raising fares to $2.25 and use this for transit that will not service more than a fraction of commuters. It is unprecedented to use toll increases to finance Metrorail. This has never been done in Virginia and could lead to a situation where motorists are being asked to foot the bill for other transit projects. (0112, 0462-L –10)

Public Comment: But the Metrorail alternatives require raising tolls on the Toll Road to $2.25 each way and imposing a Special Tax District, raising the "BPOL" tax that businesses (like mine) pay in Loudoun, and possibly passage of the Sales Tax Referendum. Could there be a worse time to raise taxes and tolls

for a project that costs ten times more than is necessary? The economy is in turmoil, business activity is down, unemployment is rising, and 13 million square feet of office space stands vacant in the Dulles Corridor. (0112, 0462-L –34)

Public Comment: The Commonwealth of Virginia share of the capital investment does not appear to be balanced on a cost-benefit basis. The user of the Dulles Toll Road (DTR) entering and exiting the Toll Road at the Hunter Mill Road, Wiehle Avenue, Reston Parkway, Fairfax County Parkway, and Centerville Road interchanges paid for the construction and expansion of the Dulles Roll Road. These same users are now expected to pay a disproportionately larger share of the costs of the DCRTF. The EIS does not provide and data on the use of excess DTR receipts to date. As substantial excess toll funds have been realized from the DTR and state statute precludes the use of these funds for other than Dulles Corridor transit projects, an accounting of the surplus funds expended to date is needed. (0427, 0427-E –6)

Public Comment: But there also is a bad precedent to use toll revenue for Metro. Tolls have never been used for rail transit expansion in Virginia. The Dulles Toll Road is nearly paid off. By raising tolls and maintaining them after 2015 when they were supposed to be eliminated, a system that will not alleviate congestion in this corridor will be financed on the backs of motorists and commercial property owners, most of whom will not benefit. Using a great facility such as the Dulles Toll Road to finance WMATA's rail program would put the Commonwealth of Virginia on a slippery slope - where toll and gas revenue is being robbed for highways to pay for transit programs that service a small minority. (0112, 0462-L –35)

Public Comment: The proposal to double the cost of the tolls on the Dulles Toll Road to provide funding for the state share of the cost of rail through the corridor seems exorbitant since current tolls are already providing a surplus. Rationale: There are currently excess funds from Dulles Corridor tolls that could be applied to the rail project. Also, increasing/doubling the tolls may cause users to find travel alternatives on other congested roads. (0402, 0402-L –4)

Public Comment: We believe that a refinanced Dulles toll road bond program can provide in excess of one half billion dollars. This will reduce the required additional state share to an amount that should not be difficult to fund from statewide transportation funding sources. If this were done, the total sate share that would be funded from statewide sources (as distinct from Dulles toll revenues) would still be well below the statewide share of economic benefits that are forecast in the DEIS (about 42% according to Chapter 5, pages 5-8 to 5-11 of the DEIS). (0478, 0484-E –12)

Public Comment: What I would like to say is while I think that some sort of transportation alternative is necessary, I am concerned with the idea of funding it through the Dulles Toll Road. (0262, 0262-T –1)

Public Comment: There is no other metrorail area that pays a similar premium. There is not a toll on I-66 or Wilson Boulevard, nor will there probably ever be. To equal the amount I currently pay for each round trip I take, which is $4.50, in the proposed half cent tax I would have to spend $900 for each round trip, and I really can't -- when the Dulles toll road first came in, were told that toll would be removed eventually, and in fact it's been extended continuously. (0262, 0262-T –2)

Public Comment: I am very concerned about the proposal to increase tolls on the Dulles Toll Road. Many residents have no viable alternative to using to Toll Road and will be financially impacted by an increase. (0273, 0273-L –2)

Public Comment: A big part of the project's cost, as I understand it, will be funded by increasing the tolls on the Dulles Toll Road. Round-trip travel from the Beltway to Reston would increase from $1.50 to $3.50. And who bears the burden of this cost? The low to moderate-income workers traveling from other areas in the region. These people are not rich. Many of them live from paycheck to paycheck. It discourages them from working in this area, and even more of a problem is it places an unfair burden on area employers to find suitable candidates from positions. Already many of these workers have had to pull out their maps to look for residential secondary streets to use to get to work in Reston. They have to. They can't afford to pay higher tolls. (0183, 0183-T –4)

Public Comment: I would like to see mitigation of tolls esp. for moderate-income people… (why not give them a break?) if possible. (0291, 0291-L –2)

Public Comment: The Toll Road users should have their fees go only toward maintaining and improving the road, including new lanes for the express buses (also available to car/vanpools). Since transit is by nature "public", taxpayers should agree to pay for the construction if they want it and users should thereafter pay to keep it running. If neither can do so, it doesn't have the support it needs and can quickly relegated to history. (0299, 0299-E –3)

Public Comment: What is this going to mean on the cost side? Well, they are going to double tolls on the Toll Road. The annual subsidies are going to amount to approximately $200 per individual taxpayer in Fairfax per year for the indefinite future, and the triple threat is another half-cent sales tax is going to help go finance this thing. We don't need any of that if we do BRT. (0184, 0184-T-6)
Public Comment: The Dulles access fee goes up to $1.75 in each direction, or a round trip of $3.50 per trip, when we were promised years ago that the Dulles toll would go away. (0252, 0252-T –2)

> ***Response****: The Commonwealth Transportation Board (CTB) amended its policy in September 2001 to reserve a minimum of 85 percent of excess Dulles Toll Road revenues for public transportation.*
>
> *To fund the Commonwealth's share of the Wiehle Avenue Extension with available revenues and limited use of short-term financing, a toll increase is planned. Based on an initial analysis of current traffic and growth projections, a toll of $0.75 at the main toll plaza and $0.50 at each interchange ramp toll plaza provides sufficient revenues to meet the Commonwealth's obligations for the Wiehle Avenue Extension. A final decision on the revised toll structure will be made by the CTB after the completion of a formal traffic and revenue study and its administrative review process. Any approved toll increases would be implemented in advance of construction to begin building reserves for the project.*
>
> *The Final EIS does not provide any information on the use of excess Dulles Toll Road revenues that are not dedicated to the Wiehle Avenue Extension. That information can be obtained through the Virginia Department of Transportation. Dulles Greenway toll revenues are not part of the Project's capital funding strategy.*
>
> *The sales tax referendum of Fall 2002 did not pass; it would have allocated a minimum of $350 million for the Fairfax and Loudoun County shares of the Project capital funding. If it had passed, the Project's financial analysis would have been updated accordingly.*
>
> *Section 8.1 of the Final EIS describes the creation of the Fairfax County Dulles Rail Transportation Improvement District as the County source of revenues for its capital funding share of the Wiehle Avenue Extension. As stated in that section, Fairfax County and the landowners group have structured the district to provide sufficient revenues to cover the County's share of costs for the Extension.*

Public Comment: Funding should be from general funds and fed. dollars. Strongly oppose increasing tolls to build the rail system. General funds and Metro user fees should be the policy. (0090, 0090-CC-2)

> ***Response:*** *General funds are a potential funding source for both Loudoun and Fairfax counties.*

Public Comment: What would happen if all or a greater portion of the anticipated users of the Toll Road were to shift their mode of transportation to a DCRTF? Where would the required revenue to retire the construction bonds then be realized? (0427, 0427-E –8)

> ***Response****: While the Dulles Toll Road operates at a surplus, the Metrorail system operates at a deficit. Diverting Toll Road users to Metrorail would lower the deficit but could not generate net revenues for the Project.*

Public Comment: We recommend that the state share of the Dulles Rail Now alternative not include revenues from any toll increase before rail service begins. In the Financial Analysis chapter of the DEIS, three possible scenarios are described on pages 8-9 and 8-10: (a) one involving refinancing of the bond program with no toll increase, which generates an estimated $200 million, much more than enough to fund the entire state share of the BRT alternative, (b) a program involving a 25 cent increase in tolls in 2003 and another 25 cent increase every 3 years through 2015, generating an estimated $725 million, approximately enough to fund the state share of the Metrorail Alternative, and (c) a program involving a 50 cent increase in tolls in 2003 and another 25 cent increase every 3 years through 2015, generating an estimated $800 million, approximately enough to fund the entire state share of the Phased Implementation Alternative. (0478, 0484-E –10)

Public Comment: One acceptable scenario is to initiate 25 cent toll increase at the Tysons toll barrier in 2006 or when rail service to Tysons begins. It is not fair to Dulles toll road users to begin paying an increase in tolls until they receive some benefit in relief of congestion and associated environmental benefits. We also recommend that tolls not be increased beyond Tysons until rail service is extended beyond Tysons. (0478,0484-E –11)

> ***Response****: For the Wiehle Avenue Extension, the Commonwealth of Virginia is currently conducting a rate adjustment study for the Dulles Toll Road. This study will evaluate various tolling options and be used to secure financing supported by the Dulles Toll Road revenues. The results of the study and formal recommendations are expected in late 2004. Following this, a final decision on a revised toll structure would be made by the CTB. Any approved toll increases would be implemented in advance of construction to begin building reserves for the project.*

Tax Legislation to Provide Project Funding

Public Comment: This area should not be taxed extra (or in exclusion of the entire state). *This has been the developers' plan from the beginning. Who runs this state anyhow? I am disappointed in our new governor. (0006, 0236-L –3)

Public Comment: Without rail there will be no tax district(s) and without the tax district(s) there will be no rail. (0154, 0225-M –10)

Public Comment: We are concerned that the preliminary metrorail funding plan assumes commercial property owners pay up to $400 million in the form of a tax district in order to fund Fairfax County's allocated portion of the capital costs. To quote Mr. Kenneth Klinge from the Commonwealth Transportation Board in a prior presentation, "No tax district, no rail." As one of the largest property owners in the potential tax district, we are alarmed by the undue burden this proposed tax might create. We project that such a district is unlikely to be created because it provides such a disparate benefit to the members who in turn must voluntarily petition for its creation. A building owner located close to the Metro station will receive increased density credits and likely higher rental income for his property. Owners not within walking distance will receive no such benefit but by statute would pay the same additional tax to fund the system. Also what about the owners already in the Route 28 tax district? Would they pay two special taxes? (0139, 0139-T –5)

Public Comment: The burden on properties in the potential [tax] district is up to 40 cents per 100 of assessed value, according to the enabling legislation. By way of example, this tax would increase costs by 1.5 million per year for Prentiss Properties, an increase of 10 percent in our overall operating expenses. Such an increase is punitive and will serve to weaken the competitive position of property owners in the district versus Arlington County and Maryland, where metrorail service is provided at no cost to the property owner. We find it unlikely that such a tax district can be formed which will provide fair and equitable cost versus benefit for the diverse membership. (0139, 0139-T –6)

Public Comment: If an increase in the Sales Tax is voted, how much money is expected to be used from this source of revenue? (0427, 0427-E –9)

Public Comment: Virtually no one believes that the referendum will solve our transportation crisis. Remember the existing Metrorail has an unfounded capital requirement over the next 25 years of $4.5 billion. Where is the planning for this? The reckless financial planning that brought us Enron and WorldCom are what is bringing us the sales tax referendum and the planning for the Dulles rail project. The referendum legislation now allows government to sell tax-supported bonds without having to hold a bond referendum. (0140, 0200-E –6) (0140, 0140-T-5)

Public Comment: The reckless financial planning that brought us Enron and WorldCom is what is bringing us the sales tax referendum and the planning for the Dulles rail project. The referendum legislation now allows government to sell tax-supported bonds without holding a referendum. The irony is that while transportation budgets are being slashed, our taxes are mushrooming. To get elected in 1999, the chairman of the board of supervisors told the press that taxes would not be raised. Since that statement was made, real estate taxes for the typical Fairfax County household have increased $900 in three yrs. (0140, 0140-T –6)

Public Comment: Support the landowners' interest in assisting with financing through a special tax district and acknowledge the role the transportation referendum can plan in helping provide the local share of the project's capital costs. (0396, 0396-L –4)

Public Comment: Support the establishment of a Transportation Tax District along the corridor to be served to provide the local share of funding for the rapid transit project. The beneficiaries of the new system must provide adequate funding support. The existence of one or more Tax Districts and the expected contributions must be established so that any additional Fairfax County contribution can be determined. Rationale: The November 2002 referendum includes $350 million for Dulles Corridor rail. Should the referendum not be successful, then an alternative local revenue source will be needed. The Tax District(s) must ensure no shortfall in funding, as in the case of the Route 28 Tax District, where other Northern Virginia VDOT projects have been delayed to offset the District funding shortfalls in paying the debt service. (0402, 0402-L –3)

Public Comment: The Draft EIS suggests that the Fairfax County share of the project cost might be provided by one or more Tax Districts. Should there be District funding shortfalls, there is no indication of how this would be remedied. Rationale: The Tax District that was to have funded Route 28 improvements could not meet its obligations, necessitating other Northern Virginia projects to be delayed so their funding could make up the District funding shortfalls. (0402, 0402-L –5)

Public Comment: I also would just like to correct something that one of the persons who spoke earlier tonight in regard to Loudoun County supervisors being against a sales tax which he purported to support this project. I believe, if I am not mistaken, that the Loudoun County Board of Supervisors actually voted in favor of that. (0265, 0265-T –3)

Public Comment: If Metro is selected - I will definitely vote against the sales tax increase because if you throw your money down the drain today, you'll probably do it tomorrow. (0294, 0294-E –5)

Public Comment: The substantial tax burden and toll use charges are not adequately addressed in the Draft EIS. (0510 8-2)

> ***Response****: The sales tax referendum of Fall 2002 did not pass; it would have allocated a minimum of $350 million for the Fairfax and Loudoun County shares of the Project capital funding.*
>
> *Section 8.1 of the Final EIS describes the creation of the Fairfax County Dulles Rail Transportation Improvement District as the County source of revenues for its capital funding share of the Wiehle Avenue Extension. As stated in that section, Fairfax County and the landowners group have structured the district to provide sufficient revenues to cover the County's share of costs for the Extension. The tax levy will be only upon commercial and industrial*

properties within the district. Although payments will not be due until December 2004, on July 1, 2004, Fairfax County began charging commercial landowners an additional 22 cents per $100 of assessed value for their properties on top of the base real estate tax rate of $1.13. Fairfax County projects that the tax rate could eventually increase to 29 cents per $100 of assessed value once a Full Funding Grant Agreement is reached. The actual levy will be established each year based on current assessments and the amount of outstanding debt. The district, which had an assessed value of $6.8 billion in June 2004, is expected to generate up to $400 million for the construction of the Wiehle Avenue Extension. If Transportation Improvement District revenues are not sufficient, Fairfax County may consider supporting its capital obligations for the Wiehle Avenue Extension using general obligation debt.

A new landowner's group, called the Western Alliance for Rail to Dulles (WARD), has formed to explore the potential of developing another tax district, similar to the Dulles Rail Transportation Improvement District, which would include properties within Fairfax County west of Wiehle Avenue. WARD has drafted a petition and began circulating it among landowners in July 2004. A determination regarding overlap within the Route 28 tax district would be addressed by WARD and Fairfax County. Property owners within the second district will be able to comment on that district's details during the Fairfax County hearing process.

Public Comment: The LEADER board of directors represents businesses in the Dulles corridor which collectively own about 40 percent of the commercially and industrially zoned land in the corridor, and the LEADER board has accepted the charge of the Commonwealth of VA and the County of Fairfax to petition the county to assemble one or more districts along the corridor for the purposes of levying a tax assessment which will finance all or a portion of Fairfax County's share of the cost of building metrorail in the Dulles corridor. (0154, 0154-T –2)

Public Comment: Additionally, LEADER has obtained expressions of support for the creation of the tax district and the construction of metrorail from several other commercial landowners in the corridor. Collectively these landowners and the LEADER board of directions represent approximately 60 percent of the commercially and industrially zoned land in the corridor. By law, the petition, when submitted to the Fairfax County board of supervisors, must bear the signatures of the owners of at least 51 percent of the commercially and industrially zoned land within the proposed district. (0154, 0154-T –3) (0154, 0225-M –3)

Public Comment: The LEADER Board of Directors, representatives of 30 businesses in the Dulles Corridor -- from the eastern edge of Fairfax County to the western border of the county - which own collectively nearly 40 percent of the commercially and industrially zoned land in the corridor, has accepted the charge of the Commonwealth of Virginia and the County of Fairfax to petition the county to assemble one or more districts along the corridor for the purpose of levying a tax assessment which will finance all or a portion of Fairfax County's share of the cost of building Metrorail in the Dulles Corridor. (0154, 0225-M –2)

Public Comment: The LEADER board of directors is comprised of representatives of businesses in the corridor form the eastern edge of Fairfax County to the western border of the County. These businesses collectively own 40 percent of the commercially and industrially zoned land in the corridor. The board of directors of LEADER has been created to consider drafted a petition which will assemble one or more districts along the corridor for the purposes of levying a tax assessment which will finance all or a portion of Fairfax County's share of the cost of building metrorail in the Dulles Corridor. By law the petition, when submitted to the Fairfax County Board of Supervisors, must bear the signatures of 51 percent at least of the commercially and industrially zoned landowners within the district. (0154, 0182-T –2)

Response: *The Project Team recognizes the important role that LEADER and the business community have had in the development of the financial plan of the Dulles Corridor Rapid Transit Project.*

Public Comment: In particular: We wish to know if the sponsorship of the current public-private partnership will wish to continue if the final choice is Bus Rapid Transit combined with Private Transit, with no firm commitment to the wasteful extension of rail beyond Tysons Corner. We suspect that, contrary to the PR campaign, BRT is being pooh-poohed as only an interim step to rail, and that BRT will not happen without the imposition of an unneeded special tax district and the delegation of the ability to raise taxes therein and also on the toll road arbitrarily. (0162, 0162-M –11)

Response: *The selected LPA is the Metrorail Extension. Its first phase, the Wiehle Avenue Extension, will have Corridor express bus service for the remainder of the LPA. FTA has approved DRPT's entry into preliminary engineering. DRPT has engaged Dulles Transit Partners under the PPTA legislation to be its consultant for preliminary engineering services. See above responses and Chapter 8 of the Final EIS on the creation of a transportation improvement district and on the use of excess revenues of the Dulles Toll Road as part of the capital funding strategy for the Metrorail Extension.*

Public Comment: Relying on creation of a special taxing district is not "stable and dependable financing." Most developers in the special taxing district are not going to be prime beneficiaries of "bonus densities." Furthermore, to raise $152 million in Loudoun County from the "BPOL" tax is absurd. At present, there is 13 million square feet of empty office space in the Dulles corridor. A tax increase would be a real killer. Some of WMATA's assumptions for inflation also are dubious. In contrast, BRT costs $3 billion less. BRT is estimated to cost $300 to $400 million, and WMATA includes unnecessary features that could be eliminated and fails to consider other alignments outside the Dulles Access Road, which could facilitate ridership. (0112, 0462-L –11)

Response*: Section 8.1.2.3 of the Final EIS describes the creation of the Fairfax County Dulles Rail Transportation Improvement District as the County source of revenues for its capital funding share of the Wiehle Avenue Extension. As stated in that section, Fairfax County and the landowners group have structured the district to provide sufficient revenues to cover the County's share of costs for the Extension.*

Loudoun County presently funds the local share of transportation projects through the use of the local gasoline tax and the Business Professional and Occupancy License (BPOL) revenue. In FY 2004, the adopted six-year Capital Improvement Plan (CIP) allocated $1.9 million from the County Public Transportation Fund and $23 million from BPOL pledge bonds for FY 2005-2010 to the Dulles Corridor Rapid Transit Project. Loudoun County is proposing the use of these funding sources for its share of the full LPA capital costs.

Public Comment: I hope that the project will move forward expeditiously. I am willing to pay my fair share of the cost through increases in toll road fees, local sales tax increase, and by other appropriate means. (0194, 0194-T –6)

Response: *Comment noted.*

Operating Subsidies

Public Comment: The Dulles Corridor rail system may offer the best possible opportunity, within the overall regional rail system, for reducing the operating subsidy requirement, and possibly eliminating it entirely or making the system profitable, at least on an operating and maintenance cost basis. The reasons for this include (a) the Dulles corridor line might possibly be operated as a separate, but fully-integrated system under state control, so that key factors affecting operating costs such as fare policy, parking pricing, station design and operation, air-rights development, and provisions for station access and control could more readily be used to achieve this goal, (b) the corridor has more jobs than any other suburban corridor and therefore has the potential to attract more reverse commuters, which produces significant additional revenue without any significant operating cost increase (i.e. it fills the nearly empty return trips), (c) the two counties have begun adopting policies to encourage mixed-use-transit-oriented development, which will attract much more reverse commuting and off peak transit use, again creating

significant additional revenue without any significant operating cost increase, (d) the Dulles tolls largely avoid the subsidy of motor vehicle usage, particularly during peak periods, thus encouraging greater transit use, (e) the Dulles Toll Road offers the possibility of initiating peak period pricing in order to both eliminate peak period congestion and further encourage transit use, and (f) the residents and property owners of the Dulles corridor have begun to recognize the potential community benefit of air-rights development, which can create opportunities for much greater transit-oriented development than at other sites, thus further enhancing transit ridership, particularly during off-peak periods and in the reverse peak direction. We recommend that each of the two counties join with the Dulles Corridor Rapid Transit Project to establish a working group charged with developing a range of strategies to achieve the goal or reducing operating subsidies in the near-term and eliminating them entirely and creating a profitable system in the long-term. (0478, 0484-E –20)

> ***Response****: The LPA, as a seamless Metrorail Extension, will be fully integrated into the WMATA Adopted Regional System with respect to fare structure and revenue collection; operations, maintenance and related costs; and subsidy allocation and payment. The system and any extension will operate at a deficit, despite continued ridership growth, including reverse commuting.*
>
> *While DRPT is the project sponsor and initial owner, its intent is to lease the Extension to WMATA for operations and maintenance, and later to convey ownership to WMATA. The two counties will be the beneficiaries of higher tax assessments due to induced development and might use the additional assessments to offset their allocation of subsidy.*
>
> *With respect to air rights development above Metrorail stations, the Project Team acknowledges that the two Counties govern land use and that FAA, MWAA, VDOT and TRIP II, as the owners and operators of the DIAAH, Dulles Toll Road and Dulles Greenway, must be involved. Therefore, the Project Team will await any initiative of the two Counties with the involvement of the highway owners and operators.*

Public Comment: Have you surveyed the potential users to determine if they are willing to pay the fare required to break even? Your data implies the fare must be at least $7 a ride for buses and $11 a ride for rail. (0166, 0166-T –2)

> ***Response:*** *The LPA as a seamless Metrorail Extension will be fully integrated into the WMATA Adopted Regional System with respect to fare structure and revenue collection. In the analysis in support of the Final EIS, Metrorail fares and station parking fees are assumed to increase every 3 years at the 3-year average of the Consumer Price Index. As such, the system and the extension will operate at a considerable deficit and never cover costs with revenue.*

Public Comment: At present rates of fare, except for the artificial fare "cap", Dulles Rail Line revenues should approximate $61 million per year, including station parking and minimal station and car advertising. This will result in an incremental revenue-to-cost ratio of 91 percent, one of the highest such ratios anywhere in North America, if not the highest. MetroBus earns a revenue-to-cost ratio of only 35% (which is above average) and Fairfax Connector and Ride-On in the suburbs earn only 25 percent. In other words, the Dulles MetroRail line will need only ten cents of subsidy for every dollar of fares. Fairfax Connector (or Ride-On) needs $3 of subsidy for every dollar of fares. That is a stark contrast. It should be understood that many highly rated bus systems, such as Houston or Seattle do no better. Buses are the low cost mode for light travel because of rail's high fixed cost, but for higher volumes of travel, rail becomes the lowest cost mode. (0013, 0013-L –34)

> ***Response****: Fare box recovery is the ratio of total annual revenue over annual operating costs. The LPA as a Metrorail Extension will have lower fare box recovery than the Metrorail system as a whole. The Metrorail system does have a higher fare box recovery than Metrobus system.. Tables 8.2-1 and 8.2-2 of the Final EIS present operating cost and revenue estimates for the two Build Alternatives in the opening year and forecast year (2025) in year-of-expenditure dollars.*

Public Comment: I am completely bewildered by the acceptance by quite a few people in our country of that concept that rail should be self-supporting. We know the enormous subsidy that we give and have given to cars and roads, and we know the enormous subsidies that we give to planes and airports. Why in the world should we think that rail is self-supporting? It isn't in most places, and shouldn't be. (0195, 0195-T –1)

> ***Response:*** *The comment is correct. The LPA as a seamless Metrorail Extension will be fully integrated into the WMATA Adopted Regional System with respect to fare structure and revenue collection; operations, maintenance and related costs; and subsidy allocation and payment. The system and any extension will operate at a deficit, despite continued ridership growth.*

Passenger Facility Charges

Public Comment: It may be concluded that the DCRTF will offer a substantial savings to those passengers selecting to transit to DC by rail. This amounts to a subsidy by the residents/businesses of the Dulles Corridor for DIA passengers. It is suggested that the MWAA be authorized to collect an additional amount of the $3.00 (or more) per passenger that would contribute $80M per year to defray the construction and O&M costs. This would permit the elimination of the projected increase in toll road fees, as well as provide and improved assurance to retire the bonds. (0427, 0427-E –11)

> ***Response****: MWAA is proposing the use of Passenger Facility Charges (PFC's) as a revenue source for the capital funding for the Dulles Corridor Rapid Transit Project. This is currently $4.50 per airline passenger. FAA allows the use of PFC for airport-related facility costs, such as contributions toward transit projects to serve the airport. The Federal Aviation Administration would not allow airport revenues to be used for operations and maintenance expenses or for non-airport purposes, such as eliminating the proposed Toll Road fees.*

Capital Costs

Public Comment: The sooner you get the approval & implementation the cheaper the cost will be and the public will use it. (0070, 0070-CC-2)

> ***Response:*** *Comment noted.*

Public Comment: VDR&PT must do more with value engineering for the Dulles Rail Project. It should not cost more than $2.69 billion for completion by 2010. Half a billion must be taken out of the DEIS estimates. It is not necessary to buy enough cars for 2025. Sufficient cars for 2010 will suffice as MetroRail will be buying cars continually as the 1976 Rohr cars wear out. (0013, 0013-L –2)

Public Comment: Given that MetroRail is the only practical choice, it is necessary to construct it at the least possible quality cost and operate it much more cost effectively than proposed in the DEIS. With the mid-year of construction 2008, construction costs will have risen 38.5 percent over the cost of the Springfield-Franconia extension of MetroRail.

With 24 miles, Dulles MetroRail should cost $1.1 billion plus $627 million for stations, $48 million for ground level parking, $51 million for garage parking, $167 million for subway and elevated construction in Tyson's Corner for Route T-9, $132 million for shops and yards, $265 million for cars and $300 million for contingencies, a grand total of $2.69 billion should be the limit, saving up to half a billion dollars under some of the estimates in the DEIS.

The annual cost of the project over its cycle should not exceed $67.3 million which is estimated to average 23 cents per passenger-mile. With an equal or lesser amount for operating expenses, the total cost of 46 cents per passenger-mile is far below MetroBus or Ride-On costs of 75 cents per passenger-mile including capital. The difference of 29 cents per passenger-mile is worth about $87 million per year in favor of MetroRail. (0013, 0013-L –26)

Response: *The capital cost estimates of the two Build Alternatives of the Final EIS were based on the project's final General Plans and include right-of-way, station and line facilities, service & inspection yards, vehicles, contingency and soft costs. The estimates of capital costs will be updated during preliminary engineering. A value planning process is currently underway during the start of preliminary engineering; a value engineering process will be undertaken during the end of preliminary engineering. Both processes seek to reduce the capital costs. The Project's procurement of rail cars will be for the opening years and not for the forecast year of 2025.*

The operating and maintenance cost estimates of the two Build Alternatives were based on the WMATA cost model, which uses input from the operating plan and ridership forecasts. The operating costs and revenues in the Final EIS allow comparison with the No-Build Alternative. Comparison of the cost per passenger mile is not the basis to predict savings.

Public Comment: Number two, the cost of rail has been complained of and yet the cost of this project is in the range of other major transportation projects such as widening the beltway, proposed Interstate 81 improvements in southwest Virginia, even the Woodrow Wilson Bridge project. The Airports Authority plans improvements in the same range of costs for Dulles airport. Thus, the scale of costs we are discussing is not out of line with other major transportation projects that provide none of the smart growth benefits that occur with the rail, and the cost will be a lot higher in the future if we delay. (0144, 0144-T – 4)

Response: *The commenter is correct that each of the referenced projects is a major investment. The Project does offer the potential to provide Smart Growth benefits to the corridor.*

Public Comment: How much per mile would the extension of transit cost? I have heard $100 million per mile, and I have also heard that it could be $130 million per mile. (0147, 0147-T –9)

Response: *The Wiehle Avenue Extension is currently estimated to cost $131 million per mile and the . Full LPA is $150 million per mile (in year of expenditure dollars), exclusive of any required financing costs. .*

Public Comment: If the bridge associated with the Tysons West Station is only to be used with the BRT phase of the rail extension, why are the costs associated with the acquisition of right-of-way and construction not considered "sunk costs," rather than "capitalized" costs? (0135, 0391-L –20)

Public Comment: We do not believe the costs or impacts of the bridge, or the elimination of the private access easement across the Templeton Property, were considered or evaluated as part of the DEIS, despite the potential harm to a woman-owned small business that is the primary revenue source for its owners. Accordingly, we respectfully contend that the DEIS is inaccurate in its representations concerning the displacement of business and the costs of constructing the BRT facilities under the BRT/Metrorail and Phased Implementation alternatives (including the $194 million in "sunk costs"). (0135, 0391-L –8)

Public Comment: TMS is concerned that the so-called sunk costs associated with BRT are not fully accounted for in the $194 million figure cited in the DEIS. Our concern is that the costs are much higher than that. For example, there is proposed a bridge connection from the Tysons West parking structure for BRT buses to access the toll road access road for the BRT buses running up and down the Dulles corridor. It's a 50-foot right of way to be constructed. It's designed to appear in function like the numerous bridges and overpasses that are now dotting the landscape in the Springfield mixing bowl area, and would provide BRT buses direct access to the toll road. Possibly, we think, to avoid the surface transportation impacts of the adjacent 2000-vehicle parking structure. While it's a laudable goal to provide access for the BRT buses to the access road, in the abstract, it complicates other goals of the project. We note that the costs of constructing this bridge are not included in the sunk costs but are instead capitalized costs, as we understand it, under the DEIS. (0135, 0135-T –4)

***Response**: The bridge to and from the Dulles International Airport Access Highway and Tysons West is included as a cost and right-of-way requirement associated with the BRT/Metrorail and Phased Implementation Alternatives only, which were evaluated in the Draft EIS but were not carried forward in the Final EIS.*

Public Comment: Capital cost estimates should be re-examined in great detail by a team of engineers that are entirely independent of DRPT and WMATA. The work could be overseen by COG/TPB staff, or some other independent, respected organization, and must be free of interference and spin by WMATA. Substantially more work must be done to answer questions that raised above, such as alternatives to financing if tolls cannot be raised and if the special taxing district fails to reach a mandatory 51% vote majority of commercial property owners. (0112, 0462-L –38)

***Response**: The DPRT consultant for preliminary engineering, Dulles Transit Partners, will prepare a new estimate of capital costs for the two Build Alternatives of the Final EIS at the end of preliminary engineering, will prepare a firm, fixed price proposal for the design/build contract of the Wiehle Avenue Extension.*

Public Comment: We request a financing plan for parking related to this [project] and the spillover effect of traffic. (0184, 0184-T –18)

***Response:** All parking and related roadway modifications for station access are included in the project's capital cost estimates, which is the major input to the capital funding strategy. Section 8.1 of the Final EIS lists the major categories of the Project's capital cost estimate.*

Need for Cost Comparison of Alternatives

Public Comment: We request that the next round of the study produce a matrix showing a comparison of the lowest cost alternatives for transit in the Dulles Corridor. In order to calculate this matrix, it will be necessary to place monetary value on commuter time, which should be explicitly stated. (0162, 0162-M –13)

Public Comment: We request that an extra study produce a matrix showing a comparison of lowest cost alternatives for transit in the Dulles corridor. (0184, 0184-T –10)

Response: The consideration of alternatives commenced with alternatives from past studies and those suggested during the formal scooping process of Summer 2000. These were reduced in number through initial and interim screening. The alternatives that were fully evaluated in the Draft EIS were those that best fulfilled the goals and objectives of the Project and the needs of the Corridor. Therefore, not all low cost transit alternatives are in the Draft EIS. The Project's Final Alternatives Analysis Report does offer a review of other transit alternatives, such as light rail or personal rapid transit, that the Team eliminated from consideration during screening.

Other Potential Sources of Funding

Public Comment: But bus rapid transit is not only a faster mode of travel but the lanes used for BRT can be used for HOV and "HOT" lanes. This means motorists who want to drive alone can pay a fee to use these lanes, thus defraying some of the costs. Plus, HOV and vanpooling has proven successful in the D.C. area, particularly in reduction of cars on the road. (0112, 0269-M –6)

***Response:** BRT was an alternative evaluated in the Draft EIS but not carried forward into the Final EIS. BRT would have used the lanes of the Dulles International Airport Access Highway, which is available for mass transit but not for HOV nor HOT usage.*

Public Comment: What I present here is the outlines of the program for this national transportation emergency, which is being put forward by Democratic Presidential pre-candidate Lyndon LaRouche, a program which I fully support. LaRouche is the world's most credible economist, having forecast the

demise of the scam called the New Economy, and the current depression collapse - and put forward the only alternative, an FDR-style recovery drive, based heavily upon rebuilding our national physical infrastructure. LaRouche's program begins with the recognition that our national transportation system is effectively a {public utility}, and is thus the responsibility of the Federal Government, which has a Constitutional commitment to the General Welfare of the population. To fulfill this obligation, we need billions of dollars of low-interest credit made available to public and private companies responsible for our transportation system, in the "public works" mode that Franklin Roosevelt used. (0482, 0482-E –2)

> ***Response:*** *The Project is operating on a "pay-as-you-go" financing philosophy among the Federal and non-federal funding partners. The present assumption is that the Federal participation are capital grants (New Start 5309 Grant Program), and therefore do not have to be repaid. DRPT has prepared a preliminary financial plan for the Wiehle Avenue Extension, which is reflected in Chapter 8 of the Final EIS.*

General Concern for Future Availability of Funding

Public Comment: My concern is funding and how financially there can be incentives for the public to afford the rail 10 years from now. (0070, 0070-CC-3)

> ***Response:*** *Chapter 8 of the Final EIS provides the capital and operating funding strategies of the two Build Alternatives. During its review of the DRPT final financial plan for the Wiehle Avenue Extension, FTA will evaluate the stability and reliability of the funding of infrastructure renewal of the Metrorail system and the extension.*

Public Comment: What will be the cost to level a space for a possible future station at Wolftrap? I understand from the literature that some 1700 feet of material will need to be brought in to grade the foundation at the time track is laid. Point is - how much more will it cost to allow for a station "sometime in the future?" (0060, 0060-CC-1)

> ***Response:*** *The design of the Metrorail Alternative allows a future side-platform station at Wolf Trap by creating a level track grade along the vertical alignment. Fill and retaining walls up to 20 feet in height are required in the median of the Access Road. The additional cost is estimated at over $5 million (YOE). The accommodation for a possible future station would not require any widening of the Dulles International Airport Access Highway or Dulles Toll Road, or require additional track. The future cost of a station at Wolf Trap would depend on the design of the station and the location of the stations support facilities (park-and-ride layout and size, access roads, pedestrian connections). No station design has been completed and therefore a cost estimate also has not been developed.*

Public Comment: I guess the other thing I would like to note is, you know, it's real important to get a consensus around what you want to do very quickly, because the T-21 funding comes up next year, and unless there is both a Locally Preferred Alternative and political consensus to move ahead, the next time you are eligible for funding is in six years. So if you don't - I am not downplaying in any way the legitimate concerns that have been raised here tonight, but I would urge those to move quickly to identify those concerns and bring them forward. Otherwise, you'd be in a situation where you're actually delaying any project for a minimum of six years. (0186, 0186-T –7)

> ***Response:*** *DRPT has requested that $600 million in additional New Starts funding be authorized for the Dulles Corridor Rapid Transit Project in the pending transportation reauthorization. This will be in addition to a total of $163.5 million in New Starts funding that has been appropriated for the Project through FY 2004 to support project planning, environmental review, and engineering activities and in addition to $20 million of New Starts funding expected in FY 2005.*

Costs Related to Mitigation

Public Comment: At many of the intersections it is stated that the level of service will experience deterioration even to the point this could negatively impact station access. To mitigate these negative impacts, certain improvements were identified, to include interchange improvements such as road widening of intersections and other improvements. These mitigation efforts will come with a price tag. Therefore, my request is that the conceptual cost estimates be prepared for the construction and implementation of the improvements recommended to mitigate this anticipated traffic operating condition. (0147, 0249-T –1)

Public Comment: Also, how much will it cost to widen all of these roads leading to the various stations, plus add sidewalks for pedestrian/bike access? (0112, 0382-L –23)

> ***Response:*** *The proposed roadway modifications for station access are not high in number nor in costs. The capital cost methodology for the Final EIS does not include an estimate for each modification but rather uses "top down" method, whereby an order-of-magnitude cost is determined for the modifications. Modifications of sidewalks and trails are not the responsibility of the Dulles Corridor Rapid Transit Project, but rather of the two counties and VDOT.*

Public Comment: What are the indirect impacts caused by the direct impacts? For example, with the financial deficit of VDOT, mitigation measures such as extra lanes, turn lanes, etc. will not be built. Therefore, expand on the cumulative direct impacts regarding traffic shifts, neighborhood parking, etc. (0147, 0459-L –15)

> ***Response:*** *The secondary, often defined as indirect, impacts are assessed in Chapter 9 of the Final EIS and are not related specifically to direct effects. Secondary effects are those that are caused by the Federal action, in this case construction of the Build Alternatives, but are removed in either time or distance, from the Build Alternatives. As specified in the Final EIS, the greatest potential for indirect effects are those associated with the increase in densities at the transit station areas that would be permitted. These effects include induced traffic demand, the creation of additional impervious surfaces, loss of open space, and additional demand for public services. The financial status of VDOT is not part of the consideration as it would be impossible to project for year 2025, which is the timeframe for evaluation of indirect effects; so it is not correct to assume that VDOT, or the localities involved who are most directly responsible for mitigating the effects of secondary development growth, would not be able to regulate and/or mitigate for these effects. As defined in the Final EIS, most of the indirect effects will occur in the station areas and are expected to have minimal effect on the study area.*

Costs Per Rider

Public Comment: The Automobile is the primary means of travel so must be considered as the base line for cost. The AAA, Runzheimer and Federal Bureau of Transport Statistics all agree that automobile travel costs an average of 37 cents per passenger-mile for movement plus parking plus highway investment. For the Dulles Corridor, parking for commuting will average 31 cents per passenger-mile additional and highway widening is out of sight. If a new lane of urban freeway costs $10 million a mile (very low compared to the Beltway estimates), the subsidy per passenger-mile after allowance for fuel taxes paid, will be about eight (8) cents more, a total of 76 cents per passenger-mile full cost. Metro-Rail complete will cost only 46 cents as noted on page 5. (0013, 0013-L –37)

> ***Response:*** *Comment noted.*

Public Comment: Can you also tell me the cost per rider in terms of operating and capital cost? What is the FTA target for costs per rider? (0112, 0112-E –2)

> ***Response:*** *The Federal Transit Administration has established two cost-effectiveness measures as part of its equitable evaluation of New Starts projects. As presented in Section 10.2 in the Final*

EIS, for the Wiehle Avenue Extension in year 2025 in comparison to the New Starts Baseline, the cost per new transit trip is $24.73 and the cost per user benefit hour is $18.69 to $21.08.

Need for Cost Benefit Analysis

Public Comment: How do you expect the costs and benefits of the metrorail line from Rosslyn to Vienna to compare to the actual costs and benefits? (0166, 0166-T –5)

Response: *An analysis of the existing Metrorail system between Rosslyn and Vienna was outside the scope of work for the Final EIS, was not necessary to document the potential effects of the two Build Alternatives carried forward in the Final EIS, and therefore was not conducted.*

Public Comment: Have you had an organization with absolutely no vested interest evaluate the costs and benefits of the proposed system? The current decision makers have a conflict of interest. They favor construction because their jobs are to oversee it. I think an outside agency with no vested interest should evaluate the cost-benefit analysis and include behavior changes in that analysis. (0166, 0166-T –7)

Response: *Comment noted. The evaluation of alternatives in the Draft, Supplemental Draft and Final EIS has been coordinated extensively with public agencies, and the selection of the Locally Preferred Alternative has been made by the Commonwealth Transportation Board and the WMATA Board of Directors in coordination with the Federal Transit Administration, and in cooperation with FAA, Fairfax County and Loudoun counties, Town of Herndon and MWAA.*

Public Comment: More Information on Experience of Comparable Heavy Rail Extensions. It also would be useful to know whether comparable examples exist in this country of heavy rail extensions to largely suburban areas 30 miles beyond the urban core and what their experience has been in terms of projected versus actual costs and ridership. (0446, 0446-E –7)

Response: *An analysis of comparable heavy rail extensions was not necessary to document the potential effects of the two Build Alternatives, and therefore was not conducted for the Final EIS. In addition, the existing Metrorail system extends into suburban areas throughout the region, and experience over the last 30 years has shown that the system provides substantial transportation benefits.*

Costs Related to Infrastructure Improvements

Public Comment: WMATA and VDRPT also should calculate the financial cost to the Virginia taxpayers of paying for various road and sidewalk improvements to facilitate Dulles Rail and BRT. It should be noted that most of the intersections near proposed transit stations are at levels of service of D, E or F without these road and intersection widenings. (0112, 0462-L –39)

Response: *The proposed roadway modifications for station access are not high in number nor in costs. The costs will be borne by the Project rather than by the two counties and VDOT.*

Costs Related to Widening the Dulles Toll Road

Public Comment: Finally, in the interests of a fair and complete study, you should look at the cost to simply widen the Dulles Toll Road to accommodate the traffic that would be the equivalent of the rail or BRT ridership. Such a widening would most likely pay for itself through increased toll revenues from the increased traffic volume and would, unlike Metro, not require a perpetual tax subsidy to operate. (0464, 0464-L –6)

Response*: There is little, if any, available land on either side of the Dulles Toll Road to accommodate an additional lane of traffic. The addition of a single lane would not meet the long-term capacity requirements of the corridor, nor would it meet the land-use and environmental goals outlined in the project's purpose and need.*

Public Comment: Commenter believes that an independent group that has no vested stake in the project should analyze the financial plan.(0294 8-1)

> ***Response:*** *Comment noted. The DPRT consultant for preliminary engineering, Dulles Transit Partners, will prepare a new estimate of capital costs for the two Build Alternatives of the Final EIS and, at the end of preliminary engineering, will prepare a firm, fixed price proposal for the design/build contract of the Wiehle Avenue Extension. During the preliminary engineering of the Wiehle Avenue Extension, DRPT will prepare the Extension's final financial plan, which FTA will review for financial capacity as part of negotiations for a Federal Full Funding Agreement.*

Public Comment: Did not see any reference to a public/private partnership, and expected it to be considered. (0123 8-1)

> ***Response:*** *Under the Commonwealth of Virginia Public-Private Transportation Act, as amended, DRPT has entered into a PPTA contract with Dulles Transit Partners to engineer, design and build the project. Additional information on the contract and its benefits is available at the DRPT web site, www.drpt.virginia.gov.*

Loudoun County Project Funding

Public Comment: I also would just like to correct something that one of the persons who spoke earlier tonight in regard to Loudoun County supervisors being against a sales tax which he purported to support this project. I believe, if I am not mistaken, that the Loudoun County Board of Supervisors actually voted in favor of that. (0265, 0265-T –3)

> ***Response:*** *The sales tax referendum of Fall 2002 did not pass; it would have allocated a minimum of $350 million for the Fairfax and Loudoun County shares of the Project's capital funding.*

Local Funding Source

Public Comment: My only other note that I wish to say is the fact that, since I live in Reston, the new tax that they're going to be doing as far as the Toll Road, possibly, and a sales tax-- we're paying for the rail, we've been paying for the rail through the tolls. We need to build it now. (0081, 0285-T –2)

Public Comment: What really this boils down to is who has the money and who is going to get it. (0191, 0191-T –2)

> ***Response:*** *Chapter 8 of the Final EIS provides the capital funding strategy for the two Build Alternatives.*

B. Supplemental Draf EIS Comments

Local Agency Comments

Need to Secure Adequate Project Funding

Local Comment: Has funding for the project been secured? What is the current projected time table the property in the Tysons West area will be required? (0134 8-1)

> ***Response:*** *DRPT has developed a preliminary financial plan for the Wiehle Avenue Extension, which identifies capital funding sources and shares for each of the Project's funding partners. Chapter 8 of the Final EIS reflects the preliminary financial plan*

DRPT estimates that right-of-way acquisition would be conducted from late 2005 to early 2007. A detailed acquisition plan and schedule will be developed during preliminary engineering.

Phasing Implication for Transportation Improvement District Funding

Local Comment: Moving the terminus for Phase I to Herndon-Monroe is a means to guarantee immediate value for landowners in the western end of the district. Under the current funding and construction phasing proposals, these owners face the possibility of paying taxes to support Phase I construction bonds for thirty years or more, even in the event of a failure to get Federal funding for any subsequent phase. Under the best case scenario, these owners would be taxed from 2004 through at least 2015 before seeing any transit facilities in the Herndon area.
0132 0171-1

Local Comment: In short, the proposed phasing scheme provides significant uncertainties for the implementation of a future phase. The Town Council opposes a single tax district, as proposed by the LEADER group, with the phasing scheme that does not extend the system to the Herndon-Monroe Station within the first phase.
0132 0171-02

Response: *Section 8.1 of the Final EIS describes the creation of the Fairfax County Dulles Rail Transportation Improvement District as the County source of revenues for its capital funding share of the Wiehle Avenue Extension. As stated in that section, Fairfax County and the landowners group have structured the district to provide sufficient revenues to cover the County's share of costs for the Extension. The tax levy will be only upon commercial and industrial properties within the district.*

For the remainder of the Full LPA, a new landowner's group, called the Western Alliance for Rail to Dulles (WARD), has formed to explore the potential of developing another tax district, similar to the Dulles Rail Transportation Improvement District, which would include properties within Fairfax County west of Wiehle Avenue. WARD has drafted a petition and began circulating it among landowners in July 2004.

Local Comment: Please enter the attached Town Council Resolution 03-G-144 of December 2, 2003 into the public hearing record for the Draft Supplemental EIS. This resolution does support the LPA but conditions Town approval of the Transportation Improvement District on a Phase I interim terminus at Herndon-Monroe, as a means to assure rail service to the western part of the Dulles Corridor. The Herndon resolution recommends removing language that would have allowed landowners to veto Phase 2 implementation with one or more failures to obtain federal funding. The resolution also provides for minor adjustments to the boundaries of the tax district within the Town of Herndon.
0132 0171-03

Response: *Comment noted. The Herndon Town Council Resolution was added to the public hearing record for the Supplemental Draft EIS. Specific comments or questions on the transportation improvement district should be directed to the Fairfax County Board of Supervisors or Fairfax County staff.*

Public Comments

Costs Related to Widening the Dulles Toll Road

Public Comment: Again, I requested the project team address the conflicts in the Purpose & Need as stated above, particularly your outlandish statements that is cheaper to build rail in the middle of the Dulles Toll Road at $135 million a mile than to add new lanes, which could cost at a minimum $15 million a mile.

Again, I requested the project team address the conflicts in the Purpose & Need as stated above, your

build schedule for Dulles Rail vis-à-vis the Largo extension, etc. This was not done in the SDEIS hearing report. (0112 8-1)

> ***Response:*** *There is little, if any, available land on either side of the Dulles Toll Road to accommodate an additional lane of traffic. The addition of a single lane would not meet the long-term capacity requirements of the corridor, nor would it meet the land-use and environmental goals outlined in the project's purpose and need. The opening year of the first phase of the Full LPA, being the Wiehle Avenue Extension has been moved forward from 2009 to 2011.*

Concern for Cost Overruns

Public Comment: Finally, on p 119, your response to the questions about cost overruns and what happens if the project runs out of money is not satisfactory. WMATA has consistently had cost over-runs and has been criticized extensively for its failure of long range planning. Therefore, there is a lack of confidence that this project will be any different. (Jody Bennett)

> ***Response:*** *WMATA has proven itself in project delivery. For completion of its 103-mile program, opening between 1997 and 2002, WMATA was under budget by $286 million, and on-time or early by 10 months aggregate. Moreover, DRPT is primarily accountable for the cost-effective delivery of this Project as its owner and contracting authority. DRPT has entered into a PPTA contract with Dulles Transit Partners for the benefits of PPTA, which are explained at DRPT's web site, www.drpt.virginia.gov.*

Use of Toll Revenues to Fund Transit Improvements

Public Comment: Another irritant for me and thousands of others in the Reston-Herndon area is the proposal to increase tolls. In the first place, why are we the only residents of the entire Washington Metropolitan area that are burdened with tolls? How about implementing tolls on I-66? How about I-95/395? With all the millions and millions of dollars being spent on ONE interchange (Springfield), how come the residents in that area are not being charged? (0143 8-1)

> ***Response:*** *The Commonwealth of Virginia will be responsible for funding 25 percent of the Wiehle Avenue Extension capital costs, approximately $380.4 million (YOE), using Virginia Transportation Act (VTA) of 2000 and Dulles Toll Road revenues. In September 2001, the Commonwealth Transportation Board (CTB) directed that a minimum of 85 percent of available revenues be dedicated to public transportation initiatives in the Dulles Corridor. To fund the Commonwealth's share of the Dulles Corridor Rapid Transit Project with available revenues and limited use of short-term financing, a toll increase is planned. Based on an initial analysis of current traffic and growth projections, a toll of $0.75 at the main toll plaza and $0.50 at each interchange ramp toll plaza provides sufficient revenues to meet the Commonwealth's obligations for the Wiehle Avenue Extension. A final decision on the revised toll structure would be made by the CTB after the completion of a formal traffic and revenue study and its administrative review process.*

Use of Toll Revenues to Support Project

Public Comment: [GRCC would support] - A limited increase in tolls, parking and other user fees to help fund the state's portion of the rail project; and (0023 0024-6)

Public Comment: I am willing to pay higher tolls in the Dulles Corridor to allow the subterfuge that Virginia is paying its fair share of the Dulles Rail system. (0041 0042-3)

Public Comment: People will complain about toll increases on the Dulles Toll road. I think most people are not aware that this is coming. If this is done, no one will ever vote for a project like the Dulles Toll Road. The promise of removing the tolls should be kept. (0044 0045-4)

Public Comment: As a resident living one mile from the proposed Wiehle temporary rail terminus, I fully support the Dulles Rail plan as outlined. People don't generally support additional taxes or costs, such as increased toll road costs, but if I knew those costs were going to fund rail, it would be worth the additional costs. (0057 0058-1)

> ***Response****: The Commonwealth of Virginia will be responsible for funding 25 percent of the Wiehle Avenue Extension capital costs, approximately $380.4 million (YOE), using Virginia Transportation Act (VTA) of 2000 and Dulles Toll Road revenues. In September 2001, the Commonwealth Transportation Board (CTB) directed that a minimum of 85 percent of available revenues be dedicated to public transportation initiatives in the Dulles Corridor. To fund the Commonwealth's share of the Dulles Corridor Rapid Transit Project with available revenues and limited use of short-term financing, a toll increase is planned. Based on an initial analysis of current traffic and growth projections, a toll of $0.75 at the main toll plaza and $0.50 at each interchange ramp toll plaza provides sufficient revenues to meet the Commonwealth's obligations for the Wiehle Avenue Extension. A final decision on the revised toll structure would be made by the CTB after the completion of a formal traffic and revenue study and its administrative review process.*

Public Comment: Let's start with the proposal to double the tolls on the Dulles Toll Road. The burden is inequitable in that it will fall directly on those of us who live along the corridor and use the toll road. Yet the rail we are asked to fund will benefit travelers from all over the region - indeed from all over the world if it ever makes it to Dulles Airport. In fact, it appears the only reason that Wiehle Avenue was added as the terminus so late in the game was to fabricate a station in the Dulles Corridor and thus legitimize the use of the toll road monies. (0027 0028-1)

Public Comment: The financial plan as proposed has placed an unfair burden of the citizens along the Dulles corridor by the Commonwealth of Virginia. The Commonwealth should assume "all" the non federal share. This share should not include funds from the Toll Road, but should be totally funded by bonds. Just like Rt.58 and the Harbor Tunnels. (0033 0034-1)

Public Comment: Our research indicates that the Dulles Toll Road has taken $400 million in revenue since it was built for an initial cost of $55 million. It is time to get rid of full-time tolls. Let's take the pork out of politics and the tolls off the toll road. (0061 0069-14)

Public Comment: When the toll road was proposed, there was a promise to people that the tolls would be used to pay off the construction bonds. This has not happened and, to go further and increase the tolls at this point is simply, I think, a betrayal of the public trust. (0071 0080-2)

Public Comment: Furthermore, these increased tolls will provide a disincentive for people to use the toll road during hours in which congestion isn't a problem, like weekends, off-hours, middle of the day, late at night. No one is going to want to pay those tolls if they can use Route 7 or some of the back roads, Lawyer's Road, to commute east-west. (0071 0080-3)

Public Comment: Full time tolls should be taken off the Toll Road. There is enough money in the reserve funds to do this. The toll plazas should go. Confirm or deny the existence of enough money to pay off the current bonds outstanding on the Toll Road. (0061 0117-23)

> ***Response****: The Commonwealth of Virginia will be responsible for funding 25 percent of the Wiehle Avenue Extension capital costs, approximately $380.4 million (YOE), using Virginia Transportation Act (VTA) of 2000 and Dulles Toll Road revenues. In September 2001, the Commonwealth Transportation Board (CTB) directed that a minimum of 85 percent of available revenues be dedicated to public transportation initiatives in the Dulles Corridor. To fund the Commonwealth's share of the Dulles Corridor Rapid Transit Project with available revenues and limited use of short-term financing, a toll increase is planned. Based on an initial analysis of current traffic and growth projections, a toll of $0.75 at the main toll plaza and $0.50 at each interchange ramp toll plaza provides sufficient revenues to meet the Commonwealth's obligations*

for the Wiehle Avenue Extension. A final decision on the revised toll structure would be made by the CTB after the completion of a formal traffic and revenue study and its administrative review process.

Funding Plan Concerns

Public Comment: Here are three examples of what is unfair about the funding plan. (1) The plan raises tolls $2.00 per day per rail rider, some are even proposing $2.00 per day per automobile driver. The driver's benefit is only $0.25 per day per rail rider. (2) The plan taxes those within 2 miles of the rail line. The benefit by those who live more than one-quarter of a mile from the stations is almost zero. (3) The plan takes Federal and State funds so that wealthy Northern Virginians, especially those currently owning land near the stations, can profit. The benefit to those in Danville, Virginia, for example, who will be paying State taxes into this project is zero. (0048 0049-1)

Public Comment: Now is the time to reconstitute a funding plan which is fair and equitable to the parties involved. A taxing mechanism should be proposed which matches the benefits of service to the burden of the tax. That is just common sense and good business. We stand ready to participate in a new dialogue with the Project proponents, Fairfax County, the Town of Herndon, and property owners in the Dulles Corridor and Tysons Corner. We need new leadership to emerge to help move the funding component of this project forward. We stand ready to assist in that effort. This time, let's make it fair, equitable, and open so that it can achieve broad based support. (0028 0029-3)

***Response**: Major transportation improvements in the Washington, DC region have historically been funded through combinations of federal, state and local assistance. The Dulles Corridor Rapid Transit Project would have many beneficiaries, including users and non-users, and would contribute to regional goals for land use, mobility and access. As such, the capital funding strategy of the Wiehle Avenue Extension distributes the costs of the project among three funding partners: the federal government at 50 percent, the Commonwealth of Virginia at 25 percent and Fairfax County at 25 percent. The Commonwealth of Virginia will be responsible for funding 25 percent of the Wiehle Avenue Extension capital costs, approximately $380.4 million (YOE), using Virginia Transportation Act (VTA) of 2000 and Dulles Toll Road revenues. The majority of the Commonwealth's share would be funded through tolls on the Dulles Toll Road, and not through statewide transportation funds that would otherwise be directed to projects in other parts of the Commonwealth.*

In September 2001, the Commonwealth Transportation Board (CTB) directed that a minimum of 85 percent of available revenues be dedicated to public transportation initiatives in the Dulles Corridor. To fund the Commonwealth's share of the Dulles Corridor Rapid Transit Project with available revenues and limited use of short-term financing, a toll increase is planned. Based on an initial analysis of current traffic and growth projections, a toll of $0.75 at the main toll plaza and $0.50 at each interchange ramp toll plaza provides sufficient revenues to meet the Commonwealth's obligations for the Wiehle Avenue Extension. A final decision on the revised toll structure would be made by the CTB after the completion of a formal traffic and revenue study and its administrative review process.

Section 8.1 of the Final EIS describes the creation of the Fairfax County Dulles Rail Transportation Improvement District as the County source of revenues for its capital funding share of the Wiehle Avenue Extension. As stated in that section, Fairfax County and the landowners group have structured the district to provide sufficient revenues to cover the County's share of costs for the Extension. The tax will be levied only on commercial and industrial properties within the district. Specific comments or questions on the proposed transportation improvement district should be directed to the Fairfax County Board of Supervisors or Fairfax County staff.

Public Comment: The rest of the rail system was not paid for by tolls on roads and local tax districts. Why is it proposed for here? (0098 0114-3)

Response: *Federal funding for the construction of the initial Metrorail system was provided from sources that are no longer available. All new major fixed guideway capital investments, including extensions to the Metrorail system, are funded under FTA's New Starts (Section 5309) program. This program is discretionary and relies upon local project sponsors to contribute a significant portion of funding for proposed projects. Under current law, the maximum share of Federal funding for New Starts transit projects is 80 percent, although Federal participation of 50 percent is typical for New Starts projects. DRPT is currently seeking $760.8 million in Federal "New Starts" funding for Phase 1 of the project. This funding level represents a 50 percent share of the estimated project costs and assumes that annual Federal contributions would be maintained at a consistent and reasonable annual level through the proposed construction period. The remainder of the project costs for the Wiehle Avenue Extension would be funded by the Commonwealth of Virginia and Fairfax County. See response to the above comment.*

Public Comment: The potential costs of a rail project are substantial, and our members will bear a large portion of the funding responsibility, including potential sales tax and real estate tax increases, as well as increased tolls paid by our employees and customers; (0023 0024-2)

Response: *Comment noted. Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in revising the LPA, as evaluated in the Supplemental Draft EIS.*

Public Comment: the rail proposal is so flawed that it would make financial sense to decommission the Silver Line the day it opened, even if its enormous construction costs could be magically covered. (0061 0069-1)

Response: *Comment noted. Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in revising the LPA, as evaluated in the Supplemental Draft EIS.*

Public Comment: The capital investment in Dulles Rail should not be a problem. Federal law designates eighty percent federal support and Congress has increased the appropriation. True, FTA is reluctant, but Congress earmarks these grants. Utah gets sixty percent for rail. Why can't we? Even at fifty percent, Virginia has pledged 25 percent and the Airport has pledged about four percent. That leaves 21 percent for Fairfax and Loudoun counties, with 1.3 million people. The local share of $714 million is easily manageable. (0054 0090-4)

Public Comment: I think it is misleading the public to keep saying the federal government is going to pay for 50 percent of this. All that is in the application that is pending at FTA for funding is $600 million in addition to the money that Frank Wolfe has already gotten, $150 million more, $750 million. (0072 0082-6)

Response: *Under current law, the maximum share of Federal funding for New Starts transit projects is 80 percent, although Federal participation of 50 percent is more typical for New Starts projects. DRPT is currently seeking $760.8 million in Federal "New Starts" funding for the Wiehle Avenue Extension. This funding level represents a 50 percent share of the estimate Project costs, and assumes that annual Federal contributions would be maintained at a consistent and reasonable annual level through the proposed construction period. The specific amount and timing of Federal funds will be negotiated through a Full Funding Grant Agreement (FFGA) once a Record of Decision is issued and preliminary engineering is completed. Section 8.1 of the Final EIS provides the anticipated funding sources for each jurisdiction.*

Project Phasing

Public Comment: Please explain why it is necessary to justify Phase I based on the completion of Phase II, particularly when funding for Phase II is not even being considered at this time. (0063 0151-7)

> ***Response:*** *The Full LPA would be constructed in two phases in order to reduce annual Federal funding needs by spreading the construction costs over a longer period of time. At this time, the FTA is considering only the first phase of construction, the Wiehle Avenue Extension for New Starts funding from the pending six-year reauthorization of the New Starts program. FTA may consider the subsequent phase for FTA funding in the future, but has made no commitment to do so. Furthermore, FTA has determined that the first phase now being considered for funding has independent transportation utility even if the subsequent phase is never built. (The first phase serves the high employment area of Tysons Corner.) Therefore, FTA will make a decision on the funding of the first phase without regard to possible future phases.*

Public Comment: Please explain how it is in the public's interest to treat Phases I and II as separate projects for purposes of funding, but not for purposes of the NEPA analysis. Why is this not misleading, given that funding for Phase II appears unlikely? (0063 0151-8)

> ***Response:*** *See the above response on the construction phasing of the project. The Final EIS does evaluate the Full LPA as a Build Alternative since it fulfills the goals and objectives of the project more fully than the Wiehle Avenue Extension.*

Alternative Funding Approaches should be considered

Public Comment: Rail-revenue bonds could cover construction costs. Fares would cover the debt, operating and maintenance costs. Billions of taxpayer dollars would be saved, perhaps allowing funding, for example, of a DC hospital. (0048 0049-3)

> ***Response:*** *Since the Metrorail system and any Metrorail extension operates at a deficit, there are no excess fare revenues for capital financing.*

Investment per Passenger

Public Comment: The capital "cost" of Dulles Rail is NOT a cost. It is an investment. The $1.5 or $1.6 billion on grant money is $39 million per year, or $1.96 per passenger. This must be disclosed. There is no other way to get such mobility for so low a cost. (0054 0055-4)

> ***Response:*** *Comment noted. Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in revising the LPA, as evaluated in the Supplemental Draft EIS.*

Concern about Cost of Studies and Project Development

Public Comment: Furnish an accounting for the amounts expended and the sources for the cost of the DEIS and SDEIS studies, for any future studies, and an equivalent calculation for the cost and funding of preliminary engineering. (0061 0117-18)

> ***Response:*** *The budget for the current environmental review phase of the Project is $45.6 million, of which $43.7 million has been expended through August 2004. The sources of the funds are the Federal Transit Administration and the Commonwealth of Virginia. The environmental review phase, known as the NEPA process, includes: the scoping process; early and ongoing public involvement and agency coordination; alternatives analysis; environmental, engineering and financial analyses; preparation of the Draft EIS, Supplemental Draft EIS, Final EIS, and Revised General Plans; public hearings; and a Federal Record of Decision. In addition to the above, the*

Project has also responded to the requirements of the Federal New Starts program. Under New Starts, FTA evaluates and recommends projects for Federal funding. The requirements have included the Request to Enter Preliminary Engineering, project justification criteria, preliminary financial plan, and development of supporting materials.

For the next phase of the Project, preliminary engineering of Wiehle Avenue Extension, DRPT has a budget of $68 million. This budget includes DRPT's administrative and consultant costs, WMATA's administrative and consultant costs, and costs for professional consultant services. The sources of the PE funds are the Commonwealth of Virginia and the Federal Transit Administration.

Regional Funding Needs and Impact on State and Local Funding for WMATA

Public Comment: The current metro system in Washington has a $1.5 billion emergency capital deficit, and a longterm $12 billion capital deficit. Where is Virginia's share of this money coming from? And if Dulles Rail is implemented, won't Virginia's share of both figures increase? Shouldn't these questions be asked and answered up front prior to considering Virginia's further involvement in money-losing old-transit technology? (0061 0168-3)

Public Comment: Please identify the resources and plan to upgrade the Metrorail system to be able to accommodate eight car trains. Where will the money come from, and how will the job be completed in time for the opening of the Silver Line? (0063 0151-13)

Public Comment: Explain, and forecast, how the addition of the 23 mile Silver Line will affect Fairfax County, and the State of Virginia's portion of 1) the $1.5 billion emergency capital shortfall WMATA has announced, and 2) the $12 billion long term capital program WMATA says it needs. (0061 0117-22)

Public Comment: At a recent meeting of the Dulles Corridor Steering Committee, WMATA reportedly stated that it must get its $1.5 billion in core capital funding before Dulles Rail gets built. Moreover, MWAA reportedly stated that unless there is a financial commitment to build rail to Dulles Airport, it may not allow the use of its right of way for Phase I. Clearly, this is critical information that could seriously impact the integrity and environmental impact of the project. Please explain why it was not disclosed, particularly at the December 11, 2003 public hearing, which occurred after the Dulles Corridor Steering Committee meeting. Please explain whether the information will be disclosed and whether the public will be given an additional opportunity to comment. (0063 0151-21)

Public Comment: Please explain how the project team plans to meet the contingencies set forth by WMATA and MWAA, and what alternative plans may be under consideration. For example, if MWAA refuses to grant use of its right-of-way, what other alignments may be considered? Similarly, if WMATA does not get its $1.5 billion in core capital funding, how will the project proceed without their participation? (0063 0151-22)

Response: *In preparing the Final EIS , the Project Team developed and evaluated the No-Build Alternative with the assumption that WMATA would be funding and implementing eight-car train operations to satisfy forecast demand prior to the Project. WMATA has been emphasizing to the Commonwealth of Virginia and to the Project's other funding partners the critical importance of the implementation of eight-car train operations. Under its Metro Matters campaign (see www.wmata.com/about/metro-mattersfactsheet.pdf), WMATA is presently seeking the funding of its near-term capital needs to sustain the Metrorail and Metrobus systems. Within the $1.5 billion Metro Matters campaign, there is over $600 million for the eight-car train operations. In addition, WMATA has fully informed the region's Transportation Planning Board of the near term and long-term capital needs.*

In November 2002, MWAA endorsed the Metrorail Alternative. In its December 29, 2003 letter, MWAA has stated that its continued support of the Project is subject to three conditions: 1) The FTA reauthorization process needs to recognize the ultimate goal to complete the rail line out to

and beyond Dulles Airport; 2) Advanced additional engineering must proceed beyond the initial segment and include the entire project; and 3) There needs to be a Memorandum of Understanding among the local partners that captures a joint commitment to see the entire project through to completion.

Public Comment: Remember transportation (not tons of metal) is the goal and there is an entire region to serve. Throwing a boatload of money at the Dulles Corridor will leave nothing for other areas with traffic problems just as bad or worse than Dulles. (0044 0045-5)

Response: *Section 8.1 of the Final EIS provides the capital funding strategy for the two Build Alternatives. The non-Federal funding proposed for the project would come from sources dedicated to transportation improvements in the Dulles Corridor, and would not impact available funding for projects in other areas of the Commonwealth. The regional Transportation Planning Board (TPB) approves the long-range plan of transportation projects in accord with available funding over twenty-five years. The TPB has approved the Full LPA to be part of the long-range plan. Members of the TPB include representatives of local governments; state transportation agencies; the Maryland and Virginia General Assemblies; the Washington Metropolitan Area Transit Authority; and non-voting members from the Metropolitan Washington Airports Authority and federal agencies,*

Crowd Control Measures

Public Comment: Metro is having difficulty handling the crowds they now have traveling from Vienna into downtown. What will be the impact to the present system when the projected additional riders will be added to the present system? Analyze in terms of new capital cost and operating cost that will be spent towards crowd control. (0109 0128-3)

Response: : *In preparing the Final EIS , the Project Team developed and evaluated the No-Build Alternative with the assumption that WMATA would be funding and implementing eight-car train operations to satisfy forecast demand prior to the Project. WMATA has been emphasizing to the Commonwealth of Virginia and to the Project's other funding partners the critical importance of the implementation of eight-car train operations. Under its Metro Matters campaign (see www.wmata.com/about/metro-mattersfactsheet.pdf), WMATA is presently seeking funding of its near-term capital needs to sustain the Metrorail and Metrobus systems. Within the $1.5 billion Metro Matters campaign, there is over $600 million for the eight-car train operations. In addition, WMATA has fully informed the region's Transportation Planning Board of the near term and long-term capital needs.*

How are Cost Over-Runs Handled

Public Comment: who pays for the cost-over runs? (0109 0128-22)

Public Comment: The federal government is not going to contribute one penny towards those cost overruns. All that money is going to come out of the local taxpayers, the people who ride the toll road and the people who are paying your special tax in the tax district. (0072 0082-7)

Public Comment: What happens if we run out of money? Tunneling is very expensive. (0073 0083-3)

Public Comment: Inadequate Local Financial Commitment and Financial Plan: There currently is no local financial plan in place, and to the extent one might be advanced in the future, the cooperation of commercial property owners has been to date solicited based on substantial misrepresentations of the risks of additional costs that will fall on local and state taxpayers when the Federal Government does NOT contribute "50% of the costs" as the SDEIS and the rail proponents have claimed. In fact, the Federal government has made it crystal-clear that it will not by policy advance more than the specific number of dollars to which it commits when it signs the FFGA. The Application now pending at the FTA is

for $600 Million of Federal funding, and the FTA has been very clear that it has no obligation or intent to pay 50% of whatever excess costs might occur in the future. (0072 0150-10)

Public Comment: Cost Overruns are a virtual certainty: Environmental mitigation, interest costs, geotechnical considerations, and life-safety requirements that are not anticipated are certain to dramatically increase the Project cost above the estimated amount. As one small example, the citizens are demanding sound-walls where none have been proposed. (0072 0150-11)

> ***Response:*** *Obviously, with any large complex project, schedule and cost risks are real. WMATA has proven itself in project delivery. For completion of its 103-mile program, opening between 1997 and 2002, WMATA was under budget by $286 million, and on-time or early by 10 months aggregate. Moreover, DRPT is primarily accountable for the cost-effective delivery of this Project as its owner and contracting authority. DRPT has entered into a PPTA contract with Dulles Transit Partners for the benefits of PPTA, which are explained at DRPT's web site, www.drpt.virginia.gov. Through the Federal Full Funding Grant Agreement, FTA will not participate in the funding of any cost overruns.*

Accuracy of Cost Estimates

Public Comment: A close look at these numbers reveals something very peculiar. Note the guideway estimate of 301.3 million. The 11.6 mile section included in Phase 1 has one mile of tunnel and 4 miles of elevated section, along with the remaining 6.6 miles of surface guideway. This is stated to cost 137 million less than the remaining 12.5 mile section that contains no tunnels and less than one mile of elevated section. This is obviously wrong. (0095 0111-2)

Public Comment: The cost breakdown between Phase One and Phase Two does not appear to be reasonable. Tunneling, aerial construction, and right-of-way requirements indicate a much higher level of construction cost and risk for Phase One than for Phase Two where tunneling is limited to Dulles Airport, and where most risk has been eliminated through excavation off the proposed station during the recent reconstruction of the Dulles terminal. Phase One involves five stations, Phase Two, six stations. There is no significant difference in length between the phases. Yet the proposed cost for Phase One is $1.5 billion versus $1.9 billion for Phase Two. (0108 0127-10)

> ***Response:*** *The cost estimates for both the Full LPA and Wiehle Avenue Extension are based on the project's General Plans. It should be noted that the medians of the Dulles Connector Road, Dulles Toll Road and Dulles Greenway were reserved for high-capacity transit, saving the project significant money for right-of-way and access. The remainder of the Full LPA, west of Wiehle Avenue, includes a section of underground line and station at Dulles International Airport, a major service and inspection yard and two park-and-ride structures in Loudoun County. The capital cost estimates are reported in year of expenditure dollars; therefore, expenditures in later years reflect annual inflation.*

Public Comment: The cost of the proposed LPA Phase 1 is projected to be $1.5 billion. This is not the real bottom line of cost, however, because no where in the budget is the cost of money and other financing charges. The public needs the whole story. Please revise the budget to include financing charges as well as all sources of financing. (0109 0128-20)

Public Comment: Forecasting the cost and performance of major infrastructures projects with a reasonable degree of approximation is very difficult. However, proponents, including county, state, and federal politicians, DRPT and WMATA paint a rosy picture that the federal government will pay 50%. The average citizen believes that all is needed is to dig the hole in Tysons and the federal government will pay 50% of whatever costs are incurred in all stages. However, SDEIS, 8.2.1 states, these estimates do not include the cost of financing for delays or annual shortfalls in Federal funding. (0109 0128-21)

> ***Response:*** *According to DRPT's preliminary financial plan for the Wiehle Avenue Extension, no long-term financing of any shortfall in Federal funds for the Extension is anticipated. Short-term*

financing, through a letter of credit or similar mechanism, may be required if annual Federal funding levels do not match the terms of the Full Funding Grant Agreement. As prepared during preliminary engineering, the final financial plan will provide additional detail on potential financing costs. The final terms and timing of any short-term financing would be determined once a shortfall was projected, based on market conditions existing at that time.

Because FTA is now advancing only the Wiehle Avenue Extension in the New Starts program, a detailed financing approach has not been developed for the Full LPA. A preliminary financial plan for the full LPA will be developed subsequently, when DRPT seeks approval from FTA to advance that portion of the project into preliminary engineering. As with the Wiehle Avenue Extension, a more detailed financial plan would then be developed to support an FFGA for the remainder of the full LPA.

High Cost of Proposed Improvements

Public Comment: The enormous cost is really staggering. For this option alone, the capital cost is estimated to be $1,050.4 billion excluding finance costs. The proposal calls for the Commonwealth of Virginia to be the Project sponsor furnishing 25% or $262.6 million and Fairfax County furnishing 25% or $262.6 million for this option. The total Federal share 50% or $525.2 million. Considering the huge current funding deficits, the large costs for the Woodrow Wilson Bridge and the Mixing Bowl, and the failure of the transportation tax increase in Northern Virginia, it does not appear to be wise to pursue such an undertaking. (0102 0119-1)

Response: *The project's capital cost estimates are comparable with projects of this size and are based on a methodology appropriate with the design stage of the Final EIS and the final General Plans. Section 8.1 of the Final EIS provides the capital funding strategy of the two Build Alternatives. Section 8.3 of the Final EIS provides an initial discussion of risks and uncertainties. The ultimate cost of the Build Alternatives relies on a number of assumptions, including project schedule, major cost drivers, inflation rates, expenditure forecast, funding availability, and financing requirements. During the project's next phase of preliminary engineering, DRPT will prepare the final financial plan, which will include an update of the capital cost estimate and a formal risk assessment.*

Cost and Funding of Mitigations

Public Comment: What is the cost for each proposed mitigation option that is identified in, Table 6.2-7? (SDEIS, 6-22) (0107 0125-1)

Public Comment: Proposed mitigation measures for LPA and the LPA Phase 1 are identified, however, the DEIS and the SDEIS are silent in regards to cost and funding sources. This information should have been provided to the public prior to the hearings and comment periods. What is the cost for each mitigation measure and what is the funding source? Please do not justify your response by stating that during the PE this information will be available. The whole point of the NEPA process is to get in early with all available data and that data to undergo a rigorous analysis. This includes reporting all impacts, including the financial impacts that some agency (probably the citizens) will have to shoulder. (0109 0128-23)

Public Comment What is the funding source for each of the proposed mitigation options? (0107 0125-2)

Public Comment: Is the funding of the proposed mitigation options part of the cost over-runs that we are to expect from this megaproject? (0107 0125-3)

Response: *The proposed roadway modifications for station access are not high in number nor in costs. The capital cost methodology for the Final EIS does not include an estimate for each modification but rather uses "top down" method, whereby an order-of-magnitude cost is*

determined for the modifications. This method was also applied to environmental mitigation measures.

More Detailed Costs

Public Comment: A defensible breakdown of cost data – both capital costs and annual O&M costs – needs to be evaluated in the SDEIS. This is particularly needed in light of the huge costs and funding sought (e.g., $1,500,000,000.00 in capital costs (YOE) for Phase 1, with $48,700,000.00 in annual O&M costs (YOE), plus Phase 2-total projected capital costs of $3,400,000,000.00 (YOE) and $101,600,000.00 in annual O&M costs (YOE). (0068 0173-16)

Response: *The Project Team has two Technical Memoranda, Capital Cost Methodology and Metrorail Operating Subsidy, to record the determination of capital and operating costs. Since these are not public documents, they may be viewed at the Project office.*

Concerns about Local Taxing District and Local Funding

Public Comment: I WANT TO INFORM YOU THAT I WANT THE COUNCIL VOTE TO AMEND THE ORIGINAL PETITION, OR VOTE NO!!! WE VIRGINIA RESIDENTS ARE PAYING TOO MUCH ON TAXES FOR DIFFERENT REASONS. THIS ONE WILL NOT BE ONE OF THEM. I WANT YOU ALL TO COME UP WITH A BETTER PLAN FOR ALL MIDDLE CLASS, UPPER COMMUNITIES, AND TAX PAYERS. (0018 0019-1)

Public Comment: An additional tax on my business will have a significant detrimental impact and could well lead to my re-evaluation of the business location I have enjoyed for many years. (0019 0020-1)

Public Comment: As the owner of a small business in the Bowman Green business townhouse section adjacent to the Reston Town Center, I understand that my business is to be levied with a supplementary real estate tax to support the development (maintenance?) of the rail extension. I can categorically state that my business will see no material benefit from this project. My business, a pediatric speech therapy practice, serves a local clientele comprised overwhelmingly of physically impaired infants and young children. Parent and caregivers served by my practice arrive by car from about a ten-mile circumference. For practical reasons involving the physical impairments of their charges, they will not, and arguably could not, avail themselves of the proposed rail link. My suggestion, as a Reston business owner, is that my eventual tax on local business be levied in a manner that it takes into consideration the direct benefit of the transit link to the business. This could include evaluation of employee demographics, i.e., percent of employees commuting from points along the expanded rail system and the businesses proximity to the local rail station; evaluation of customer demographics, i.e., realistic recognition of catchment area; and finally, a threshold related to business size that would determine whether the business is appropriate in size to support an additional tax. (0019 0020-2)

Public Comment: There is potential for overlapping tax districts that would additionally impact commercial property owners in Reston in the future; (0023 0024-3)

Public Comment: [GRCC would support] - A two-phased tax district approach that supports the local funding portion of the rail project while fostering a connection between those who will help pay for rail and those who will directly benefit from the project, to correspond with the phased construction; (0023 0024-7)

Public Comment: [GRCC would support] - Reforming the existing LEADER petition to remove the requirement of the land owners to approve tax district funding for subsequent phases of Dulles Rail. (0023 0024-8)

Public Comment: With regard to the tax district, the proposal is to collect a tax from commercial property owners all the way to Loudoun County to fund Fairfax County's share of building the rail line, while only bringing the rail to Tysons Corner. The plan as it now stands would allow the Tysons Corner commercial property owners, who would be the first and largest beneficiaries of rail, to opt out once phase one was completed. That leaves the commercial property owners along the Dulles corridor holding the financial

bag as it were. They pay all along to fund construction of rail to Tysons and once the Tysons rail is constructed, Tysons property owners can drop out of the tax district, thus shrinking the tax base. This leaves the Dulles corridor property owners, who paid for Tysons rail, with increased property taxes to cover funding for phase two, which is their section of the rail. (0027 0028-2)

Public Comment: This leads to point #2: The Tax District funding mechanism for Fairfax's local share, as presented, is not fair nor equitable. Businesses in Herndon and Reston should not pay 10 years or more in advance to support construction of a rail line for their competitors to use in Tysons Corner. There is no guarantee that Phase 2 would ever be built and no commitment on timing. There are other problems with the flawed petition as well, such as the infamous poison pill provisions that give the majority of the district, controlled by Tysons Corner owners, the ability to back out of the funding for Phase 2. These issues have been well documented in testimony to the Herndon Council, and I will not elaborate again on them here. (0028 0029-2)

Public Comment: To be fair, the funding must be such that people are paying in proportion to their gain. Everybody in the tax district does not gain equally. I ask you to provide a quantitative analysis that identifies who gains and by how much they gain. You can start with my paper, but you must do the analysis and the cost allocation, then report these to the public. (0048 0049-4)

Public Comment: The tax-district funding mechanism for Fairfax's local share as presented is not fair or equitable. Businesses in Herndon and Reston should not pay ten years or more in advance to support construction of a rail line for their competitors to use in the Tysons Corner. There is no guarantee that Phase 2 would ever be built and no commitment on timing. (0028 0064-2)

Public Comment: There are other problems with the tax-district petition as well. Time will not permit me to go into them, but they have been well documented; for example, the infamous poison pill which gives the majority of the district control by Tysons owners the ability to back out of the funding for Phase 2. (0028 0064-3)

Public Comment: A taxing mechanism should be proposed which matches the benefits of safety to the burden of the tax. That is just common sense and good business. (0028 0064-4)

Public Comment: It is our hope and expectation that the tax district supporting Phase 1 will be implemented in time to meet the Federal New Start appropriation schedule in the first quarter of 2004. The Phase 2 tax district may follow within 90 – 120 days following implementation of Phase1. (0113 0132-1)

Public Comment: The vote last week by the Herndon Town Council should be looked at very seriously for its message and not merely as a setback in the rush for federal funding. The uncertainty demonstrated by the town council, the businesses being asked to invest in an extension that won't benefit them yet, and the local citizens is the canary in the mine shaft. (0115 0135-1)

Public Comment: The sponsors of the special tax district have publicly declared that plan "dead." Please explain how the project remains financially viable. (0063 0151-19)

Public Comment: Please explain how the local financial commitment criteria of TEA-21 will be met, given that two recent attempts to raise the local share have failed to gain public support (i.e., sales tax referendum and special tax district). (0063 0151-20)

> ***Response:*** *Section 8.1 of the Final EIS describes the creation of the Fairfax County Dulles Rail Transportation Improvement District as the County source of revenues for its capital funding share of the Wiehle Avenue Extension. As stated in that section, Fairfax County and the landowners group have structured the district to provide sufficient revenues to cover the County's share of costs for the Extension. The tax levy will be only upon commercial and industrial properties within the district. Although payments will not be due until December 2004, on July 1, 2004, Fairfax County began charging commercial landowners an additional 22 cents per $100 of*

assessed value for their properties on top of the base real estate tax rate of $1.13. Fairfax County projects that the tax rate could eventually increase to 29 cents per $100 of assessed value once a Full Funding Grant Agreement is reached. The actual levy will be established each year based on current assessments and the amount of outstanding debt. The district, which had an assessed value of $6.8 billion in June 2004, is expected to generate up to $400 million for the construction of the Wiehle Avenue Extension. If Transportation Improvement District revenues are not sufficient, Fairfax County may consider supporting its capital obligations for the Wiehle Avenue Extension using general obligation debt.

A new landowner's group, called the Western Alliance for Rail to Dulles (WARD), has formed to explore the potential of developing another tax district, similar to the Dulles Rail Transportation Improvement District, which would include properties within Fairfax County west of Wiehle Avenue. WARD has drafted a petition and began circulating it among landowners in July 2004. A determination regarding overlap within the Route 28 tax district would be addressed by WARD and Fairfax County. Property owners within the second district will be able to comment on that district's details during the Fairfax County hearing process.

8.2 Operating Funding Strategy

A. Draft EIS Comments

Regional Agency Comments

Operating Subsidies

Regional Comment: The Commonwealth has a great opportunity to make the Dulles corridor transit a shining example for user-friendly, service-oriented, 21st century transit, with very low, and possibly even zero, subsidy operation. It has been done in other countries, it can be done here. (0133, 0133-T –7)

Response: *With respect to the comment on zero subsidy operation, the Metrorail system and any Metrorail extension operates at a deficit. Section 8.2 of the Final EIS provides the operating costs, revenue and subsidy allocation of the two Build Alternatives.*

Public Comments

Need for More Thorough Financial Analysis

Public Comment: Assessment of financial implications is insufficient. A more comprehensive presentation and assessment of financial analysis is needed. (0510 8-1)

Response: *Chapter 8 of the Final EIS reflects DRPT's preliminary financial plan for the Wiehle Avenue Extension. Section 8.3 of the Final EIS provides an initial discussion of risks and uncertainties. During the project's next phase of preliminary engineering, DRPT will prepare the Extension's final financial plan, which will include an update of the capital cost estimate and a formal risk assessment.*

Operating Subsidies

Public Comment: The projected annual operating subsidy for a rail line to Dulles is $180 million per year. This is five times more than Fairfax County's current transportation subsidy payment. It is also more than the anticipated revenues from the 1/2-penny sales tax increase. To repeat, the revenues from the proposed sales tax hike would not even cover the Dulles Metrorail operating subsidy, much less pay for any other transportation improvements. (0140, 0200-E –1)

Public Comment: The annual operating subsidy for the Dulles metrorail extension would be $180 million

a yr. This is five times more than Fairfax County's current transportation subsidy payment. It is also more than the anticipated revenues of the one-half penny sales tax increase. To repeat, the revenues from the proposed sales tax increase would not even cover the Dulles metro operating subsidy, much less pay for any other transportation improvements. (0140, 0140-T –1)

> ***Response:*** *The subsidy amounts that are presented in Section 8.2 of the Final EIS are in year-of-expenditure dollars, that is, the amounts are inflated to year 2025 dollars. So, it is improper to compare the forecast subsidy of the Full LPA to the current operating assistance of Fairfax County. The sales tax referendum of Fall 2002 failed.*

Public Comment: During the FEIS and rail PE process we need hard work on…Strategies for reducing operating subsidy requirements and making the system profitable. (0173, 0213-M –8)

Public Comment: Believes that harmonized land use, good design, and cost control should enable the 24-mile proposed Metrorail extension to "break even" operationally. Since the Dulles Line will be one of the most heavily used sections of the Metrorail system, attention to user-friendly design, customer service, and fare levels should enable WMATA to recover 100 percent of the operating cost from the farebox. Acknowledges that this comment may be more properly directed to the Commonwealth. (0133 8-1)

> ***Response:*** *With respect to the comment on a profitable system, the Metrorail system and any Metrorail extension operates at a deficit. Section 8.2 of the Final EIS provides the operating costs, revenue and subsidy allocation of the two Build Alternatives. WMATA has recently reduced its operating costs in face of higher deficits.*

Public Comment: As indicated by the following numbers, the subsidy for rail represents a minimal increase over the bus rapid transit return. The Metrorail system has a much higher fair box recovery (75-84 percent) than the bus system (30 percent range). Operating Subsidy. Table 6.3-12 Annual Operations and Maintenance Costs indicated $533.53 million for the baseline, 553.19 for BRT 1 and $601.40 for the T-9 rail alternative or only 7-8 percent higher than BRT. Table 10.19 indicates that O and M Costs per passenger mile in 2025 are nearly identical for BRT 1 $0.264 and T6/9 rail $0.27. Table 10.1-21 The Cost per new rider is $16.62 for BRT 1 and $24.63 for T-9. If the additional riders from the transit-related development in Fairfax County (Loudoun's TOD was not modeled for additional ridership) only are added in the figure for rail is $17.40. It reflects the additional capital and O&M costs to carry each new rider attracted to the regional system. (0141, 0443-E –16)

> ***Response****: The commenter is correct, the operating cost per passenger mile in 2025 for each Build Alternative that was evaluated in the Draft EIS is very similar, as indicated in Chapter 10 of the Draft EIS. The selected LPA is the Metrorail Extension.*

Public Comment: How does the annual operating budget for rail and bus break down, Loudoun vs. Fairfax? I am told that the $21 million BRT and $111 million rail operating budgets are subsidies. Is that correct? (0112, 0382-L –14) (0112, 0462-L –42)

> ***Response****: Tables 8.2-1 and 8.2-2 in the Final EIS present the estimated opening year and forecast year operating subsidies for each WMATA Compact member jurisdiction, including Fairfax County and Loudoun County. For example, in the opening year of the Full LPA, the project's Metrorail operating and maintenance subsidies for Fairfax and Loudoun counties are estimated to be $11.4 million and $8.0 million respectively. The project total operating and maintenance subsidy is allocated to all WMATA Compact members in Virginia, Washington, DC, and Maryland via the formula described in Section 8.2.4 of the Final EIS.*

Operating and Maintenance Costs

Public Comment: Do the operating costs include maintenance of Metro equipment, gasoline for buses, labor costs, etc.? (0112, 0112-E –3)

Response: *The operating and maintenance costs include all costs to operate the bus and/or Metrorail system.*

Public Comment: I also ask you to tone down the annual operating cost estimates without depreciating the quality of the service. Operating costs should be estimated at current cost levels to compare against current fare levels. (0013, 0013-L –3)

Public Comment: That details on operating subsidies and their potential to escalate are sketchy at best. (0446, 0218-M –11) (0446, 0146-T –11)

Response: *The annual operating costs were derived using established WMATA cost models, fare structure, and the results of the operating plan for the Build Alternatives in year-of-expenditure dollars.*

Public Comment: The operating expenses in the early years should not exceed $67 million additional per year for the 71,900 weekday passengers envisioned. (2002 dollar values) The $108 million estimate in the DEIS needs to be restudied and reworked. If the $108 million is correct, it must include existing "tripper" operations between West Falls Church and New Carrollton that will become part of the Dulles operation. It will not be added expense. Approximately 44 cars are now involved in this "pre-Dulles" operation on the Orange Line. Only 100 additional cars will be required (for 71,900 weekday passengers) plus 15 spares and shopping margin. Each added car will cost only $172 per car hour in current dollar values because very little added station and tunnel expense will incurred east of Falls Church. The only added costs will be for rail wear and minimal added wear and tear on existing facilities, plus the additional moving cars. (0013, 0013-L –30)

Response: *The $108 million estimate of the Draft EIS is in year 2010 dollars (not year 2002 dollars), and the cost reduction by using the existing and growing tripper service have been incorporated into the results. The annual operating costs were derived using established WMATA cost models, fare structure, and the results of the operating plan for each Build Alternative in year-of-expenditure dollars.*

Public Comment: How will that money for operating costs be raised and divided among Fairfax and Loudoun? An estimate of Loudoun's share of the operating costs for rail and BRT would be helpful. (0112, 0382-L –15) (0112, 0462-L –43)

Response*: The selected LPA is the Metrorail Extension. Section 8.2 of the Final EIS provides the operating funding strategy for the two Build Alternatives, being the Full LPA constructed in two phases. Fairfax County uses a combination of state aid and general funds for their current share of WMATA Metrorail, Metrobus and MetroAccess programs. Loudoun County has not yet identified their anticipated operating subsidy funding source for the project. The project total operating and maintenance subsidy is allocated to all WMATA compact members in Virginia, Washington, DC, and Maryland via the formula described in Section 8.2 of the Final EIS.*

Public Comment: States that the Project Team needs to explain or correct information about operating costs on Page 24 of the *Public Hearings Report* (Section 3.6). The bus costs appear to be for the shuttle bus service west from West Falls Church to Loudoun County for less than one-minute headway service. (0013 8-2)

Response: *The costs shown in the Draft EIS Public Hearings Report reflect high-capacity, 60-foot articulated BRT vehicles. The headway service is as described in the Transit Operations and Maintenance Plan Draft Technical Report (June 2002).*

Public Comment: Metrorail will need 104 scheduled cars on the extension, but this can be reduced to 88 by turning alternate peak trains back at Herndon to avoid too many empty cars to Loudoun County. The annual future cost of 104 cars may be $72.8 million, not the quoted $106 million. (0013 8-3)

Response: *The four stations west of Herndon-Monroe have high ridership and therefore short turning alternate trains at Herndon-Monroe would hurt this important market of riders and would ultimately lower total ridership on the line because rail service would not be as convenient for Loudoun County riders as under an operating plan where all trains run through. The suggested operating plan would negatively impact an extremely large and important ridership market for the line.*

Escalation of Operating Costs

Public Comment: We will have inflation, but fares will inflate, also. Until fares inflate, we must not inflate costs. Please instruct your estimators to recognize that Dulles Rapid Transit operations between Falls Church and the Anacostia River will be on existing trackage already staffed so added car-miles will come at much lower than average costs. Metro is already operating some of these car-miles, so again, new costs will be less than average. (0013, 0013-L –4)

Response: *Both revenues and operating and maintenance costs are presented in inflation adjusted dollars. The existing Metrorail service between Falls Church and the Anacostia River has been incorporated into the each alternative's operating plan based on WMATA model for operating and maintenance costs.*

Editorial Comment

Public Comment: Cannot find Section 6.9 in the *Public Hearings Report*. (0013 8-1)

Response: *Section 6.9 begins on Page 197 of the Draft EIS Public Hearings Report.*

Concerns Regarding BRT Funding

Public Comment: We also recognize that the assumptions regarding future bus service may be highly unrealistic. We think that it is unlikely that BRT would be implemented as assumed in the DEIS without absorbing significant amounts of funds now used for local and express bus service. This DEIS assumption is particularly unrealistic given the fact that the BRT would be using the same funds (surplus toll road revenues and Fairfax County general revenues) as are now being used for local and express bus service. (0478, 0484-E –8)

Response: *For purposes of analyses in support of the Draft EIS, BRT was considered an extension of the WMATA Adopted Regional System (ARS). It was assumed that the WMATA Compact member jurisdictions, including Fairfax County, would pay the incremental annual subsidy of BRT, according to the Metrorail subsidy allocation formula. Under this assumption, BRT operations would not have been substantially funded from sources presently funding local and express bus service."*

B. Supplemental Draft EIS Comments

State Agency Comments

Need Clear Understanding of Financial Commitments for WMATA Member Jurisdictions

State Comment: Montgomery County believes that the Washington Metropolitan Area Transit Authority Board should address the operating and maintenance cost sharing formula so that all member jurisdictions have a clear understanding of their financial responsibility for both phases of the project. The Dulles Corridor Rapid Transit Project is potentially a 23 mile extension to a 103 mile system for a 22 percent increase In the system size, and this large a system expansion should be thoroughly reviewed by the funding partners at WMATA. Such a review can then be used by all jurisdictions to guide future system expansions. (0079 0092-2)

Response: *In support of the Final EIS, the Project Team, in coordination with WMATA staff, has analyzed the estimated Metrorail operating and maintenance costs, revenues and deficits of the No-Build Alternative, the Full LPA and Wiehle Avenue Extension in the opening year and in the forecast year. The Team allocated the operating deficit among all the Compact member jurisdictions in accordance with the current WMATA formula. Similar information was published in the Draft EIS of June 2002 and Supplemental Draft EIS of October 2003 and in DRPT's preliminary financial plan for the Wiehle Avenue Extension . In addition, the WMATA staff presented the costs, revenues and deficit of the No-Build and Build Alternatives of the Draft EIS to the Planning and Development Committee of the WMATA Board of Directors in March and April 2002 and to the WMATA Jurisdictional Coordinating Committee in March 2002. This information should be sufficient for the Compact member jurisdictions to discuss the Project's financial aspects.*

Public Comments

Fairfax County Share of Operating Assistance

Public Comment: How will Fairfax County pay for its share of the operating deficits projected to be millions of dollars a year? Will other Fairfax County programs be reduced, or will other taxes be increased to cover these deficits? 90038 0039-6)

Response: *Currently, Fairfax County provides funds for Metrorail operating assistance through its General Fund. The Fairfax County Board of Supervisors would be responsible for determining the funding sources that would be used by the County for its portion of the WMATA operating and maintenance subsidy under the WMATA Compact. Additionally, the Commonwealth of Virginia supports WMATA operations with funding from DRPT formula assistance, which is passed to Northern Virginia localities through the Northern Virginia Transportation Commission to support local transit operating needs, including Metrorail subsidies. Specific comments or questions regarding the funding sources used to cover Fairfax County's share of Metrorail operating assistance for the Wiehle Avenue Extension and the Full LPA should be directed to the Fairfax County Board of Supervisors or Fairfax County staff.*

Public Comment: There will be an operating deficit and, if I read the Draft EIS correctly, in Year 1, that will be $9 million. In 2025, that will be $23 million. That is just Fairfax County's share and no one, as yet, has determined where that money will come from. (0062 0070-4)

Response: *As provided in Section 8.2 of the Final EIS, the estimated Fairfax County contribution to the annual incremental Metrorail operating subsidy for the Wiehle Avenue Extension will be $7.5 million in 2011 and $12.6 million in 2025, in year of expenditure dollars. It should be noted that operating costs and subsidy are reported in year of expenditure dollars; therefore, expenditures in later years reflect annual inflation. Specific comments or questions regarding the funding sources used to cover Fairfax County's share of Metrorail operating assistance for the Wiehle Avenue Extension and the Full LPA should be directed to the Fairfax County Board of Supervisors or Fairfax County staff.*

Rail Passenger Fare Levels

Public Comment: A fair funding plan would have the rail riders pay approximately $16 per day, an amount they can afford because they would save that much on automobile and garaging costs. Those owning property near the rail line would not realize excess profits because the fare would be at its fair market value. No new taxes or fees would be required. The system would pay for itself. (0048 0049-2)

Response: *In accordance with WMATA policy, Metrorail fare revenues are set at levels to recover a portion of systemwide operations and maintenance costs, optimize ridership, and provide equitable access to the system for all potential users. For the purpose of NEPA analysis,*

estimated fare revenues, which would cover a portion of the project's operations and maintenance costs, are based on the current fare levels set by the WMATA Board with modest increases approximately every three years. The majority of operating revenues would come from farebox revenues and annual subsidy payments provided by member jurisdictions of the WMATA Compact.

Public Comment: Rail transit can and should open up jobs throughout the region to lower income households and provide those households with lower-cost mobility than the automobile. This social goal can be accomplished by means other than undermining the system's operating efficiency by subsidizing the ticket price. The system in the Dulles Corridor at least should be designed and managed primarily as a transportation system. Service standards and fares should reflect the nature of the market being served and be structured to operate without subsidy. (0108 0127-4)

Response: *Comment noted. Few public transit systems in the U.S. operate without a subsidy. The current Metrorail system averages approximately a 70 percent farebox recovery. For the purpose of NEPA analysis, future fares are the current fares escalated at a rate one-third the rate of inflation. Ridership forecasts incorporate the expected fares in calculating the projected ridership.*

Public Comment: The Dulles Corridor line likely would be among the most heavily used sections of the Metro rail system. Yet in the DEIS, WMATA projected only a 38% recovery of operating cost from the fare box! This does not make sense. (0108 0127-5)

Response: *Few public transit systems in the U.S. operate without a subsidy. The current Metrorail system averages approximately 70 percent farebox recovery. The outer limits of the system will have lower recovery, while the core of the system will have a very high recovery.*

Public Comment: According to a recent article published in the Washington Post, there has been a 0.36% reduction in riders for the Metro system with each 10% fare hike. If Metro's operating budget is funded by money from fareboxes, how will this reduction in ridership affect the operating cost for LPA Phase 1? (0109 0128-17)

Response: *The travel demand forecast model that the Project Team uses for estimating ridership and revenue is sophisticated. It includes the application of regular Metrorail fare increases for the purpose of NEPA analysis and incorporates formulas to address traveler's sensitivity towards the costs of different transportation modes. So, the ridership and revenue forecasts already reflect the effect of fare increases*.

Operating Cost Subsides Required

Public Comment: it would cost $200,000 for each new rider attracted to Dulles Rail. It would be cheaper to buy a car for every driver in the typical Fairfax family. Do you dispute this calculation? (0061 0069-4)

Public Comment: Heavy rail systems such as the proposed Silver Line typically require subsidies, annual subsidies, greater than the average income of the community at the twentieth percentile. Please confirm or deny these figures. (0061 0069-5)

Public Comment: We do not understand the methodology of calculation of cost per new rider. This needs to be explained. (0061 0117-9)

Response: *Using the methodology used by the Federal Transit Administration for New Starts projects, the total cost per passenger is estimated to be approximately $24.73 (in 2004 dollars) per new rider. This is based on total annualized capital and operating costs divided by the number of new transit riders, which is estimated in the travel demand forecasting process.*

Public Comment: The incremental cost of initial operation in Stage or Phase I may be $48.7 million per year, so with 53,600 initial riders, the cost per passenger will be $3.25 for a long ride, for a revenue-to-cost ratio of 81 percent, almost unheard of in public transit. This financial windfall, or lack of substantial deficit, is crucial to the SDEIS and should be so stated. (0054 0055-2)

Public Comment: The public needs to know that the Dulles rail subsidy will be only 24 cents per dollar of passenger fare. (0054 0055-3)

> ***Response:*** *Comment noted. Chapter 10 of the Final EIS includes several comparative measures of cost-effectiveness, including operating cost per passenger mile.*

Public Comment: Heavy rail systems such as the proposed Silver Line have, in other places, required annual subsidies at the level of the gross income at the 20th income percentile of the community. Please confirm or deny this calculation. (0061 0117-5)

> ***Response:*** *The estimated incremental annual operating costs, revenue and subsidy are provided in Section 8.2 of the Final EIS..*

Public Comment: A study done by BART (Bay Area Rapid Transit) in San Francisco indicated that a similar heavy rail system would cost a total of $47,000 per round trip commuter in annual subsidies. Please compare the costs of that proposal (Hayward to San Jose) with the Silver Line projections and indicate any differences that would affect the $47,000 subsidy number (0061 0117-6)

Public Comment: A study done by the Bay Area Rapid Transit in San Francisco indicates that a similar heavy-rail system will cost $47,000 in annual subsidies per round-trip commuter. Please compare the cost of that proposal, Hayward to San Jose, with the Silver Line projections. (0061 0069-10)

> ***Response:*** *There are many ways of calculating subsidy per rider. Without having the methodology used in the BART study referenced by the commenter, it is difficult to provide a "subsidy per commuter" figure for the Dulles Corridor Rapid Transit Project that can be compared accurately to the measures used by BART for the above-referenced project. However using the methodology used by the Federal Transit Administration for New Starts projects, the total cost per passenger is estimated to be approximately $24.73 (in 2004 dollars) per new rider. This is based on total annualized capital and operating costs divided by the number of new transit riders, which is estimated in the travel demand forecasting process.*

Public Comment: Operating Subsidy is grossly understated: The operating subsidy will be far higher than the SDEIS purports, because the lower ridership means lower farebox receipts. (0072 0150-4)

> ***Response:*** *Ridership forecasts were developed using a travel demand forecasting model that is consistent with the Metropolitan Washington Council of Government (MWCOG) model, as well as regionally-adopted land use and demographic data. The annual operating costs and revenues were derived using established WMATA cost models, fare structure, and the results of the operating plan for each alternative in year-of expenditure dollars. Section 8.3 of the Final EIS presents a discussion of the operating cost and revenue risk factors.*

Funding Impacts for WMATA Member Jurisdictions

Public Comment: It is unfair to assess the state of Maryland $6.9 million in yearly operating costs for this LPA Phase I and $0.00 for Loudoun County. I would guesstimate that more Loudoun residents will use the LPA Phase I than Marylanders or D.C. residents, especially when you propose spending $2.8 million a year in "premium bus service" to Loudoun County. (0016 0122-20)

> ***Response:*** *To date, the Northern Virginia Transportation Commission has waived the participation of Loudoun County in the Metrorail subsidy allocation. Otherwise, funding for operations and maintenance of the Metrorail system is governed by the WMATA Compact.*

WMATA Compact jurisdictions contribute to the agency's annual operating budget in accordance with Board-approved Metrorail subsidy allocation formula. Per a WMATA Board of Directors Resolution in year 2000, the operating deficits of an extension (such as the Dulles Corridor Rapid Transit Project) will be allocated among member jurisdictions in accordance with the formula in effect at the time of the extension.

8.3 OTHER FINANCIAL ISSUES

A. Draft EIS Comments

No comments pertaining to this topic were received.

B. Supplemental Draft EIS Comments

Public Comments

Costs for Mitigation Measures

Public Comment: [I]nclude in the project budget post-construction study of the noise, visual and traffic impacts on neighborhoods and contingency funds to pay for additional mitigation if the impact is greater than anticipated. (0026 0067-1)

Public Comment: What are the estimated expected costs and the sources of proffers or funding for connections and mitigations? (0042 0043-8)

Response: *The proposed roadway modifications for station access are not high in number nor in costs. The capital cost methodology for the Final EIS does not include an estimate for each modification but rather uses "top down" method, whereby an order-of-magnitude cost is determined for the modifications. This method was also applied to environmental mitigation measures. ,*

Cost per New Rider

Public Comment: Our calculations are that the cost to remove one car from the road through Dulles Rail is $900,000. Confirm this number or come up with another one. Compare and contrast this $900,000 figure with the $700 per vehicle we estimate it costs to expand the traffic capacity. (0061 0069-3) (0061 0117-3) (0061 0136-4)

Response: *In general, every "new rider" generated by the project could result in one less automobile on the Dulles toll Road or other regional roadways. Using the methodology developed by the Federal Transit Administration for determining the cost per new rider for New Starts projects, the total cost per passenger is approximately $24.73 (in 2004 dollars) per new rider for the Wiehle Avenue Extension. This is based on total annualized capital and operating costs divided by the number of new riders, which is estimated in the travel demand forecasting process.*

9.0 SECONDARY AND CUMULATIVE EFFECTS

9.1 Secondary Development Effects

A. Draft EIS Comments

State Agency Comments

Need for Further Explanation of Environmental Effects

State Comment: Land Use and Socioeconomic - Technical Report (June 2002)*. Page 7 - Purpose - "By providing a high-capacity transportation choice for travelers, the proposed project would be better able to meet the anticipated increases in travel demand, reduce the projected use of existing facilities, and help reduce further congestion in the corridor." This statement would be true if the construction of rail transit in the corridor did not also allow for increased densities. However, the comprehensive plans within the local government provide for higher densities with the introduction of rail transit. Therefore, any reduction in auto travel due to the availability of rail transit is exceeded by the increase in demand resulting from the increased densities, and the anticipated benefits are lost. "Moreover, the ability of the proposed improvements to increase person-moving capacity over long distances with fewer numbers of vehicles, should help minimize future increases in vehicle miles traveled in the corridor and vehicle emissions." This statement would be true if the construction of rail transit in the corridor did not also allow for increased densities. However, the comprehensive plans within the local government provide for higher densities with the introduction of rail transit. Therefore, any reduction in auto travel due to the availability of rail transit is exceeded by the increase in demand resulting from the increased densities, and the anticipated benefits are lost. In addition, because the proposed improvements only provide for increased transit opportunities in only the east-west direction, the increased travel demand in the north-south directions due to the increased densities is not even partially reduced by the proposed construction, again reducing the anticipated benefits. (0421, 0421-A –4)

State Comment: Economics and Secondary Development Effects - Technical Report (June 2002)

- Page 5 - Need - "The projected increase in residents and job opportunities, will result in markedly higher traffic volumes on highways and streets in the Dulles Corridor and throughout the region."
- "Given that the corridor transportation network currently experiences traffic volumes that meet or exceed the capacity of roadways and intersections, causing severe congestion, these increases in traffic volumes are only expected to worsen conditions."
- "Because the existing transit system in the Dulles Corridor operates on the congested roadways described above, it generally offers a poor alternative to auto travel."
- While these are valid considerations, there is no information as to how this impact will be mitigated other than a mention of the increase in rail transit opportunities with the Metro rail Alternative. While it is recognized that rail would provide some mitigation for congested auto travel in the east-west direction, in this instance the increase in land use densities allowed with the provision of rail transit would result in an increase in traffic that is greater than any reduction that which might be provided by rail patronage. Additionally, it should be anticipated that there will be no reduction in congestion, but an increase in congestion, in the north-south direction. (0421, 0421-A –6)

  Response: *Fairfax and Loudoun counties govern land use and have recently conducted extensive comprehensive planning in advent of this Project. As the commenter states, the Fairfax County and Loudoun County comprehensive plans allow more density to occur at the Metrorail station areas, if the Metrorail Extension is funded and built. These policies would provide for higher levels of mixed-use, pedestrian-friendly development in these areas than would otherwise exist without Metrorail in the corridor. The primary intent of these policies is to focus future development into patterns that will increase the number of viable travel options available to corridor residents and employees, including transit, walking, and bicycling. Without the Project, the same level of development would occur in the counties; however, it would be in a dispersed*

pattern of development that is highly auto-oriented, leaving people with few travel choices and resulting in widespread congestion.

The commenter is correct in stating that the increased development in station areas would attract an increased number of vehicle trips; however, this change is consistent with local goals and comprehensive plans. These goals include promoting overall mobility by providing travelers with choices. Even though many people will still use a car in a transit-oriented development, the density allows for the cost-effective provision of other modes at reasonable service frequencies, thus providing people a choice. The clustered development at Metrorail stations in the Dulles Corridor would foster a higher mode split for transit (see Chapter 6 of the Final EIS for an analysis of the effects of the Project on transportation). Moreover, the increase in densities combined with the transit investments, results in a greater number of transit trips, pedestrian trips, and non-single-occupant vehicle trips in the corridor. Therefore, the new, transit-oriented urban form will help to provide a greater number of travel choices, increasing overall mobility in the corridor, the counties, and the region.

The Metrorail extension and related transit improvements will not only provide for increased transit opportunities in the east-west direction. Many of the feeder services that are included, as part of the alternatives would provide improved transit service for north-south travel to and from the station areas as well. Because the planned development would be within walking distance of the new stations, feeder services that connect to the station would also provide access to this development. Moreover, because in many cases the proposed feeder services would operate more frequently than existing transit service, they would provide improved transit opportunities in the north-south direction.

The density increases associated with implementation of the Dulles Corridor Rapid Transit Project also create better opportunities for future transit improvements geared toward this north-south demand. The focused development pattern (rather than a dispersed pattern) creates opportunities for "point-to-point" express services from elsewhere in the corridor. For example, say the new development along the Dulles Toll Road attracts a large number of travelers from the Centreville area. A new express service could be developed that operates from the Centreville Park-and-Ride to the concentrated destinations along the Toll Road. Because the park-and-ride lot concentrates the trip origins at one end, and the focused development concentrates destinations at the other end, the express service can efficiently and cost effectively service multiple origins and destinations. In a dispersed landscape, on the other hand, it is not possible to provide frequent and cost-effective service that serves multiple origins and destinations.

Mitigation for traffic-related impacts around proposed station areas and for long-term effects on traffic in the vicinity of the proposed stations is identified in Chapter 6 of the Final EIS. In addition, as stated in Chapter 9 of the Final EIS, any secondary effects to the built and natural environment resulting from additional station area development would be mitigated through compliance with Fairfax and Loudoun Counties' land use policies and development permitting processes. In the future, the counties may limit development at station areas if necessary to mitigate any associated impacts to the surrounding community.

Local Agency Comments

Consistency Between Transportation and Land Use Planning

Local Comment: The perpetual issue of how to integrate transportation planning with land use planning needs to be looked at more closely than has been done. Put simply, are Metro and Fairfax County repeating the same mistake in putting rail down the median strip of the Dulles access road that they made in putting it down the median strip of I-66? We know that separating the rail line from where people actually live and work, resulting in building a chain of lonely, isolated, ugly parking facilities connected to a metro station, is that the type of development we want for the Dulles corridor? Is the proposed median alignment likely to reduce or increase automobile traffic? The Fairfax County board of supervisors, of

course, last year attempted at least a partial solution to these issues by approving measures to encourage denser development around the metro stations. We applaud the goal. We wonder did they go far enough. (0151, 0151-T –5)

Local Comment: The perpetually mishandled issue of how to integrate transportation planning with land use planning needs to be looked at more closely than it has been. Put simply, are Metro and Fairfax County repeating the same mistake in putting rail down the median strip of the Dulles Access road that they made in putting it down the median strip of I-66? We know that separating the rail line from where people actually live and work resulted in building a chain of lonely, isolated, ugly parking facilities connected to a Metro station. Is that the type of development we want for the Dulles Corridor? (0151, 0297-E –6)

Local Comment: In sum, is there an integrated land use transportation master plan? We would like to see more evidence that the overall impact of the project has been fully considered. (0151, 0151-T –8), (0151, 0297-E –13)

> ***Response:*** *Each locality has adopted land use plans that determine the actual level of development and support transit-oriented development at the Metrorail station areas as a method to integrate land use and transportation. All current land use plans and zoning ordinances were reviewed for the Final EIS, as required. The adopted plans that were assessed as part of this study include: the Fairfax County Transportation Plan; the Fairfax County Comprehensive Plan, as amended; the Loudoun County Countywide Transportation Plan; and the Loudoun County Revised General Plan. In addition, several regional plans and initiatives were also evaluated. Section 1.3 and Section 3.1 of the Final EIS provide a discussion of each of these plans as they relate to this Project.*
>
> *The median of the Dulles International Airport Access Highway (DIAAH) has been studied as a location for rapid transit since that roadway was constructed and the airport dedicated the median for that use. As shown in Figure 1.4-2 of the Final EIS, the major activity centers of Reston, Herndon, and Dulles Corner are bisected by the DIAAH. Local land use plans call for higher-intensity office, retail, and residential development on parcels in the existing and emerging activity centers these areas. Further, past experience with the Metrorail system has demonstrated that transit investment has had positive effects on residential and commercial development near the stations. Chapter 5 of the Final EIS provides a discussion of the station area planning guidelines, characteristics and development potential. Potential impacts to automobile traffic as a result of the Project are presented in Chapter 6.*

Local Comment: While we may be critical of the EIS, we remain firmly committed to public transportation and recognize and accept that it is critical to the elimination of air pollution, minimization of vehicular transportation on city streets and in our neighborhoods. Towards this end, Section 10.3 of the Draft EIS, entitled "Issues to be Resolved," should be amended to include the Falls Church City issues raised herein. (0122, 0122-A –30), (0122, 0164-T –11)

> ***Response:*** *The EIS' fully document the potential significant effects of the No-Build and Build Alternatives. The Project Team initiated meetings with the City of Falls Church during the course of the National Environmental Policy Act (NEPA) process (see Chapter 11 of the Final EIS for specific dates) to more fully understand the concerns and position of the City as they relate to the Project and the EIS' Specific issues raised at the meetings and where they are addressed in the Final EIS are as follows:*
>
> - *Parking – Chapters 3, 4, and 6;*
> - *Pedestrian access and overpasses – Chapter 5*
> - *Land use and development close to the proposed station locations – Chapters 3 5;*
> - *Station location and alignment alternatives – Chapter 2;*
> - *Impacts (e.g. noise levels, pollution, property values, congestion, and crime) – Chapters 3, 4, and 5;*

- *Coordination with other transit studies –Chapters 1 and 3;*
- *Service to Tysons Corner Center – Chapter 2;*
- *Support for and opposition to aerial alignments – Appendix H;*
- *Cost and funding – Chapter 8;*
- *Operational flexibility – Chapter 2;*
- *Enhanced bus service – Chapter 2.*

Public Comments

Need to Plan the Project with a Regional, Long-Term Focus

Public Comment: Likewise, in addition to the many virtues associated with the advent of a sophisticated transit system, there will be additional automobile traffic that must be accommodated. More people clustered in transit impact areas will generate more public health, safety, educational, recreational, and environmental challenges. Public officials must begin to think in terms of an urban life style here, and not just in traditional suburban terms. The transit system can generate many social and economic advantages, but we cannot assume that we can meet the associated challenges with local government business as usual. Let's plan ahead to fully utilize the opportunities created and meet the associated challenges of a more urban community related to a greatly improved transit system. (0088, 0211-M –19)

> ***Response:*** *As part of the NEPA process, impacts associated with safety, recreational, and environmental challenges were addressed in the Draft EIS, Supplemental Draft EIS and Final EIS (see Chapters 3, 4, and 5). Chapter 9 of the Final EIS also presents an analysis of the secondary and cumulative effects of the two Build Alternatives and references the need to provide additional public services if the local governments approve additional development in the Metrorail station areas. Public health was not specifically evaluated in the Final EIS; however, there are air quality standards established in the Federal Clean Air Act to protect public health. Section 4.6 presents the results of an air quality analysis that was completed as part of this Project.*

Secondary Benefits of Project

Public Comment: Secondary travel effects. I should note that in the way back of a traffic study appendix on one of the technical appendices, they did an examination of what having mixed use would do in the Reston area. And when you do that, you can get up to as many as 45 percent more new transit riders. The benefits of mixed use are great. (0141, 0141-T –6)

> ***Response:*** *Comment noted. The Project's ridership forecasts are based on regionally adopted population and employment forecasts for the opening and horizon years. The density bonuses associated with the Metrorail Extension are not part of these regionally adopted forecasts and therefore were not calculated as part of the demand forecasting process for the Supplemental Draft EIS and Final EIS. The impacts of congestion due to density bonuses was included in Chapter 9 of the Draft EIS and the Travel Demand Forecasting Methodology and Results Technical Report (June 2002). Chapter 5 of the Final EIS does present an analysis of the potential effects of increasing densities on the level of development as a result of the two Build Alternatives. The effects of implementing density bonuses in the corridor at Metrorail station areas is also quantified and presented in Table 5.3-1. In addition, density bonuses were included in the analysis of secondary development effects that is presented in Chapter 9 of the Final EIS in relation to traffic. This analysis was included in the Final EIS in order to address comments about the need to quantify the potential effects of increased density on traffic at Metrorail station areas.*

Benefits to Non-Motorized Travel

Public Comment: You are also going to be able to increase the number of walking and bicycling trips overall. This was included into the report. In other words, not just going to the metro station, people will be able to walk to these activities because they are going to be better planned and in close proximity. Now

it's kind of difficult, although Reston is a leader in bicycles and trails, but this kind of development would encourage more of that. (0141, 0167-T –5)

Response: *A discussion of pedestrian and bicycle impacts with regard to station area development is also provided in Chapters 3, 5, and 9 of the Final EIS.*

Station Area Environmental Effects

Public Comment: And eight, transit-oriented land use plans have been adopted by the local governments for all the proposed rail stations, and the traffic impacts were studied for the Tysons and Reston and Herndon plans, and they do not overburden the surrounding roadways. (0144, 0144-T –9)

Response: *The land use plans of each community affected by the Project were assessed and summarized in Chapters 1 and 3 of the Final EIS. In addition, traffic impacts associated with the station areas were addressed in Chapters 6 and 9. Localized traffic congestion is projected at the Metrorail stations areas. The actual level of congestion, though, can be mitigated through the site development process controlled by local government. Mitigation measures for traffic impacts are provided in Chapter 6.*

Public Comment: We have concerns about proposals for as much as 16 million square feet of commercial development at the end statement, what is called Moorefield station. While we support transit-oriented development, this is overkill, given the vast amount of land already available for commercial development, and this amount of office and commercial will prompt sprawl far out to the west. (0251, 0251-T –7)

Response: *The actual level of development and implementation of any site-specific private development opportunities within the corridor is under the control of the local government. The Final EIS provides a general assessment of the potential for development surrounding stations as part of the effort to identify potential effects of the two Build Alternatives.*

Clarification of Tysons Corner

Public Comment: There is a reference in the technical report for economic and secondary development that states that there can be a change in the character at Tysons West, and with all the Tysons alignments. The character of the area is auto-oriented and could convert into the future as many - as more density is allowed, once the transit station's construction. My question to WMATA is, what will be the changed character of Tysons Corner? (0147, 0147-T –6)

Response: *The potential changes in character are described in Chapter 5 of the Final EIS. Land use compatibility and impacts to neighborhoods, community services, and community cohesion in the Tysons Corner area are also discussed in Chapter 3. In addition, the Fairfax County Comprehensive Plan includes language that supports pedestrian and transit-oriented design, including mixed-use developments connected to transit and accessible by foot on a network of sidewalks, trails, plazas, and courtyards and includes provisions for creating improved landscapes and gateways for Tysons. The actual implementation of these plans for the Tysons West area is under the jurisdiction of Fairfax County; it is difficult to project specific changes in relation to specific stations as their ultimate form is dependent on the local government and the development plans that they approve in the future.*

Clarification of Transit-Oriented Development

Public Comment: On page 55 of the same report, it talks about some specific changes and it relates to the dense development, pedestrian amenities and mixed uses. It states that the transit corner could become more transit oriented. I guess my question is or my concern is I would like for it to say "would." On the other hand, does that also mean that it might not become more transit-oriented? We are concerned about the increase in traffic. (0147, 0147-T –7)

Response: *The word "could" was used because the selection of the preferred alternative was pending at the time of the Draft EIS. It is an objective of this Project to provide stations that are compatible with the character of the surrounding neighborhoods and encourage transit use. In addition, density bonuses and transit-oriented development plans are tied to implementation of Metrorail through the core of Tysons. Summaries of area transit-oriented plans assessed as part of the Final EIS are presented in Chapters 1 and 3.*

More Use of Illustrations

Public Comment: We have some concerns about the DEIS. We would like greater attention directed to illustrating, perhaps through alternative development scenarios, the impact of generating greater density near the stations, especially Reston Parkway and Wiehle Avenue. (0188, 0188-T –2) (0188, 0217-M –2)

Response: *The actual implementation of greater densities for the Reston Parkway and Wiehle Avenue station areas is under the jurisdiction of Fairfax County. It is difficult to project specific changes in relation to specific stations, as their ultimate form is dependent on approval by the local jurisdiction. The potential change in development character in the corridor is assessed and quantified in Chapter 5 of the Final EIS.*

Clarification of Non-Motorized Traffic Impacts

Public Comment: Another goal of higher density TOD is to increase the number of walk and bicycle trips. These trips occur independently of transit and are not access to station trips. The analysis shows substantial increases in walk and bicycle trips resulting from concentrated, transit-related development patterns. Walk/bike trips in Reston for work would go from 371 to 819, a 68 percent increase. Total walk/bike trips would increase from 708 to 1,643, a 132 percent increase! (0141, 0443-E –15)

Response*: Comment noted. The data referred to by the commenter are included in Table 22-5, on page 385 of the Traffic Analysis and Station Access Study Technical Report (June 2002). An analysis of transportation effects is also included in Chapter 6 of the Final EIS.*

Need for Further Clarification of Development Assumptions

Public Comment: Following are my comments on the Draft Environmental Impact Statement for Dulles Rail. Since ridership is predicated on increased densities as provided in Amendment No. 2000-01 to the Comprehensive Plan for Fairfax County, these comments are centered around assumptions built into this amendment. More details, including my background, are attached in the Appendix. There is considerable flexibility in the amendment as it relates to redevelopment in Reston, assuming a BRT or rail option. Your DEIS used rail development related forecasts. There needs to be detail supplied as to the specifics used in your assumptions. Maximum density requires a hotel component with neither square footage or room count specified. It also requires a residential component, within limits (for example, 40-75% in the 17 acres closest to the Wiehle Avenue station). Many sub-units permit density increases with the BRT, but not the rail option. Accordingly, questions are:

1. What specific densities for the rail option did you assume for each sub-unit-- office, residential, support/retail, hotel?
2. What specific densities for the BRT option did you assume for each sub-unit-- office, residential, support/retail, hotel?
3. For those sub-units in the Master Plan Amendment that permit higher density for BRT but not for rail, did you assume the Master Plan BRT density for rail?
4. What assumptions did you make about the site coverage -- building and parking structure footprints-- in each case? (0449, 0449-E –1)

Response*: In reviewing the comments submitted, the focus of the analysis presented by the commenter is on the Reston-Herndon area, so these responses will focus on that segment of the corridor and not Tysons Corner or Loudoun County. Density analyses were also conducted for*

these areas, but the methodology varied slightly since the land use regulations vary for each sub-area. The detailed information requested is included in the Appendices for the Land Use and Socioeconomics Technical Report (June 2002) and in the Economics and Secondary Development Effects Technical Report (June 2002).

The Project Team used the specific densities allowed in the comprehensive plan amendment for the Reston-Herndon area and worked from a build-out projection to estimate what percentage of build-out might be achieved. The analysis was general in nature to determine potential effects of growth in the Metrorail station area and did not include a detailed evaluation of the intricacies of the land use regulations, since they are flexible in application. For the Metrorail Alternative the Project Team had used the rail option floor to area ratio (FAR) maximum and then calculated a standard mix of development in terms of office, residential, retail, and hotel development and did not vary by land use. For example, at Wiehle Avenue Station, the Team had applied the rail option 2.5 FAR that is allowed for 17 acres in Sub-Unit G-4. For the BRT Alternative evaluation, the Team had used the lower FAR's, as defined in the comprehensive plan and used the same mix of development. The Project Team had used the BRT level of development for sub-units and then added the rail development totals to the BRT projections to determine the maximum under the Metrorail Alternative. No assumptions were made about site coverage, as this level of detail was not included in the analysis. However, BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS

Need for Clarification of Development Assumptions

Public Comment: Most sites are currently fully, or close to fully developed according to previously approved densities. Remaining economic life of the projects thereon may be as much as 40-50 years. It is not likely that these projects can be redeveloped with double or triple present densities without substantial increases in land values sufficient to justify removal of the current improvements. Achieving the highest permitted densities will likely require at least some use of the maximum permitted height of 140 feet (14 stories). Existing buildings are not likely to be sited such that extensive redevelopment could take place and achieve maximum permitted densities without the substantial removal of existing improvements. Several examples of this are:

1. 10 Acres of Sub-Unit D-4 in the Reston Town Center Urban Core closest to transit station, which will permit mixed-use development at an FAR up to 2.0, upon funding for rail. This is essentially developed, including two very new office buildings just opened.
2. Sub-Unit D-6, the Oracle development. This has a currently approved FAR of 0.7 and is currently improved with two of a four building planned project. It may be redeveloped to an FAR of 1.5 for a mixed-use development, with funding for rail.
3. Sub-Unit H-2 permits the 10 acres closest to the rail station to go to an FAR of 1.25 with funding for rail. Eight acres of this are currently improved with Class "A" office buildings dating from the mid- to late 1980s. (0449, 0449-E –2)

Response: *The development analysis, presented in Chapter 5 of the Final EIS, and the secondary development analysis, presented in Chapter 9, used aggressive growth projections to assess what can be viewed as the worst-case scenario. Actual growth may vary, depending on a number of external factors.*

Need for Further Explanation of Development Effects

Public Comment: In addition to physical constraints relating to redevelopment, there are also market constraints. Typically far higher land values will be required to make it economic to remove currently performing office projects. Yet higher land values will, of course, result in the requirement for higher office and residential rents. Question:

1. What full-service office rents did you assume for office redevelopment?
2. What residential rents did you assume for high-rise apartments?
3. What absorption rates for office, hotel, retail/service, and residential redevelopment did you assume going forward from 2002 to 2025? (0449, 0449-E –3)

***Response**: The development analyses conducted in Chapters 5 and 9 of the Final EIS did not contain this level of detail. The development projections were based on the continuation of the positive market conditions within the corridor and predicted that much of the development potential allowed in local comprehensive plans would be achieved. Chapter 5 of the Final EIS describes in detail the methodology used to determine the potential development effects of the two Build Alternatives.*

Public Comment: A major component of redevelopment, and perhaps source of your new riders, would come from residential redevelopment. This would appear to require average residential rents of about $2500/month. This is about twice the current highest Reston apartment rents, size for size. There is also an on-site, dispersed affordable housing requirement. Reduction of market rate rents to accommodate affordable housing will require an increase or subsidy by the remaining market rate rent payers. Required rents are also about 30% higher than current asking rents, per square foot, from individual owners at Stratford House, a luxury condominium at Reston's Town Center. This project currently partake of all Town Center amenities and does not overlook the Dulles Access/Toll Road or future rail.

1. What assumptions did you make concerning affordable housing?
2. What assumptions did you make concerning the requirement for noise abatement for high-rise apartments? (0449, 0449-E –4)

***Response**: The traffic analysis conducted as part of the Final EIS did not contain this level of detail. Assumptions about affordable housing were not needed in order to prepare inputs into the traffic analysis, which refined regional projections by adding new growth in the Metrorail station areas to the regional transportation network. Chapter 6 in the Final EIS presents a discussion of the methodology used in the traffic analysis.*

Noise was assessed in the Final EIS, but not for future development projections. The noise analysis used Federal Transit Administration (FTA) guidelines for three land use categories: Category 1, serene parks or other outdoor uses where quiet is an integral part of its use; Category 2, residential, which includes all single- and multi-family buildings; and Category 3, institutional, such as schools and churches. Project noise levels were determined using the FTA guidelines and WMATA criteria. Chapter 4 of the Final EIS includes a discussion of the methodology and assumptions employed in the noise analysis.

Public Comment: Maximum redevelopment to permitted amended master plan densities also require hotels as a part of the component. Reston currently supports only two hotels, with a third currently planned for Reston's Town Center.

1. How many hotel rooms did you assume in total?
2. Did you assume a hotel in each sub-unit as required for mixed-use redevelopment?
3. If so, how many rooms were assumed in each sub-unit? (0449, 0449-E –5)

***Response**: The development analyses conducted in Chapters 5 and 9 of the Final EIS did not contain this level of detail. Chapter 5 of the Final EIS presents an in-depth discussion of the methodologies used to determine the development effects of the Project. Chapter 9 presents the potential secondary development that may occur because of the Project.*

Public Comment: The amended master plan contains a "Non-degradation Policy" for rail high-density options. This requires transportation or other guarantees to maintain levels of service. With specific regard to the 17 acres, part of Sub-Unit G-4 (Wiehle Avenue TSA), it appears necessary to accommodate parking for at least 5,000 cars (including 2,300 as identified as transit parking as identified in your Draft EIS). Presently there are accommodations for about 1,100 cars (including 825 on the commuter lot). Questions:

1. How can an increase of about 4,000 cars on-site be accommodated without degradation of the level of service on adjacent roadways?
2. If additional traffic lanes are deemed required, how many are there and where are they located? (0449, 0449-E –6)

***Response**: The analysis did not contain this level of detail. This level of detail was not needed in order to prepare inputs into the traffic analysis conducted, which refined regional projections by adding new growth in the Metrorail station areas to the regional transportation network. Transportation effects of the Project and the methodologies used to estimate the effects are presented in Chapter 6 of the Final EIS.*

Public Comment: Conclusion: According to your Draft EIS, highest density options for rail were used as assumptions for Reston redevelopment, and in turn for your ridership forecasts. The Master Plan Amendment permitting this raises as many questions as it answers. Those enumerated above need to be answered to give credibility to the ridership forecasts in your Draft EIS. (0449, 0449-E –7)

***Response**: The travel demand forecasts in the Draft EIS were based on the Metropolitan Washington Council of Governments' (MWCOG) Round 6.2 Cooperative Land Use Forecasts. The Round 6.2 forecasts represented the regionally adopted population and employment forecasts through 2025, for the metropolitan Washington area, including Fairfax and Loudoun County. Travel demand forecasts in the Final EIS were based on the MWCOG Round 6.3 Cooperative Land Use Forecasts, which represent the regionally adopted population and employment forecasts through 2030. By federal regulation, such regionally approved land use forecasts must be used in the travel demand analysis of each alternative studied in an EIS.*
The density bonuses associated with the Metrorail Extension are not part of these regionally adopted forecasts and therefore were not calculated as part of the demand forecasting process for the Supplemental Draft EIS and Final EIS. The impacts of congestion due to density bonuses was included in Chapter 9 of the Draft EIS and the Travel Demand Forecasting Methodology and Results Technical Report (June 2002)*. Chapter 5 of the Final EIS does present an analysis of the potential effects of increasing densities on the level of development as a result of the two Build Alternatives. The effects of implementing density bonuses in the corridor at Metrorail station areas is also quantified and presented in Table 5.3-1. In addition, density bonuses were included in the analysis of secondary development effects that is presented in Chapter 9 of the Final EIS in relation to traffic. This analysis was included in the Final EIS in order to address comments about the need to quantify the potential effects of increased density on traffic at Metrorail station areas.*

Public Comment: What pressures will be put on public services due to the increase density around the stations? (0147, 0459-L –16)

***Response**: If a local jurisdiction allows an increase in density, there will be additional demand for public services from the local government involved. Chapter 3 in the Final EIS identifies one specific impact to emergency services as a result of the Project. An increase in traffic congestion in the vicinity of the Fairfax County Fire Company #25 could affect egress and access to the station. The Fire Company currently has a pre-emptive traffic signal to control the flow of traffic.*

Need for Further Explanation of Environment Effects

Public Comment: What will be the specific secondary and cumulative effects of development at the proposed densities around the rail stations? What resources, either from WMATA or by the county, will be required to mitigate these potential for adverse secondary cumulative effects? What financial resources will be required? Who will be - where will we get the resources for this revenue? (0147, 0147-T –8)

***Response:** The secondary development effects of the Project alternatives as they relate to population, employment, and residential and commercial development around station areas are summarized in Table 9.3-1 of the Final EIS. The table also summarizes the predicted development characteristics if the LPA was not implemented, i.e., the effects of the No Build Alternative. Chapter 9 also presents a discussion of the potential secondary effects of development on growth patterns, traffic, and visual characteristics. However, it should be noted that since the predicted character of development is highly speculative and based on how*

development would occur under circumstances similar to today, it is difficult to specify the exact secondary effects of development at the proposed densities surrounding the stations.

Four potential resource areas where cumulative effects may be of concern were identified and evaluated in the cumulative effects analysis. These include: water resources, air quality, historic resources, and resources protected under Section 4(f). If the Project was not expected to impact a certain resource, then it was not considered as contributing to cumulative impacts to that resource.

Any secondary or cumulative effects to the built and natural environment resulting from additional station area development would be mitigated through compliance with Fairfax and Loudoun Counties' land use policies and development permitting processes.

Public Comment: The Council on Environmental Quality's regulation defines cumulative effects as the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-federal) or person undertakes such other action (40 CFR 1508.7). The DEIS failed to include sufficient information about impacts to neighborhoods but not define these impacts is a major defect in the DEIS. A lack of a more complete community impact analysis indicates that the project team determined that the cumulative impacts were insignificant. However, there is a lack of evidence in the DEIS which supports this analysis. (0147, 0459-L –19)

***Response**: An analysis of cumulative effects, as defined by the commenter, is included in Chapter 9 of the Final EIS and presented in detail in the Economics and Secondary Development Effects Technical Report (June 2002). In addition, a full community impact assessment was conducted for every neighborhood not only within proximity to the Metrorail stations and along the corridor, but also for any neighborhoods projected to experience an increase in traffic volumes or noise effects. The detailed impacts to neighborhoods and community resources as a result of the Project are included in Chapter 3 of the Final EIS. They are also summarized in Table 3.2-3 of the same chapter. The use of the 300-foot buffer and half-mile radii at the Metrorail station areas resulted in the inclusion of numerous neighborhoods in the corridor that were evaluated for impacts. Few actual impacts have been identified, other than noise and traffic impacts for the vast majority of neighborhoods assessed. Since the alternatives are located primarily within existing transportation rights-of-way, there are few neighborhood and community impacts, in comparison to other alignments on new locations that could include numerous residential displacements. Few cumulative impacts are projected as well.*

Public Comment: It is proposed that the rail line along Reston will be wall to wall office buildings. The DEIS does not address the impact of wall to wall office buildings along the rail line. What impact will they have on the character and aesthetics of Reston? What impact would it have on the social and political make up of the community? What financial impact would they have on the community? What impact would it have on our property values? What are alternatives to heavy density? What positive impact would increased density have on the community? What is the tax impact on the community to include the poor, retired and the elderly? What impact would the daily commuters have on Reston on utilizing restaurants and businesses? What impact would the increase in residents have on the community? On the Reston Association? On schools? On police and fire responses? (0189, 0448-E –5)

***Response**: Chapter 5 of the Final EIS presents an analysis of the potential effects of increasing densities on the level of development as a result of the two Build Alternatives. The effects of implementing density bonuses in the corridor at Metrorail station areas is also quantified and presented in Table 5.3-1. In addition, density bonuses were included in the analysis of secondary development effects that is presented in Chapter 9 of the Final EIS in relation to traffic. This analysis was included in the Final EIS in order to address comments about the need to quantify the potential effects of increased density on traffic at Metrorail station areas.*

An analysis was also conducted to determine the effects of the Project on output, earnings, employment, and tax revenues. The analysis, however, was not specific to the poor, retired, or the elderly, but rather to the counties directly impacted by the Project. This analysis is presented in Chapter 5 of the Final EIS.

The commenter identifies several issues related to the increase in density. While they are important considerations for Fairfax County to consider, they are not specifically related to this Project. However, the direct effects of the Project on neighborhoods and community resources were evaluated in Chapter 3 of the Final EIS (see Table 3.2-3). As part of the neighborhood and community analysis the following issues were evaluated: changes in population and employment; community cohesion and interaction; isolation effects; social values – social groups valued or harmed; barrier effects; noise and vibration; physical intrusions; access changes; community facility impacts, which includes hospitals, parks, places of worship, day care centers, schools, government offices, police and fire stations, cultural centers, and special service providers; displacements; safety; and property values adjacent to Metrorail stations. From a cumulative effects perspective, there is not a causal relationship between the two Build Alternatives and many of these issues.

Public Comment: What are the traffic increases projected if various alternatives are selected? For instance, metro stations attract more businesses and more housing, thus increasing traffic around the stations and areas - a neverending circle. (0235, 0235-E –8)

Response: *The effects of the Project alternatives on regional and local roadway facilities are presented in Chapter 6 of the Final EIS. The 2025 peak-hour traffic volumes and levels of service (LOS) on selected highway links throughout the Dulles Corridor are shown in Table 6.2-2. LOS reflects the impacts of congestion experienced by vehicles traveling along a road or through an intersection. Projected delays in seconds at key intersections in the corridor and the corresponding LOS were also assessed for the Project alternatives.*

Public Comment: The second thing we have to do, I requested a few times the county transportation staff taking a look at this issue, rather than just the land use people looking at it. In fact, I got so frustrated I got myself a transportation consultant who did an analysis. There are 13 plan amendments pending in Tysons Corner, and I asked him to take a look at the amount of trips per day that this 13 plan amendments would produce. They would produce 111,000 new trips per day in Tysons Corner. Also I suggested that you find out how many metro trips would come from that other station, because we're in Tysons Corner. Sixteen thousand new transit trips a day on metro out of this 111,000. Another 16,000 would be internal. That's about 32,000 trips out of 111,000 that would be carried by a system that would - to get into Tysons Corner it would cost almost $2 billion. The other 78,000 trips would be on the road. That's not a happy thought. (0136, 0168-T –3)

Public Comment: The proposed redevelopment of the commons is based on rail through Tysons. The density that is being proposed will be approximately seven to 10,000 apartments. Even with 30 to 35 percent ridership, which is the number being used by Washington Metro - and even that's being optimistic - that still means another 5 to 7,000 cars in Tysons Corner. (0159, 0159-T –2)

Public Comment: Additionally, I have grave concerns with the information that I have been able to read in this brief amount of time. Bonus densities that would be granted around the metro stations do not appear to have been considered in the traffic calculations. The most optimistic projected non-single occupancy vehicular ridership for growth around the new metro stations is estimated to be 20 to 30 percent. That translates into 70 to 75 percent of the residents using the area roads. Tysons is currently a congested and a miserable drive during peak hours. If the current level of service in this area is failing, retaining an F grade does not mean that there is not change of road conditions with no relief from increased densities. (0179, 0179-T –6)

Public Comment: The last one, you know, back in December I thought it might be interesting to go to the planning commission of Fairfax County and suggest that they take those 13 plan amendments that

are pending in Tysons Corner and say, hey, you know, maybe building those rail stations is not necessarily going to take care of all those trips created by those 13 plan amendments that are pending at Fairfax County pending the outcome of this EIS and rail station in place. And I was turned away. And the Fairfax County transportation staff has never done an analysis of the impact of transit rail stations and this development that's being proposed in Tysons Corner. Now I took it upon myself to get a transportation consultant who is well known in this region to do an analysis, and he concluded that those 13 plan amendments would create 111,000 new trips in Tysons Corner per day, and 16,000 of those, according to this consultant, would go use Metro. Another 16,000 would go internally. And 78,000 would be new trips on the road. And I'm still waiting for the county to do their own transportation - you know, we pay millions and millions of dollars to the transportation staff that we have in the county, and I think they're very competent, but it's time to let them loose, let them do their job. This is not a land use program. This is supposed to be a transportation program, the largest public works project in the history of Fairfax County. And the least we should do is have the transportation people in Fairfax County, the staff, our staff, the ones we pay for, take a look at it. Because I have information which I am sure the folks at the table up there have, that just putting rail stations at Tysons Corner is not necessarily going to hack it. (0136, 0136-T –3)

Response: *The travel demand forecast results used in the Final EIS analyses of roadways and transit service (see Chapter 6) are based on the MWCOG Round 6.3 Cooperative Land Use Forecasts. These forecasts represent the regionally approved and adopted population and employment forecasts through 2030 for the region, including Fairfax and Loudoun counties. By federal regulation, such regionally approved forecasts must be used in the analysis of the two Build Alternatives. Model assumptions must be consistent among the alternatives so as to not bias the results of the travel demand forecasting process.*

In fact, land use development patterns often do react differently depending on the type and mode of transportation in a given corridor, due largely to local policies that may encourage transit-oriented development around major transit nodes. Subsequent to the adoption of the Round 6.3 Forecasts, Fairfax and Loudoun counties amended their respective land use plans (Fairfax County Comprehensive Plan and Loudoun County Revised General Plan) to permit additional residential, retail, and office development around Metrorail stations. These amendments and their impact on corridor land use and population and employment are discussed in detail in the Final EIS in Chapters 3, 5, and 9. Density bonuses were included as part of the analyses included in Chapter 5. The travel-related effects of this additional, or secondary development are summarized in Chapters 6 and 9 of the Final EIS. However, the Project's ridership forecasts are based on regionally adopted population and employment forecasts for the opening and horizon years. The density bonuses associated with the Metrorail Extension are not part of these regionally adopted forecasts and therefore were not calculated as part of the demand forecasting process for the Supplemental Draft EIS and Final EIS. The impacts of congestion due to density bonuses was included in Chapter 9 of the Draft EIS and the Travel Demand Forecasting Methodology and Results Technical Report (June 2002). All current land use plans and zoning ordinances were reviewed for the evaluation of land use impacts (see Chapter 3). Pending plan amendments and development proposals, as referenced in the comments, that have not been adopted by the local government are not included in the analysis.

Public Comment: And what assurances do the surrounding neighborhoods have that they won't be overwhelmed by a greatly increased human and traffic density, without adequate infrastructure in place? (0159, 0159-T –4)

Response: *The local governments have control over the actual level of development that will be approved and there are triggers included in the land use regulations that have been adopted to mitigate the infrastructure effects of the additional growth. County regulations allow the clustering of future development in locations that are best able to support that development in terms of providing transit, pedestrian, and bicycle access to residents and employees. In the future, the counties may limit development at station areas if necessary to mitigate any associated impacts*

to the surrounding community. Chapter 9 presents the potential secondary and cumulative effects of the Project alternatives.

Public Comment: Another thing I wanted to touch on tonight was something very deep in a technical report. The report is called "Traffic Analysis and Station Access Study Technical Report." It reported on the secondary impacts of land use, and in the corridor the Fairfax supervisors had a task force that recommended mixed use development around the four stations here, and in May of 2001 the county board actually adopted these recommendations, and these were fed into the analysis. And the results were really astounding. They show that if you do plan land use to be related to the new transportation investment, you do get some significant changes in behavior. For instance, just without considering Loudoun County, their data was not - and they have changed their comp plan, too, but their data was not fed into this analysis. The projected ridership grows from 86,700 to 101,000, and the new riders grow to 54,000. Even more to the point, the number of new transit riders increase by 43 to 45 percent, depending on what alternative is used for Tysons Corner. (0141, 0167-T –3)

Response: *If density bonuses were included in the Draft EIS model forecasts, total ridership would have increased from 86,900 to 101,100 for the Alignments T6 and T9. New riders also would have increased from 38,300 to 54,400 for Alignments T6 and T9. Secondary development impacts of the alternatives brought forward into the Final EIS are presented in Chapter 9 of the Final EIS. Density bonuses were included as part of this analysis. Chapter 6 includes an analysis of the transportation effects, including ridership and new riders, of the Project alternatives. However, the Project's ridership forecasts are based on regionally adopted population and employment forecasts for the opening and horizon years. The density bonuses associated with the Metrorail Extension are not part of these regionally adopted forecasts and therefore were not calculated as part of the demand forecasting process for the Supplemental Draft EIS and Final EIS. The impacts of congestion due to density bonuses was included in Chapter 9 of the Draft EIS and the* Travel Demand Forecasting Methodology and Results Technical Report (June 2002).

Public Comment: The EIS does not appear to adequately address the traffic that will result from the density bonuses, i.e., growth, planned for land adjacent to future transit stations. If you consider that at the very most 30 percent of those in new residential developments might use transit for work commuting, that means that the other 70 percent will not. Where will all those cars go? What will be the corresponding impacts on highway noise and congestion? (0145, 0145-T –12)

Public Comment: That we don't know enough about bonus density impacts on congestion in neighborhoods around transit stations. (0446, 0146-T –8) (0446, 0218-M –8)

Public Comment: Specifically, the process should be stopped until steps are taken for the draft EIS to include a detailed quantitative analysis of the impact increased traffic and increased development will have on these residential areas. (0454, 0454-E –2)

Public Comment: To achieve the proposed density opportunities around stations, there will be an increase in traffic congestion. For example, under the metrorail option at Wiehle Avenue, there is an option to have 4,244,065 square feet of residential use. This results in 3536 dwelling units. If 25% of the people in these units use some transit mode other than a single occupancy vehicle, one can predict that 75% or 2652 people will not. The DEIS provided only a superficial analysis of the community impact of the additional traffic generated around stations. In addition, the analysis zone was too restricted. (0147, 0459-L –21)

Response: *The Project's ridership forecasts are based on regionally adopted population and employment forecasts for the opening and horizon years. The density bonuses associated with the Metrorail Extension are not part of these regionally adopted forecasts and therefore were not calculated as part of the demand forecasting process for the Supplemental Draft EIS and Final EIS. The impacts of congestion due to density bonuses was included in Chapter 9 of the Draft EIS and the* Travel Demand Forecasting Methodology and Results Technical Report (June 2002).

The impacts of congestion due to density bonuses are generally discussed Chapter 9 of the Final EIS . The overall level of development expected to occur as a result of the density bonuses in the Metrorail station areas is quantified in Chapter 5 of the Final EIS. The projected level of growth and related traffic and other effects were assessed. All neighborhoods within a half-mile of the Metrorail stations were analyzed to see if they would experience an increase in cut-through traffic or other traffic impacts due not only to the construction of the transit alternatives, but also due, in part, to the increase in traffic associated with the development. The specific neighborhoods included as part of the analysis are listed in Table 3.2-1 of the Final EIS. Direct impacts due to Project alternatives on neighborhoods in the study area are described in Chapter 3. Impacts to traffic at key intersections in the vicinity of the station areas are presented in Chapter 6.

Public Comment: There will be increased density at these station areas. More retail, more office development, more residential, and in some areas, hotel use. For example, under the metrorail option at Wiehle Avenue, today there exists 521,000 square feet of residential use. Based on the new comprehensive plan that was recently adopted, this bonus density credit plan, the projections would make metrorail options, there could be up to 4,244,000 square feet of residential. That's at the Wiehle Avenue station. Now if we wanted to calculate this and turn it into dwelling units, we could have 3500 dwelling units. Now if 25 percent of the people from these units use some transit mode, which means that they did not get in a single-occupancy vehicle, what will the 75 percent or 2652 other people do? To conserve time for the other two stations, with the projected residential use, it will total almost 7 million square feet. Then we can readily expect an addition of about 7000 cars added to our present mix. By VDOT standards, 2700 cars equals three lanes of traffic. (0147, 0177-T –4)

Response: *Localized traffic congestion is projected to occur at the Metrorail station areas, due not only to the provision of transit services, but also due to the increase in densities. The effects of this congestion are discussed in Chapter 9 of the Final EIS. As stated in that chapter, the local jurisdictions will ultimately determine the actual level of development allowed in the future. Further, there are triggers in place designed to mitigate the infrastructure effects of the additional growth.*

Public Comment: Density projections need to be realistically assessed and the impact of the increased growth needs to be included in the projections. (0150, 0150-T –10)

Response: *The potential changes in the level of development in the corridor is assessed and quantified in Chapter 5 of the Final EIS. The analysis in the Final EIS projects potential development at the Metrorail station areas. The projections were based on the continuation of the positive market conditions within the corridor and predict that much of the development potential allowed in local comprehensive plans would be achieved. For many of the parcels evaluated, it was also projected that full density bonuses due to proximity to Metrorail stations and the inclusion of housing would be allowed. An analysis of the potential effects of implementing density bonuses in the corridor at Metrorail station areas in the study area and is also included in Chapter 9 of the Final EIS.*

However, the Project's ridership forecasts are based on regionally adopted population and employment forecasts for the opening and horizon years. The density bonuses associated with the Metrorail Extension are not part of these regionally adopted forecasts and therefore were not calculated as part of the demand forecasting process for the Supplemental Draft EIS and Final EIS. The impacts of congestion due to density bonuses was included in Chapter 9 of the Draft EIS and the Travel Demand Forecasting Methodology and Results Technical Report (June 2002).

Public Comment: Let the new jobs, shopping and housing move farther out. That will ease congestion, the sensible, natural way. It appears that the real motivation for rail is to aid the businesses and property owners in Fairfax County. (0155, 0155-T –3)

Response: *The primary goals of the Project are not only to support future development, but also to improve transportation service; increase transit ridership; support environmental quality; provide cost-effective, achievable transportation solutions; and serve diverse populations. The two Build Alternatives of this Project were designed to meet those needs. The purpose and need for the Project is stated in Chapter 1 of the Final EIS and the specific goals and objectives of the Project are listed in Table 1.6-1.*

Public Comment: The EIS does not appear to adequately address the traffic that will result from the density bonuses-growth-planned for land adjacent to future transit stations. If you consider that at the very most 30 percent of those in new residential developments might use transit for work commuting, that means that the other 70% will not. Where will all those cars go? What will be the corresponding impacts on highway noise and congestion? Only a systematic approach that considers how the impacts of a change in one part of the system will affect the whole system can have credibility. We feel that this EIS lacks credibility where it addresses environmental impacts. (0145, 0452-E –9)

Response*: Localized traffic congestion is projected to occur at the Metrorail station areas due to the increase in density and as drivers access the stations, as specified in Chapter 9 of the Final EIS. A systematic approach was used to define these impacts. The potential increase in density in Fairfax was modeled to define traffic impacts and transit ridership effects and acknowledges that this growth will generate additional vehicular traffic (traffic impacts directly related to the Project alternatives are presented in Chapter 6). However, mitigation for this increase in traffic due to the increase in densities at the Metrorail station is incorporated into local land use regulations, as defined in Chapter 9 of the Final EIS. The local governments have incorporated language in their comprehensive plans that would limit the level of development if congestion were projected.*

Public Comment: On the quality of life, the rail as projected will have a devastating impact and change our community forever. As you so stated it will result in increased localized traffic congestion and in poor air quality. In addition, it will result in pedestrian and traffic safety problems, increased crime, and serious delays in ambulance, fire and police responses. Furthermore, we have a significant increase in density such as Wiehle Avenue which would be increased over 986 percent and Reston Parkway area almost 268 percent. Moreover, we will have a cannon of office buildings along the rail line effectively dividing our community like the Great Walls of China. Also, along with these buildings will come an army of commuters projected to be over thirty thousand, who will overtax our roads, restaurants, and other facilities. Not to mention that these buildings in the evening will be nothing but an empty ghost town. (0189, 0201-L –3) (0189, 0189-T –3)

Response: *The effects of the Project alternatives on neighborhoods and community resources are summarized in Table 3.2-3 of Chapter 3 in the Final EIS (see Table 3.2-3). No adverse impacts on pedestrians are predicted. On the contrary, pedestrian bridges across existing roadways are planned for several of the Metrorail stations, thus improving pedestrian access and providing better safety. The congestion is only projected to affect one emergency service community facility, Fairfax County Fire Station #25 on Wiehle Avenue. The development effects of the Project are discussed in Chapter 5 of the Final EIS. The secondary and cumulative effects on neighborhoods due to the increase in development are analyzed in Chapter 9 of the Final EIS.*

It should be noted that the 986 percent increase in population at Wiehle Avenue Station in Table 9.3-4 of the Draft EIS is largely a statistical anomaly, since the overall increase is due more to the lack of any residential development than a large volume of total residential development. In addition, the increase in residential development at the Metrorail station is allowed under the comprehensive plan in Fairfax, because it provides a greater opportunity for non-auto dependent development to occur. Residential development in close proximity to transit generates much fewer trips on the road system than other forms of development.

Public Comment: Relate the projected land use density near the stations to specific impacts on schools and arterial roadways. This information is necessary for public to determine the projected community impacts. (0147, 0459-L –13)

> ***Response****: As a result of implementation of the LPA, the intensity of development in station areas could increase. The potential increase in population and employment near stations would create an additional strain on community facilities and services, such as schools and arterial roadways. However, under the No Build Alternative, the population and employment within the Project area is projected to increase and would also cause a strain on these facilities and services. More information on potential development effects is included Chapter 5 of the Final EIS. The influence of the Project on development outside of station areas is discussed in Chapter 9.*

Public Comment: The DEIS reports an increase in traffic volume at stations and parking spillovers at certain stations. The recommended mitigation measures include truck access and circulation planning, lighting, control plans and landscape buffering. Treatment of community impacts was handled in a very superficial manner. Therefore, there should be further analysis with more specificity and with identification measures that will address the traffic shifts and overflow parking concerns. Again the geographic study area must be expanded to include feeder streets and neighborhood streets surrounding the transit stations. Without analysis and reporting of findings, the DEIS fails to meet the recommendation to report cumulative effects. (0147, 0459-L –20)

> ***Response****: Impacts to neighborhoods, communities and community services were assessed using techniques described in the Federal Highway Administration's Community Impact Assessment: A Quick Reference for Transportation. Chapter 3 of the Final EIS provides the methodology used to assess neighborhood, community services and community cohesion impacts. Transportation related impacts are discussed in Chapter 6 of the Final EIS. The process used to evaluate secondary and cumulative effects is based on the guidance provided in the Federal Highway Administration Technical Advisory, Guidance for Preparing and Processing Environmental and Section 4(f) Documents (1987).*

Public Comment: The key to reducing traffic congestion with higher density development is for total vehicle hours to be reduced by an amount to more than compensate for the higher automobile demand created by the increase density. Based on the proposed density levels for each station area, what is the automobile demand created? What is the anticipated vehicle hours per capita for each of the station areas based on density opportunities? To reduce traffic congestion in the Tysons Corner and Reston areas by 25 percent what percent reduction per capita vehicle hours would be required? (0147, 0459-L –33)

> ***Response****: The analysis to estimate the traffic impacts of increased density allowed with the implementation of rail was completed for the Draft EIS but new analysis was not completed for the Final EIS. The data are shown in Chapter 22 of the* Traffic Analysis and Station Access Study Technical Report (June 2002) *completed for the Draft EIS. The data produced for the Draft EIS do, however, provide a reasonable understanding of the impacts of increasing densities per the density bonuses allowed for rail. The data is presented for the three areas in Fairfax County where density bonuses are allowed: Tysons Corner, East Reston, and Reston/Herndon. Traffic will increase in each of the areas where density bonuses are allowed, relative to conditions where no rail line is built and therefore no additional density is allowed. In Tysons, vehicle miles traveled would increase in the range of 2.5 percent, in the eastern Reston in the range of 7 percent and in Reston/Herndon in the range of 9 percent.*

Public Comment: The DEIS stated that this [increased densities] will lead to traffic congestion. I believe this is an understatement. Nowhere does it address the number of commuter vehicle traffic coming into Reston daily, which could be easily 22,000, nor does it address an additional 6,000 to 8,000 vehicles from new residents. The only mitigating factor addressed regarding increased congestion is to add turn lanes on Wiehle Avenue. What impact would this traffic have on Reston? Such as: air quality, pedestrian safety,

timely responses of emergency vehicles? How would it impact on the side street parking and traffics? Where will the commuters park? How will they handle such traffic congestion? (0189, 0448-E –4)

> ***Response**: All of the neighborhoods located near station facilities could experience increases in traffic and longer, more frequent queuing. One fire station, Fairfax County Fire Company #25 at the intersection of Sunrise Valley Drive and Wiehle Avenue could be affected by these conditions. Increased vehicular traffic in stations areas could affect pedestrian safety. In most instances, on-street parking limits are enforced by local jurisdictions. Chapter 3 of the Final EIS addresses effects on neighborhoods, community services and community cohesion. Further discussion of traffic related effects, including parking, is provided in Chapter 6 of the Final EIS. No long-term impacts to regional air quality are anticipated from the construction and operation of the Project. Air quality effects are discussed in Chapter 4 of the Final EIS.*

Public Comment: Quantify the increased traffic, and its impact, from development generated by the availability of rail service. (0392, 0392-L –5)

> ***Response**: While it is expected that increased density would result in localized traffic congestion in station areas, the new, transit-oriented urban form related to the Wiehle Avenue Extension would help to increase overall mobility in the corridor, the counties, and the region. More detailed information pertaining to traffic increases and potential mitigation is provided in Chapter 6 of the Final EIS. Station area characteristics and development potential within the Dulles Corridor are discussed in Chapter 5 of the Final EIS.*

Public Comment: How will the increased residential development densities in Reston, that are a major feature of the project, impact school boundaries for neighborhoods to the east and south of Reston? (0460, 0460-L –7)

> ***Response**: No information on school boundaries is presented in the Final EIS because it is outside the scope of this Project and is unrelated to the selection of a transit alternative in the Dulles corridor. Local governments are responsible for any decisions related to school boundaries.*

Public Comment: How will the more intense commercial and residential development in Reston affect traffic volumes and safety on local roads such as Sunset Hills, Hunter Mill, Crowell, Browns Mill and Beulah Roads which are used by commuters as an alternate to the Dulles Toll Road connection between Reston and Tysons Corner? Will this development generate traffic that overwhelms minor arterials and create pressure for road widening? (0460, 0460-L –4)

> ***Response**: As specified in Chapter 9 of the Final EIS, traffic increase related to the increase in density will contribute to localized traffic congestion primarily located within the Metrorail station areas. Sunset Hills Road is projected to have an increase in traffic at the Metrorail station area and the other roads specified may also support additional trips. However, additional capacity or improvements needed to accommodate new growth associated with the density bonuses and not specifically caused by the provision of transit are the responsibility of the local jurisdiction and the Virginia Department of Transportation. More detailed discussion of traffic related effects and mitigation is provided in Chapter 6 of the Final EIS. However, the Project's ridership forecasts are based on regionally adopted population and employment forecasts for the opening and horizon years. The density bonuses associated with the Metrorail Extension are not part of these regionally adopted forecasts and therefore were not calculated as part of the demand forecasting process for the Supplemental Draft EIS and Final EIS. The impacts of congestion due to density bonuses was included in Chapter 9 of the Draft EIS and the* Travel Demand Forecasting Methodology and Results Technical Report (June 2002).

Public Comment: The Draft EIS fails to assess the impact on the character, infrastructure, and financial resources of communities throughout the corridor in a meaningful way. The focus of the analysis should

be placed on social and community character and infrastructure, and the direct, secondary, and cumulative impacts. (0510 9-1)

Public Comment: The evaluation of development projections in the Draft EIS is unduly subjective. The approach used (relying on professional judgment in determining development projections) undermines the reliability of the Draft EIS. A more clear explanation of methodology is needed. (0510 9-8)

> ***Response:*** *Secondary and cumulative effects are presented in Chapter 9 of the Final EIS. The process used to evaluate secondary and cumulative effects is based on the guidance provided in the Federal Highway Administration Technical Advisory, Guidance for Preparing and Processing Environmental and Section 4(f) Documents (1987). Chapter 9 of the Final EIS further describes the methodology used.*

Public Comment: The Draft EIS makes no effort to assess or advance the principles of sustainable development. It should do so, apart from whatever requirements NEPA imposes. (0510 9-7)

> ***Response:*** *It is not within the authority of the Project Team to advance the principles of sustainable development, nor would it be appropriate for the Final EIS to advocate any particular form of development. Implementation of the principles of sustainable development is under the control of the local jurisdictions in the study area. Some elements of sustainable development, such as implementation of transit-oriented development, are included and analyzed in Chapter 5 of the Final EIS, as appropriate.*

Public Comment: The Draft EIS does not address the impact of increased density on the environmental resources described in Chapter 4. (0510 9-6)

> ***Response:*** *Chapter 9 of the Final EIS describes the potential effects of secondary development on elements of the human and natural environment. Long-term effects on these resources are presented in Chapters 3 and 4, respectively.*

Public Comment: Section 9.4, Cumulative Effects, does not include enough detail. It simply states that all projects/alternatives are likely to have minor effects to environmental resources. A drive on the Toll Road between Hunter Mill Road and Route 7 shows that this statement is incorrect. (0510 9-5)

> ***Response:*** *Section 9.4 of the Final EIS describes the cumulative effects of the No Build, LPA and relevant, reasonably foreseeable actions that could contribute to cumulative effects. Based on coordination with the Federal Aviation Administration, one reasonably foreseeable action was identified, the Dulles Airport Runways Project. Four resources were identified for evaluation: water resources, air quality, historic resources and Section 4(f) resources. Technical analysis conducted for the Final EIS determined that the LPA would not result in major impacts to the resources identified and therefore, would not contribute substantially to potential cumulative effects related to other relevant, foreseeable projects, such as the Dulles Airport Runways Project.*

Clarification of Travel Patterns

Public Comment: Also the reverse commute market, the analysis shows that of the new transit trips, nearly three-quarters of them would be coming in the reverse direction, helping to balance out use of the metro system, making a much more efficient use of a rail system, rather than have it be all in one direction. And this is because of the increasing employment in the corridor, as well as the opportunity to walk to work. As a matter of fact, the analysis showed that at the Reston Parkway station, with mixed use, you have a tripling of pedestrian activity, 461 walking and biking trips to 1187. (0141, 0167-T –4)

> ***Response:*** *Secondary development near station areas would support the reverse commute market through the increase of employment densities near stations.*

Need Linkage Between Increased Density Measures and Mitigation Measures

Public Comment: We are afraid that the county will zone increased density but road mitigation measures or metrorail will be delayed or never happen. We therefore recommend approval of increased density zoning only when mitigation measures are actually implemented and funds are not only approved but are released for the operating segment that includes the Mid Corridor service. Higher density facilities should be timed to coincide or follow the arrival of metrorail and road mitigation measures. (0170, 0170-T –17)

> ***Response:*** *As stated in Chapter 3 of the Final EIS, all current land use plans and zoning ordinances were reviewed for the evaluation of land use impacts. The plan language adopted by the local government identifies that bonuses are eligible once a full funding grant agreement has been obtained. The Project Team will work with the local government to develop mitigation measures and to support transit usage in the corridor; however, the approval of site-specific projects and regulation of the form and timing of development is under the jurisdiction of the local governments in the area.*

Need to Integrate Transportation Planning and Land Use Planning

Public Comment: We also have some concerns about the DEIS and the planning it reflects. This is a complex project. In order for it to succeed, it will be necessary to consider and coordinate all the elements. This includes assuring that the kind of land use planning that will bring about the quantity and quality of development, that will make the project viable, occurs. Now we have heard repeatedly that these departments do not do land use planning, this is a local government function, and that you use COG, whatever, plan -- system to plan. We know that, but frankly we think that much more can and must be done. The agencies involved prepare transportation analysis with the use of models, and these models incorporate a definition of the surrounding land use. There is nothing preventing you from preparing scenarios of the alternative land use patterns over time to demonstrate to local planners what the result of these patterns will have on transportation factors. (0158, 0158-T –3)

Public Comment: This is a complex project and in order for it to succeed, it will be necessary to consider and coordinate all the elements. This includes assuring that the kind of land use planning that will bring about the quantity and quality of development that will make the project viable occurs. Now we have heard repeatedly that you do not do land use planning, that this is a local government function and that you use the COG round-whatever to plan. We know that, but frankly we think that much more can and must be done. (0158, 0223-M –2)

Public Comment: The agencies involved prepare transportation analyses with the use of transportation models, and these models incorporate a definition of the surrounding land use. There is nothing preventing you from preparing scenarios of alternate land use patterns over time to demonstrate to local planners what the result of these patterns will have on transportation factors. You should certainly work with local planners and citizens in defining what alternatives to analyze. This is not planning, it is providing your expertise to assist decision makers on these complex issues. It will constitute integration of land use and transportation planning, which is a mandate of the regional plan and it can be part of an EIS. (0158, 0223-M –3)

Public Comment: Traffic Impacts Resulting from Increased Density that can be Granted Near Rail Stations: If the rail alternative is built, landowners can be granted increased density near the rail stations. If this density is built, there will be additional automobile traffic because not everyone will ride the rail system. Further, these projects may be built long before the rail system is completed. This traffic increase is a direct impact of the rail alternative and, therefore, must be considered in the impact analysis. The EIS should be revised to discuss the traffic impacts of all density increases along the Dulles Corridor that could be implemented if rail is built, including both existing and proposed density bonuses. The EIS should discuss the impact of this additional automobile traffic in Tysons Corner. (0392, 0392-L –17)

Public Comment: Metrorail allows the highest densities of the station areas of any options and will generate the greatest ridership, but unless substantial mitigation efforts are made, there will be major congestion at the station areas. This congestion could easily spread throughout Reston. We understand that the current traffic analysis includes traffic at all stations due to metro, but not traffic due to the increased authorized densities. This raises doubts about the adequacy of the recommended mitigation measures. The final EIS traffic analysis should include the increased densities with and without mitigation measures. Mitigation measures should result in no more congestion than the no-build alternative. (0170, 0170-T –16)

> ***Response:*** *The Comprehensive Plan and the General Plan for Fairfax and Loudoun Counties, respectively, provide for existing development characteristics and density bonuses at the proposed new Metrorail station locations. Station area characteristics and development potential are discussed in Chapter 5 of the Final EIS. Chapter 6 addresses proposed mitigation measures for transportation effects related to LPA. However, the Project's ridership forecasts are based on regionally adopted population and employment forecasts for the opening and horizon years. The density bonuses associated with the Metrorail Extension are not part of these regionally adopted forecasts and therefore were not calculated as part of the demand forecasting process for the Supplemental Draft EIS and Final EIS. The impacts of congestion due to density bonuses was included in Chapter 9 of the Draft EIS and the* Travel Demand Forecasting Methodology and Results Technical Report (June 2002).
> *It should be noted, however, that the increase in traffic associated with the density bonus would be mitigated through the counties in coordination with the Virginia Department of Transportation. In Fairfax County there is a non-degradation clause in its Comprehensive Plan that will be used to measure the traffic impact of the increased density. Thus, mitigation of traffic impacts due to density increases rests with the counties.*

Public Comment: But overall, we can build the rail system that will work here, that can focus development, can save open space, can maximize traffic ridership and reduce traffic congestion. I think we have made good progress. I think a lot of good public comments are coming in, and indicating we need to do a lot more on the land use side, though. (0149, 0180-T –14)

Public Comment: In conclusion, we support rail provided we get the land use right and provided we get the best routing in Loudoun. Let's build the rail system that can focus development, save open space, maximize transit ridership, and reduce traffic congestion. (0149, 0205-M –5)

Public Comment: The metrorail alternative, with our recommended modifications, will help keep Reston a vital and thriving community. (0170, 0170-T –18)

> ***Response:*** *Under the No Build Alternative, the density bonuses would not be triggered and development would continue to be driven by market conditions throughout the corridor. This would likely lead to a dispersed pattern of development and would be highly auto-oriented, leaving people with few travel choices. Implementation of the LPA would help focus development in and around station areas.*

Growth Needs to be Tied to Ensuring Quality of Life

Public Comment: It is, therefore, essential that we carefully plan for our region's growth in a manner that promotes our quality of life. This plan includes the wise use of our region's diminishing development land, the preservation of our air and water quality, and the provision of rail and roadway corridors along which high-density, smart growth development can be channeled to help reach these ends. (0142, 0142-T –4)

Public Comment: As the growth of our region's economy and population is both desirable and inevitable, these policies will help ensure an excellent quality of life by sustaining a vital economy, by preserving our urban areas, and by protecting our natural environment. Moving forward with the Dulles Corridor Rapid Transit Project as soon as possible will help our region meet these goals. (0142, 0142-T –7)

Response: *The Dulles Corridor is a vibrant, diverse mix of businesses, neighborhoods, recreational amenities and an international airport that continues to attract population and employment growth at almost twice the rate of the region. The central and eastern portions of the corridor currently experience some of the region's worst traffic congestion. An investment in efficient and reliable transportation facilities to meet the travel needs will contribute to the area's economic, social, and environmental quality.*

Transit Ridership Benefits Significantly by Transit-Oriented Development

Public Comment: For those who have not had a chance to read the "Traffic Analysis and Station Access Study Technical Report," I want to note the beneficial impact of the recent changes to the Fairfax County Comprehensive Plan adopted by the Board of Supervisors. This analysis did not include anticipated transit-related development at the stations in Loudoun County because County staff has not yet developed comparable data. The total ridership for the four-station Tysons Corner alignment is forecast to be 86,900, of which 38,300 are new riders. The same analysis done using the transit-related growth forecasts projects 101,100 total riders, of which 54,400 are new riders. This represents an 18 percent increase to total Corridor ridership and, most notably, the number of new transit riders increased by 43-45 percent depending on the alternative selected for Tysons Corner. (T-4 has the largest increase because it has the most stations in Tysons Corner.) The increase in new riders result in an improvement in the cost-effectiveness of the Metrorail investment. This highlights the dramatic relationship of land use to the transportation investment and the need to "get it right" this time. (0141, 0443-E –13)

Public Comment: Another table indicates that of the nearly 27,100 work trips forecast under the transit-relate growth scenario, more than 20,400 trips (74 percent) originate from outside of the Corridor, indicating that rail in the Dulles Corridor would help to support a growing reverse commute market. As the report states "an important benefit of increased employment densities around Metrorail stations in the Dulles Corridor would be the utilization of excess capacity on a.m. outbound and p.m. inbound trains, which would result in more transit passengers being carried without an increase in operating costs, and consequently, an improvement in project cost effectiveness. (0141, 0443-E –14)

Response*: The analysis, to which the commenter refers, was completed for the Draft EIS but was not re-analyzed during completion of the Final EIS. The data produced for the Draft EIS do, however, provide a reasonable understanding of the impacts to ridership of increasing density in areas where density bonuses are allowed after implementation of rail. As noted in the response, both total riders and new riders increase with the implementation of the density bonuses, thus supporting the density bonus concept.*

Use of High Density Land Use Projections in Measuring Ridership

Public Comment: Because the Dulles Rail (NVMISM) Model makes overly optimistic assumptions of rail ridership based on pie-in-the-sky projections of high density land use at projected rail stations, for argument purposes, will not consider those "transit-related growth forecasts," just the "regionally approved forecasts" that are not dependent on high density land use (See pages 379-391, "Traffic Analysis and Station Access Study-Technical Report." My reasons for this are as follows:

1. Master Plan Amendment rail density at key "sub-units" is greater than BRT density. Comparable assumptions about the impact of transit on ridership will automatically favor rail, since rail density is higher.
2. The study does not appear to break out that portion of ridership projections which is the result of redevelopment.
3. All maximum density increases written into the plan require a residential development component with minimums and maximum (maximum up to 75%), also a non-residential component that includes office, hotel, and support retail. Is it likely even by 2025 that the Wiehle/Dulles Road crossing by itself would support three or four hotels with probably a minimum of 750 rooms? As read the planning document it does not appear that a hotel is an option, it's a requirement.

4. With the exception of the 17 acres including the present commuter lot, existing development would appear to have a useful life well beyond 2025, with values much greater than land value even assuming maximum redevelopment and $35/floor area required (FAR) square footage for land. Hence the assumption of maximum redevelopment in place and generating trips by 2025 is not realistic.
5. Required apartment rents on the aforementioned 17 acres would appear to be about $2500/month today. This would increase for market rate apartments as necessary to subsidize the required on-site dispersed affordable housing component. Will there be 1,000 renters at this level? If there are condos will buyers accept proximity to current 12 lanes of traffic and a rail lane? Will renters?
6. Master Plan Amendment appears to require maintenance of current transportation systems (I.e. roads, I assume) at predevelopment levels. I can't see how this is possible, particularly for the 17 acre site with the addition of a net of nearly 700,000 sq. foot office space, 1,000 apartments, and a transit station.
7. Air Rights over freeways is virtually non-existent. The only place I have found urban blocks built above a freeway is on the Cross Bronx Expressway in New York. Developers I have spoken to say that it is expensive to build over a freeway due to high insurance costs. Plus, in light of terrorism, I doubt few people will want to build tall buildings above a freeway. All of the above are factors in my conclusion that the density forecast is unlikely in the time frame given; if not realized but used for ridership projections, the latter are high. (0112, 0462-L –22)

> ***Response****: Growth projections for the Metrorail station areas are presented in the Final EIS and reflect the regionally adopted land use projections, as prepared by the Metropolitan Washington Council of Governments, and the density bonuses permitted by local governments. The economic effects of station area development are discussed in Chapter 5 of the Final EIS. The projected development totals are presented as a form of worst-case scenario in that the level of projected development is close to build-out in some sections of the corridor. In developing these projections, the Project Team did not go to the level of detail identified in these comments by projecting specific projects in specific locations that would define the specifics of redevelopment feasibility, rental prices, or a detailed evaluation of the specific requirements adopted in the Comprehensive Plan language. The projections were developed from calculating build-out for the general areas included in the Metrorail station area and do not include such items as air rights development and are more general than the information requested by the commenter. Once build-out was determined, the level of growth was projected based on general assessments of the percentage of growth that might occur and using a standard land use mix. As stated in the Final EIS, the actual level of growth might be much lower.*

Need to Apply Effective Methodologies to Measure Impacts

Public Comment: The cumulative and secondary effects were not adequately analyzed in the Draft EIS. The methodology is biased since it assumes that infill, joint development, and redevelopment are desirable and positive effects. In addition, the methodology is flawed because it underestimates the adverse impacts of the worst-case scenario by not describing the worst-case scenario. It only assumes that development will only proceed within the present parameters for density allowed under the Fairfax County Comprehensive Plan and the mix of uses permitted. The Draft EIS should apply various factoring tools to arrive at a more plausible worst-case scenario. For example, there is a demonstrated history of special exceptions to permitted uses, and changes to increase the allowed density, and other changes from what is allowable under the plan. A multiplier of 1.2 could be applied to reflect an assumption that for 20% of all parcels, county authorities will authorize more intense and dense usage than is currently allowed under the Comprehensive Plan. (0510 9-3)

Public Comment: Another shortcoming in the methodology for cumulative and secondary effects results because a quantitative methodology was used to evaluate effects in transit station areas but a qualitative methodology in assessing effects along regional transportation facilities. (0510 9-4)

> ***Response:*** *Secondary and cumulative effects are presented in Chapter 9 of the Final EIS. The process used to evaluate secondary and cumulative effects is based on the guidance provided in*

the Federal Highway Administration Technical Advisory Guidance for Preparing and Processing Environmental and Section 4(f) Documents (1987). Chapter 9 of the Final EIS further describes the methodology used.

Public Comment: The Draft EIS does not differentiate between the BRT alignment options when discussing the secondary and cumulative effects of the BRT Alternative. It also does not describe the intense pressure that would be borne by the low-density residential neighborhoods between Reston and Tysons Corner. The pressure exerted by increased car traffic to avoid tolls, and nearby density at the Wiehle Avenue Station is not discussed. (0510 9-2)

Response: *BRT was eliminated from further consideration after the public and agency review and comment on the Draft EIS. Chapter 9 of the Final EIS discusses the secondary and cumulative effects of the LPA.*

B. Supplemental Draft EIS Comments

Public Comments

Increase Development May Result in More Traffic Congestion

Public Comment: I really feel like the rail will increase overdevelopment in Reston.
0071 0080-4

Public Comment: [A]any economic benefits incurred from subsequently added residential communities or businesses will be accompanied by more intra-Reston congestion, overcrowding, environmental damage and higher taxes.
0105 0123-4

Public Comment: Rail to Wiehle or rail to Herndon or Dulles will not solve the local traffic problem. Reston was not designed to move traffic. It is not a grid system. It was a nicely developed town or place where people could go from their house to work.
0073 0083-1

Public Comment: With the volume of traffic on Toll Road I find it hard to believe we need to increase density around the rail route!
0030 0031-2

Response: *The analysis of development potential is discussed in Chapter 5 of the Final EIS and presents a discussion of the potential effects of density bonuses in the corridor at Metrorail station areas, including Reston. Secondary effects of potential development are discussed in Chapter 9 of the Final EIS. The actual level of development within the corridor are under the control of local government. Any mitigation needed to support the increase in densities is also under the jurisdiction of Fairfax and Loudoun counties, and they have included measures in their land use regulations.*

Public Comment: The facts are rail will not only NOT help the congestion but will in fact increase the congestion. It has been recognized and stated in the DEIS and the SDEIS and in fact, I submit, there will be serious increases of the congestion in this region just because of continued as planned development and that does not even consider the doubling and tripling of densities near proposed rail stops that are scheduled to be allowed when the agreement for funding is reached.
0107 0125-9

Response: *Over the next twenty years, congestion in the Dulles Corridor and the region will be increasing due to population and employment growth, regardless of the Dulles Corridor Rapid Transit Project. The Project would provide an alternative mode of transportation within the region. While it is stated in the Final EIS that the Project alone would not eliminate congestion on the*

Dulles Toll Road and other regional roadways, the Project would substantially increase the transportation capacity of the Dulles Corridor.

Changes in Development Intensity

Public Comment: The impact on the current development in Tysons Corner would be great. The next step would be an effort to markedly increase the intensity of development along the Route 7 corridor.
0102 0119-2

Response: *The actual level of development within the corridor is under the control of local jurisdictions. The level of development projected in the Final EIS represents the maximum allowable development under current zoning for the purpose of impact assessment. The timing and increase in densities in Tysons Corner is under the jurisdiction of Fairfax County. Chapter 5 of the Final EIS present an analysis of the potential effects of increasing densities and quantify the effects of implementing density bonuses in the corridor at Metrorail station areas. However, the Project's ridership forecasts are based on regionally adopted population and employment forecasts for the opening and horizon years. The density bonuses associated with the Metrorail Extension are not part of these regionally adopted forecasts and therefore were not calculated as part of the demand forecasting process for the Supplemental Draft EIS and Final EIS. The impacts of congestion due to density bonuses was included in Chapter 9 of the Draft EIS and the* Travel Demand Forecasting Methodology and Results Technical Report (June 2002).

Support for Transit Oriented Development

Public Comment: [Reston Association] supports mixed-use, transit-oriented development in the Wiehle station area consistent with the Fairfax County Comprehensive Plan.
0039 0040-7

Public Comment: [Reston Citizen's Association] supports mixed-use, transit-oriented development in the Wiehle station area, consistent with the Fairfax County Comprehensive Plan.
0040 0041-4

Public Comment: I strongly support the concept of planning for intensive, urban scale mixed use development allowing for significant residential, commercial, retail and public uses within a reasonable walking distance of the rail transit stations in the Dulles Corridor.
0041 0042-5

Public Comment: DCRA supports the location and design of rail stations so that the development of transit-oriented development (TOD) is encouraged.
0060 0169-3

Public Comment: The Committee for Dulles strongly supports the concept of planning for intensive urban-scale mixed-use development that allows for significant residential and commercial retail and public uses within a close proximity of these rail stations.
0067 0075-1

Response: *Implementation of the LPA would help focus development in and around station areas, contributing to a new transit-oriented urban form for the Dulles Corridor. Chapter 3 of the Final EIS describes the land use plans adopted by local governments within the Dulles Corridor, all of which contain guidelines to support transit, higher densities, mixed-use development, and walkable, bike-friendly development patterns in close proximity to the Metrorail stations. These recommendations have been adopted in the Comprehensive Plan of Fairfax County and the General Plan of Loudoun County, and would be implemented by the counties through application of their respective zoning ordinances.*

Clarify Development Assumptions Used in SDEIS

Public Comment: What quantity and mix of uses and activities within the impact area of the Wiehle Avenue station are or have been used in the supplemental DEIS?
0042 0043-4

> ***Response:*** *The regionally adopted land use and population forecasts developed by MWCOG (Round 6.2) were used in the Supplemental Draft EIS. In order to reflect the most current data, the Final EIS was updated to reflect the MWCOG Round 6.3 data. The future of land use at Wiehle Avenue under the Wiehle Avenue Extension and Full LPA would be similar to that described in Chapter 3 of the Final EIS.*

9.2 Cumulative Effects

A. Draft EIS Comments

No comments pertaining to this topic were received.

B. Supplemental Draft EIS Comments

Public Comments

More Detailed Information on Changing Development Character is Needed

Public Comment: b. The SDEIS needs to provide detailed explanation as to the contribution of the project to cumulative effect, particularly regarding the "Change in Development Character" east of Wiehle Avenue (e.g., TABLE 2-2). The geographic extent and type of change needs to be provided in detail in order to meet social impact assessment requirements of the NEPA process.
0068 0173-18

> ***Response:*** *Information provided in the secondary and cumulative effects discussion of the Supplemental Draft EIS was updated for the Final EIS to reflect coordination with the Federal Aviation Administration regarding proposed Dulles Airport improvements. Determining the cumulative environmental consequences of an action requires delineating the cause-and-effect relationships between relevant, reasonably foreseeable actions and the resources, ecosystems, and human communities of concern. One project, the Dulles Airport Runways Project was identified as having the potential to influence the cumulative effects analysis for the Dulles Corridor Rapid Transit Project. Chapter 9 of the Final EIS discusses the cumulative effects related to the Dulles Corridor Rapid Transit Project. This chapter also describes the methodology used in identifying sensitive resources and determining the area of effect for the secondary and cumulative effects analysis. More specific information pertaining to community effects is discussed in Chapter 3 of the Final EIS.*

9.3 Mitigation

A. Draft EIS Comments

State Agency Comments

Consider Environmentally Friendly Methods

State Comment: Consider environmental attributes when purchasing materials. For example, the extent of recycled material content, toxicity level, and amount of packaging should be considered and can be specified in purchasing contracts. (0407, 0407-A –14)

State Comment: Consider contractors' commitments to the environment (such as an EMS) when choosing contractors. Specifications regarding raw materials and construction practices can be included in contract documents and requests for proposals. (0407, 0407-A –15)

State Comment: Choose sustainable materials and practices for infrastructure and building construction and design. These could include asphalt and concrete containing recycled materials, and integrated pest management in landscaping, among other things. (0407, 0407-A –16)

> ***Response:*** *Construction of the LPA would adhere to industry standards and utilize Best Management Practices to minimize effects on environmentally sensitive resources identified. Consideration of environmentally friendly methods and materials will be given during preliminary engineering and final design.*

Public Comments

Consider Environmentally Friendly Methods

Public Comment: All build alternatives should address life-cycle environmental impacts of the required construction, types of transit equipment, and operation and maintenance of each design. (0487 9-1)

> ***Response:*** *The Final EIS included an analysis of anticipated effects of the LPA, which encompass many of these issues as required by the National Environmental Policy Act of 1969 (NEPA), as amended.*

Need for Further Explanation of Environmental Effects

Public Comment: Metrorail allows the highest densities at the station areas of any options, and will generate the greatest ridership, but unless substantial mitigation efforts are made, there will be major congestion at the station areas. This congestion could easily spread throughout Reston. We understand that the current traffic analysis includes traffic at the stations due to Metro, but not traffic due to the increased authorized densities. This raises doubts about the adequacy of recommended mitigation measures. (0210, 0210-M –10)

> ***Response:*** *Analysis of travel effects related to secondary development primarily focused on station area travel patterns in relation to ridership, transit mode share, pedestrian and bicycle trips, total person and vehicle trips, vehicle miles traveled, and traffic volumes at selected intersections. While it is expected that increased density will result in localized traffic congestion in station areas, the new, transit-oriented urban form related to the LPA would help to increase overall mobility in the corridor, the counties, and the region. Information pertaining to the potential development character and effects is discussed in Chapter 5 of the Final EIS. Transportation related effects are discussed in Chapter 6 of the Final EIS.*

Public Comment: The Final EIS traffic analysis should include the increased densities, with and without mitigation measures. Mitigation measures should result in no more congestion than the no-build alternative. (0210, 0210-M –11)

> ***Response:*** *A discussion of traffic-related impacts and mitigation is presented in Chapter 6 of the Final EIS.*

Mitigation Plan

Public Comment: Designate a managing entity to coordinate implementation of the mitigation plan and ensure compliance and reports to stakeholders. In the mitigation plan, designate the specific responsibilities of each agency, along with cost share, timeline, and monitoring. (0026 Francesca Bravo, Falls Church)

Response: *The Virginia Department of Rail and Public Transit (DRPT) is responsible for overall project management and implementation. It will be responsible for implementing mitigation measures included in the Federal Transit Administration's Record of Decision (ROD) for this Project. The ROD will be developed after the 30-day circulation period of the Final EIS. DRPT will prepare a mitigation monitoring plan to identify responsibilities for specific measures and track their completion.*

Public Comment: Ensure that the general project budget includes separate allocation to fund post implementation mitigation measures to address unanticipated adverse future effects of the project. (0430 9-2, Falls Church)

Public Comment: Ensure that the general project budget includes separate allocation to fund post implementation mitigation measures to address unanticipated adverse future effects of the project. (0388 9-2)

Public Comment: There is an inadequate mitigation plan, unclear mitigation responsibilities, and passing the buck between the Project and other local, state, and state transportation agencies. Conclusions on impacts and mitigation are very sketchy. (0430 9-1)

Response: *The Project will be responsible for mitigating Project-related impacts only. Mitigation for all impacts have been identified and developed as part of the Final EIS and will be finalized during preliminary engineering and/or final design. The overall Project budget will include monies for mitigation of Project-related impacts. The Federal Transit Administration's (FTA) Record of Decision (ROD) to be prepared after the circulation of the Final EIS will outline specific, agreed upon mitigation for the Project.*

Public Comment: Concerned about the construction and implementation of the Metrorail Alternative at Hallcrest Heights. Based on the responses provided, seems like the noise issues can be addressed and the commenter hopes that the Project Team will work with state and local governments to identify and fund necessary mitigation measures. (0141 9-1)

Response: *Chapter 4 of the Final EIS discusses noise impacts related to the Dulles Corridor Rapid Transit Project. The Hallcrest Heights neighborhood was identified as having a severe noise impact under both the Wiehle Avenue Extension and the full LPA. To mitigate the long-term noise effects from Metrorail operations on the Hallcrest Heights residential community, parapet and trackside sound barriers would be installed along the alignment at the locations shown in Figure 4.7-5 of the Final EIS.*

Public Comment: Coordinate with VDOT and Fairfax County regarding shared mitigation costs and measures for sound barriers, measures to address cut-through traffic. Mitigation measures for new noise and traffic impacts should be provided in the Final EIS and responsible agencies should seek programming in the Commonwealth and regional transportation plans. (0388 9-1)

Response: *Mitigation for Project-related noise and traffic impacts is proposed in the Final EIS and will be refined during preliminary engineering. Coordination with appropriate local government, and state and federal agencies regarding implementation of specific mitigation measures will occur as required.*

B. Supplemental Draft EIS Comments

No comments pertaining to the topic of mitigation were received.

10.0 EVALUATION OF ALTERNATIVES CARRIED FORWARD

10.1 Evaluation Relative to Project Goals and Objectives

A. Draft EIS Comments

Federal Agency Comments

Environmental Impacts Related Alternatives

Federal Comment: Environmental impacts of this proposal are minor and EPA has not identified any potential environmental impacts that would require substantive changes to any of the alternatives. The project is confined to existing right-of-way or is located on existing parking lots, streets and other developed lands. There are no residential displacements and up to only six commercial displacements associated with the alternatives. The Metrorail alternative is on the Metropolitan Washington Council of Governments (MWCOG) Constrained Long Range Transportation Plan (CLRP) and it conforms with regional air quality plans. Wetland and stream impacts are less than that associated with a typical residential development in the area. Noise, vibration, and visual impacts were the only significant issues identified in the DEIS and the DEIS identified ways to minimize and mitigate these impacts. (0303, 0303-A –1)

> ***Response:*** *Thank you for your comments. The Dulles Corridor Rapid Transit Project is included in both the current CLRP and the Transportation Improvement Program (TIP).*

Regional Agency Comments

Independent Market Research Shows Strong Desire of Residents and Employee to Use Transit

Regional Comment: Independent market research conducted through the Dulles Corridor Rail Association and paid for jointly by local interests and by the Virginia Department of Rail and Public Transportation, demonstrate that residents and employees in the Dulles Corridor have a "Lexus mentality" and an unusually strong desire to use a transit system if trip times, service standards and convenience are designed to meet their service oriented requirements. The market research results also demonstrate that the Dulles Corridor's reaction to transit differs from national transit norms. For example, the desire to use rail transit over the longer commuting distances increased with income for Dulles Corridor residents up to a household income of $200,000 per annum, after which it began to decline. (0133, 0405- L-10)

> ***Response:*** *Comment noted.*

Consideration of Additional BRT "Features

Regional Comment: Consider adding further BRT features to the existing express bus services where they can increase ridership, reduce trip times, or both. (0133, 0405- L-12)

> ***Response****: The express bus services currently running in the corridor are the responsibility of Fairfax and Loudoun counties, respectively. The Project Team has recommended that the existing transit service provided by Fairfax and Loudoun Counties be further enhanced beyond the bus rapid transit elements that have already been added. Prior to the opening of LPA Phase 1, additional bus rapid transit elements—including the expansion of the Herndon-Monroe park-and-ride lot (site of the future Herndon-Monroe Metrorail Station), ITS enhancements, and facility improvements—should be advanced.*

Local Agency Comments

Comparative Assessment of Alternatives

Local Comment: In order to provide a fair, comparative assessment of the rail alignments in Tysons Corner, a table or matrix should be included in the public hearing report that presents other factors, in addition to costs for each of the alignments. Other factors should include items such as construction impacts, maintenance of traffic impacts and operational issues. (0479, 0479-L –1)

> ***Response****: Table 2.7-4 in the Draft EIS presented the anticipated costs, impacts, and benefits of all alternatives under consideration for the Dulles Corridor Rapid Transit Project, including the No-Build Alternative. Table 10.2-1 presented the essential differences between alternatives, summarizing the trade-offs between the various alignments and modes.*

Station Activity During Off-Peak Period

Local Comment: Will Metro in the median perform well during rush hour, but travel virtually empty for the rest of the day? (0151, 0151-T –7) (0151, 0297-E –12)

> ***Response:*** *No. Estimates of total station activity (station boardings and alightings) for Dulles Corridor Metrorail stations during the peak period versus the off-peak show that peak activity would be between approximately 46to 63 percent of total daily activity. This shows that significant station activity would occur during the off-peak period.*

Public Comments

Comparative Assessment of Alternatives

Public Comment: The comparison of the rail out to Dulles with the BRT is not fair because the rail proposal also includes the extremely costly loop going through Tysons. If you break that out, if you just build the rail down the right of way, which was so wisely put there in the '50s, it's just a straight and simple task of rail laying, much like building the 10 miles in one day done by Crocker of the Central Pacific 133 years ago. The alignment is there, the right of way has been investigated, the footings are known. There are six bridges that are required. I will point out that that highway bridge that fell into the Oklahoma River on Memorial Day is 400 feet long and 140 feet up in the air, and it was closed today. (0083, 0192-T –3)

> ***Response:*** *The Draft EIS was not intended to present a comparison of nearly identical alternatives. It was intended to evaluate the relative merits and impacts of a small range of alternatives. Alignments that differ allow decision makers to better understand the benefits and costs of alternate approaches to providing improvements. The trade-offs identified for different alternatives may lead decision makers to ultimately select a preferred alternative that combines beneficial elements of each. BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*
>
> *The analysis presented in Chapter 10 of the Draft EIS showed that the Metrorail Alternative has several benefits relative to the BRT Alternative, even though BRT costs less and has greater cost effectiveness. In general, Metrorail provides greater improvements in transportation service; greater increases in transit ridership, more support for future development, and it would better serve diverse populations. BRT, on the other hand, provides improvements in corridor transit service sooner, has fewer impacts on the natural environment, fewer noise and visual impacts, and lower traffic impacts in the vicinity of stations (though still higher than the No-Build).*
>
> *In response to comments made following publication of the Draft EIS, the Project Team evaluated a new alignment option for the Metrorail Alternative that would provide for express service that bypasses Tysons Corner. The alignment would include a leg that extends along the median of the DIAAH on the north side of Tysons Corner.*

The analysis showed that the leg of the alignment extending along the median of the Dulles Connector Road and the DIAAH would be costly and would have substantial impacts. The alignment would have to be coordinated with the proposed interchange plans at the Capital Beltway. Because current plans consume the median in full, the Connector Road, the DIAAH, and the adjacent ramps would need to be shifted outward, likely resulting in substantial impacts on adjacent properties and residents.

A Spring Hill Road Station for Metrorail would also require shifting the DAAR outward because the current median is not wide enough to accommodate a standard-width Metrorail platform. Shifting the roadway would also require the costly widening of Spring Hill Road overpass bridges and reconstruction of an existing slip ramp between the DIAAH and the Dulles Road.

Given that a substantial portion of the demand for proposed Metrorail Alternative is for travel to and from Tysons Corner (approximately 40 to 50 percent), an alignment that effectively serves the employment concentrations and major activity centers within Tysons Corner will contribute significantly to the success of the Dulles Corridor Rapid Transit Project. An alignment that extends along the DIAAH and serves Tysons Corner via a Spring Hill Road Station would force a transfer for many travelers, degrading the level of service to Tysons Corner, increasing travel times for potential patrons, and thus reducing overall ridership on the line.

Public Comment: That most alternative comparisons provided are on the basis of opening year (2005, 2006 and 2010) and 2025. What's needed is an apple to apples comparison of all options for 2010. (0446, 0218-M –6) (0446, 0146-T –6)

Public Comment: Lack of Comparable Data for Key Out Years. Adequately assessing the value and cost effectiveness of heavy rail vs. alternatives requires comparable data for comparable years. The DEIS provides cost, ridership and other data based only on anticipated opening year of service and 2025. What's needed is comparable data for 2006, 2010 and 2015 to determine the benefit and value of different options in the short term. (0446, 0446-E –5)

Response: *A comparison of all the Draft EIS alternatives at the year 2010 would not be an "apples to apples" comparison, because at that point in time, the BRT and BRT/Metrorail alternatives would have been in operation for several years, whereas it would only be the first year for operation for the Metrorail Alternative. It often takes several years for new improvements to achieve their full potential. Once people have had time to see the benefits of the new improvement, often more people will opt to use it. Therefore, the opening year comparison of Metrorail to alternatives that have been in operation several years would not be a fair comparison. Rather, a comparison of each alternative in its respective opening year provided a better comparison.*

The best comparison, however, is for each alternative in a future horizon year—in this case, 2025. By that point in time, all alternatives would have had ample opportunity to "settle in" and analysis at this point likely represents the full potential of each.

The BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.

Public Comment: I am a big fan of metro and I use it often to get to work. I reckon some kind of mass transit will be helpful for the Dulles Corridor, but it seems from my reading of the Draft EIS that you all are focusing primarily on the costs of the alternatives and not weighing them against their benefits. Have you calculated the cost/benefit ratio for each alternative? If so, where can I find them? If not, when do you plan to do them? It is hard for me to imagine how you can choose amongst the alternatives if you are only looking at the cost side of the equations. You need to estimate the financial benefit. (0117, 0117-E –4)

Public Comment: I think all of the options-build options seem to have merit and appeal, and it's clearly been well thought out. But in looking at the draft EIS, it's unclear if there's been any serious cost benefit analysis work done of each of the proposals, and I urge that to be done. And by that, I mean, we're not only-I mean, clearly all of the expenses have been well calculated for the various alternatives, and it's easy to compare all of them next to each other in terms of their cost. But more realistic picture is to try to also calculate the benefit that will be gained, both immediately tangible benefits where you can readily calculate the financial impact, as well as more qualitative benefits, but where financial assumptions and values are designed. But then for each of the alternatives, we ought to-we, the public, ought to be able then to look at them, when we're spending this kind of money, in terms of not only what their expenses will be, but what's the value of the benefit of each one, because we clearly should try to pick the one that has the greatest benefit relative to its cost, regardless of the total price tag be four billion, or 300 million. (0117, 0277-T –1)

Public Comment: Is the system cost-beneficial? I see no quantification of the benefits against which to weigh the costs. I see only a comparison among costs. (0166, 0166-T –1)

> ***Response:*** *Chapter 10 of the Draft EIS was essentially a cost-benefit comparison, because it described how each alternative performed against the stated project goals (the benefits), and evaluated the impacts of each alternative (the costs). This analysis included both quantitative and qualitative measures, and was not the type of conventional cost-benefit analysis suggested by several of the commenters. There are many benefits received from the Build Alternatives that are difficult to reflect in such a quantitative cost effectiveness analysis. Although the region will receive a financial benefit from developments and increased tax base, these financial benefits do not accrue to the project and a conventional cost-benefit analysis is not really instructional.*
>
> *For major transportation investments, an evaluation plan that relies exclusively on weighting schemes or cost analysis comparisons can be too rigid, making it difficult to compare attributes that are more qualitative or difficult to assign a cost value. Rather, an evaluation that clearly outlines performance relative to a project goals, and summarizes the essential differences between alternatives or the various trade-offs involved in selecting one over the other, is a more instructive and useful tool for decision makers.*
>
> *Construction costs and operating & maintenance costs are a significant issue, because they are used by the Federal Transit Administration, along with other measures, to evaluate the effectiveness of a project. However, the hard numbers for cost effectiveness and financial feasibility will not be the bottom line for selecting an alternative.*
>
> *Therefore, the analysis presented in Chapter 10 reflected not only the cost effectiveness of each alternative, but also each alternative's effectiveness in meeting more qualitative or non-monetary project goals, such as "supports future development," "supports environmental quality," and "serves low-income and minority populations." The final summary of the relative benefits and impacts of each alternative were outlined in Table 10.2-1 of the Draft EIS.*
>
> *The decision-makers considered these factors in their selection of the Metrorail Build Alternative as the Locally Preferred Alternative. Concurrently, the BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Public Comment: Transit is vital to the long term health and well-being of Northern Virginia. Environmental Defense supports transit as a centerpiece for building sustainable communities. Before committing to Metrorail, however, we need a better analysis of alternatives, ensuring that we receive the greatest value for our transit investment. (0444, 0444-E –6)

Public Comment: The Center is not opposed to Metrorail – to the contrary, we strongly support transit as one of the best means to reduce congestion, improve air quality, enhance quality of life, and effectively manage growth. Before investing billions in Metrorail, however, it is reasonable to expect a fair and

impartial analysis of the benefits and impacts of that investment as compared with other investments. Unfortunately, the Draft EIS does not come close to providing a fair and impartial analysis and is nothing more than a pretext to justify billions of dollars for Metrorail. (0445, 0445-E –2)

Public Comment: In short, the DEIS appears to have been pre-engineered to support conclusions that are beneficial to the project managers and the consultants. At the same time, the DEIS fails to provide analysis that would lead to cost-effective, near-term solutions that would actually solve our suburban transportation problem. (0138, 0476-L –1)

Public Comment: Transportation investment decisions should be based upon a fair assessment of performance, cost, environmental benefits, land-use issues, and other factors important to the community. The Draft EIS, however, does not come close to a fair assessment. Rather, the document is extraordinarily biased in favor of spending billions of dollars of federal and local funds on Metrorail, and does not provide any credible analysis to support this conclusion. Many of the assumptions in the document, particularly those related to system routing and design, are so flawed that objective analysis is impossible. (0445, 0445-E-1)

> ***Response:*** *The Draft EIS documented the systematic approach that was undertaken to assess the potential effects of the proposed alternatives. Each of the chapters and sections of the Draft EIS, which documented the effects of the project, documented the relevant laws and regulations considered, described the methodologies used, defined the study areas assessed, documented the existing conditions in the study areas, predicted the direct and construction related effects, and indicated mitigation measures available to lessen substantial impacts when predicted.*
>
> *As described more fully in other responses in Section 6.24, the BRT Alternative defined in the Draft EIS was an appropriate definition of BRT for the Dulles Corridor, given the conditions and constraints in the corridor. Though BRT applications in other cities have different route structures and capacities, the evaluation of a particular mode in a given corridor is dependent on a number of factors. In other cities, the same limitations on space and lane availability may not apply, therefore, the performance and capacities of these applications do not necessarily have relevance for the Dulles Corridor Rapid Transit Project.*
>
> *As described in Chapter 2 of the Draft EIS, BRT is an emerging transit mode in which buses are used to provide high-quality service akin to a rapid rail system. It is intended to provide rail-like service and amenities at a lower cost. Therefore, in the context of the Dulles Corridor, the BRT Alternative was developed to serve the same type of travel needs as the proposed Metrorail Alternative. The intent was to evaluate a lower-cost, lower-impact alternative to see if it could have provided the same level of benefit as a Metrorail Alternative.*
>
> *Both BRT and Metrorail were designed to primarily serve the east-west travel demand between existing and emerging activity centers along the Dulles Toll Road, and between these centers and the region's core. As described in Chapter 2, both were intended to function as an extension of the existing Metrorail system, taking advantage of the direct connection this system already provides to Arlington and the region's core. In the context of the Dulles Corridor Rapid Transit Project, BRT was meant to be a complement to the existing regional rapid transit system, not a competing regional system.*
>
> *As described in Chapter 10 of the Draft EIS, the cost effectiveness for the alternatives in the Dulles Corridor Rapid Transit Project was measured using the then Federal Transit Administration's uniform method for analyzing costs and benefits. This method reflected the relative benefits of the proposed improvements, in terms of the number of riders attracted to the system, as compared to the costs to construct and operate the improvements.*
>
> *Overall, the analysis presented in Chapter 10 reflected not only the cost effectiveness of each alternative, but also each alternative's effectiveness in meeting more qualitative or non-monetary project goals, such as "supports future development," "supports environmental quality," and*

"serves low-income and minority populations." The final summary of the relative benefits and impacts of each alternative was outlined in Table 10.2-1 of the Draft EIS.

The decision-makers considered these factors in their selection of the Metrorail Build Alternative as the Locally Preferred Alternative. Concurrently, the BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.

Public Comment: Conclusion #1: Metrorail service will deliver the highest ridership (more than twice as much as BRT), the highest number of new riders (more than three times as many as BRT), and will result in a higher percentage of people using transit. This conclusion is not supported by the EIS and appears to be based upon biased assumptions about system design and performance. As defined by the EIS, the BRT alternatives offer fewer stations, less desirable routings, lower capacity stations and vehicles, and very little dedicated rights of way. Comparison of Metrorail and BRT Alternatives Considered Number of stations: Metrorail: 10-13 stations per alternative, depending upon the alignment; BRT: 1-5 stations per alternative (plus a few low capacity "stops"). Station location: Metrorail: Multiple stations in the heart of Tyson's corner, providing convenient access to significant office, retail, and residential land uses; BRT: No stations or stops in the heart of Tyson's corner, preventing convenient access to significant office, retail, and residential land uses. Station capacity: Metrorail: High capacity stations that are 600 feet long, capable of handling eight-car trains of 120 persons per car; BRT: In all but one option, lower capacity stations that are 260 feet long, capable of handling four buses of 61 persons each. Vehicle capacity: Metrorail: Roughly 120 passengers per rail car; BRT: Roughly 61 passengers per vehicle, even though existing BRT systems use vehicles that can carry 165 passengers and even 270 passengers per vehicle. Operational Frequency: Metrorail: Frequent operations of six-minute intervals during peak hours and 12-minute intervals during non-peak hours; BRT: Less frequent operations, with up to 24 minute intervals during both peak and non-peak hours. Right-of-way: Metrorail: Dedicated rights-of-way for the entire system, including elevated, at-grade, and underground tracks and stations; BRT: Virtually no dedicated rights-of-way, requiring operations almost exclusively in general traffic. Technology Investments: Metrorail: Significant built-in technologies to enhance performance, such as a control center and passenger information systems; BRT: No built-in technologies that could enhance performance, such as signal prioritization, queue jumping, and vehicle tracking. (0445, 0445-E –3)

Public Comment: Clearly, the BRT alternative was designed to provide a lower level of service than the Metrorail alternative. It is not surprising, therefore, that the EIS concludes that Metrorail will attract more riders. The lack of any fair way to compare the two alternatives is a significant flaw that must be resolved. Otherwise, the region may falsely conclude that Metrorail is the best alternative, and thus may spend billions of dollars on a system that is unnecessary and unwarranted. (0445, 0445-E –4)

Public Comment: Environmental Defense strongly supports transit in the Dulles Corridor. Transit will help build more livable communities, provide better access to jobs and cultural opportunities, reduce traffic congestion, and improve air quality. We are concerned, however, that inadequate consideration is being given to Bus Rapid Transit (BRT), a transit option that can have all the benefits of Metrorail but at a fraction of the cost. Specifically, the current draft Environmental Impact Statement (EIS) needs to be revised to include BRT options that parallel the existing Metrorail options, enabling a fair comparison of the two modes. (0444, 0444-E –1)

Public Comment: The EIS also runs counter to evidence suggesting that BRT can match if not exceed the ridership of comparable rail systems. For example, the United States General Accounting Office compared BRT to light rail projects in a number of cities and concluded that BRT and light rail ridership generally is "quite similar." Another study concluded that "the evidence suggests that one can move three times as many people by dedicated bus-based transitway systems for the same cost [as comparable rail systems]." Similarly, a book recently published by the International Energy Agency concludes that BRT can "make all cities more efficient, cleaner, less gridlocked and more sustainable" and that BRT "opens a new era in low-cost, high-quality transit." The EIS must provide a credible analysis before reaching broad conclusions about ridership. (0445, 0445-E –5)

Public Comment: There are a couple of potential ways to begin addressing the blatant bias in the draft EIS. First, the alternatives could be redrafted so that the Metrorail alternatives are compared with BRT alternatives providing a similar number of stations and similar routing. At a minimum, this would require significant BRT stations in Tyson's Corner as well as the construction of separate rights-of-way for at least part of the BRT system. It also would require the examination of alternatives that provide BRT service to stations other than West Falls Church, such as Rosslyn. This will provide a more accurate assessment of BRT capabilities and potential benefits. (0445, 0445-E –6)

Public Comment: Metrorail service would provide a much greater increase in the capacity to move people through the corridor than either BRT or Combined BRT/Metrorail. As mentioned above, the BRT alternative, as defined in the EIS, is unduly limited in its ability to move people through the corridor. There are not enough stations or stops in the right places, the service is too infrequent, and the station and vehicle capacities are not designed to compete with the capacity of Metrorail. As a result, it is impossible to conclude that Metrorail will provide a much greater capacity increase than Metrorail. (0445, 0445-E –8)

Public Comment: Existing BRT systems clearly demonstrate that BRT can meet or exceed the ridership projected in the EIS. The EIS estimates that the new Orange Line extension would have the capacity to carry roughly 10,000 riders per peak hour in the morning. However, the BRT system in Bogota, Columbia carries more than 40,000 passengers per hour on its main line, roughly four times the number proposed for the Metrorail extension. Similarly, the BRT system in Curitiba, Brazil, carries more than 23,000 passengers per peak hour on one of its lines. A recent study by the Reason Public Policy Institute noted that "with few exceptions[,] some form of express bus system, operating on either an exclusive right of way or shared facility, would have lower costs and higher performance than either light or heavy rail systems in nearly all, if not all U.S. cities." A better analysis must be conducted of the potential capacity increases available with BRT. (0445, 0445-E –9)

Public Comment: Conclusion #3: Metrorail service generally results in the shortest travel time, especially for reverse commute trips and those that begin and end in Tysons Corner. Once again, this conclusion is based upon the extremely biased and limited definition of BRT contained in the EIS. Shortest Travel Time: Even with the limited definition of BRT, the travel times for Metrorail cited in the EIS are not much better than BRT. For example, Table 6.3-4 shows that travel times in selected origin/destination pairs are very similar for BRT and Metrorail, despite the distinct disadvantage placed upon BRT by the EIS. It is reasonable to assume, therefore, that if the BRT alternatives are revised to offer a fair comparison to Metrorail, the BRT alternative may actually provide faster travel times than Metrorail. This result would be consistent with the GAO study, which found that BRT speeds were faster than light rail in five out of six cities analyzed. (0445, 0445-E –12)

Public Comment: Shortest Travel Times for Trips Within Tyson's Corner: This conclusion is simply not credible. None of the BRT alternatives contain stations or stops within the heart of Tyson's Corner. By contrast, each of the Metrorail alternatives contain multiple stations within the heart of Tysons, with alignment T4 containing six stations within Tyson's Corner. Obviously, given such a biased set of alternatives, Metrorail will provide shorter travel times within Tyson's. The BRT alternatives must be revised to provide comparable station locations and infrastructure within Tyson's, so that a fair comparison can be made. (0445, 0445-E –14)

Public Comment: Conclusion #5: More members of the business community, area neighborhood residents, and civic organizations have expressed support for Metrorail than for any other choice. It is not surprising that more people and groups have expressed support for Metrorail than other options, because no other viable options have been presented. The median of the Dulles access road has been reserved for rail since the 1960's. When serious discussions began about the Dulles corridor, there was an assumption that the extension would be Metrorail. Not surprisingly, the 1997 Major Investment Study (MIS) recommended rail. After significant pressure, however, the MIS was supplemented in 1999 to include consideration of BRT. However, as reflected in the EIS, BRT is not being treated as a serious alternative, and there is no real effort to educate the public about the potential benefits of BRT. The EIS must be revised to compare the Metrorail alternatives with comparable BRT alternatives. Moreover, a

public education campaign must be conducted to help reverse some of the significant bias toward Metrorail. Without such a campaign, the public cannot make an informed choice and a Metrorail alternative will be effectively forced upon them. (0445, 0445-E –17)

Public Comment: Conclusion #8: BRT would provide less overall passenger capacity than Metrorail. There simply is no credible information available to support this conclusion. For example, as discussed above: the Metrorail alternatives in the EIS have nearly three times as many stations as the BRT alternatives; the Metrorail stations are significantly larger than the BRT stations, capable of handling 960 passengers per train (8 cars with 120 passengers each) versus 244 passengers (4 BRT vehicles with 61 passengers each, even though vehicles are capable of carrying 2-3 times as many passengers); ·BRT systems in other countries routinely carry several times as many passengers as the proposed Orange Line extension, at a fraction of the cost; the Metrorail alignments go through the heart of Tyson's, whereas the BRT alignments bypass the heart of Tysons; and the Metrorail trains would run at 6-12 minute intervals, whereas the BRT would run at up to 24 minute intervals, even during peak hours. (0445, 0445-E –20)

Response: *Because these comments were related, a combined response was prepared. The response is divided into several subparts.*

Comparison of Comparable Alternatives The Draft EIS was not intended to present a comparison of nearly identical alternatives. It was intended to evaluate the relative merits and impacts of a reasonable number of alternatives that have been determined to meet project area transportation needs. Because the selection of a locally preferred alternative typically depends on an evaluation that focuses on the key differences and possible trade-offs between alternatives, alternatives that differ allow decision makers to better understand the benefits and costs of alternate approaches to providing improvements.

For example, while one alternative might be particularly effective in meeting the transportation and land use goals of the area, the benefits it provides may be small when compared to the costs. At the same time, a different alternative might be more cost-effective, but may not meet project goals and objectives as well as another alternative. Officials would have to make a trade-off between the two alternatives, deciding which criteria have priority. In another example, the relative importance of land use impacts and transportation service improvements may need to be decided if one alternative greatly improves transportation service but has highly negative land use impacts, while another alternative has fewer land use impacts but does not provide as much improvement in transportation service.

Ultimately, the trade-offs identified for different alternatives may lead decision makers to select a preferred alternative that combines beneficial elements of each.

The Definition of BRT in the Dulles Corridor The BRT Alternative defined in the Draft EIS was an appropriate definition of BRT for the Dulles Corridor, given its conditions and constraints in the corridor. Though BRT applications in other cities have different route structures and capacities, the evaluation of a particular mode in a given corridor is dependent on a number of factors. In other cities, the same limitations on space and lane availability may not apply. Therefore, the performance and capacities of these applications do not necessarily have relevance for the Dulles Corridor Rapid Transit Project.

As described in Chapter 2 of the Draft EIS, BRT is an emerging transit mode in which buses are used to provide high-quality service akin to a rapid rail system. It was intended to provide rail-like service and amenities at a lower cost. Therefore, in the context of the Dulles Corridor, the BRT Alternative was developed to serve the same type of travel needs as the proposed Metrorail Alternative. The intent was to evaluate a lower-cost, lower-impact alternative to see if it could have provided the same level of benefit as a Metrorail Alternative.

Both BRT and Metrorail were designed to primarily serve the east-west travel demand between existing and emerging activity centers along the Dulles Toll Road, and between these centers and the region's core. As described in Chapter 2, both were intended to function as an extension of the existing Metrorail system, taking advantage of the direct connection this system already provides to Arlington and the region's core. In the context of the Dulles Corridor Rapid Transit Project, BRT was meant to be a complement to the existing regional rapid transit system, not a competing regional system. Therefore, BRT routes that provided direct connections between the Dulles Corridor and Arlington, Washington, D.C., or Maryland rather than connect to the existing Metrorail system at the eastern end of the corridor would not be appropriate in the Dulles Corridor. Moreover, given that BRT vehicles would likely have to travel on congested roadways to reach these regional destinations, it is doubtful they would offer faster travel times than the existing Metrorail system, which operates on an exclusive guideway.

As a result, the proposed alternatives would not serve the travel needs of all trip makers in the Dulles Corridor. They would, however—in combination with the planned transit-oriented urban form—help to increase overall mobility in the corridor. Highway and transit improvements that address other travel needs are recommended in the Northern Virginia 2020 Plan, the Statewide Transportation Plan, and local comprehensive plans. Overall, this program of improvements is intended to increase mobility and address the existing and potential future deficiencies in Northern Virginia.

The BRT Alternative made use of the relatively exclusive travel way in the DIAAH to provide rapid, limited-stop service for long-distance trips between the corridor and the region's core. The alternative was also attractive for short-distance trips between activity centers within the corridor, because it offered time-savings over existing corridor transit services for these trips. However, most trips on the proposed alternative were expected to be at least 20 to 30 minutes in length.

An efficient way to serve both the long-distance and short-distance trips in the Dulles Corridor would be to have stations in the median of the DIAAH. These stations would eliminate the need for buses to enter and exit the freeway on local streets, reducing overall travel times, even though many operating patterns make multiple stops along the corridor. This station configuration and the proposed operating patterns also would allow the alternative to efficiently provide access for travelers heading to and from multiple, dispersed origins and destinations.

Some commenters have suggested that because BRT is more flexible than a rail system, its operating pattern should be based on multiple "point-to-point" express services. However, it would be very difficult to provide a cost-effective service for the Dulles Corridor using several, dedicated express routes due to the relatively dispersed land use patterns. For a point-to-point transit service to be as efficient as possible, it must be able to attract a large number of travelers within a relatively small area at the origin end that all want to go to the same destination (or multiple destinations within a small area). Travel time at the "circulation and distribution" end of the trip should not be more than 10 minutes, or the increased travel times make the dedicated service a less attractive travel alternative.

Most travelers in the Dulles Corridor are coming from dispersed, lower-density locations throughout the region, and traveling to dispersed destinations throughout the corridor and the region (some high-density, some not). While travel within the corridor and between the corridor and the region is significant, travel from each dispersed location is, in general, not significant enough to support a dedicated, point-to-point type of service. Therefore, it would not be efficient or feasible to provide rapid transit improvements in the Dulles Corridor primarily using a series of "one-seat ride" express services with circulation/distribution at either end.

On the other hand, the Metrorail and BRT Alternatives of the Draft EIS used several stations to concentrate multiple origins or destinations at a discrete location. Park-and-ride facilities and feeder bus services are able to attract travelers from dispersed origins, and then the multiple stations along the transit line are able to distribute passengers to multiple destinations. In this

way, these alternatives could have efficiently provided access for many travelers heading to and from multiple origins and destinations.

The proposed BRT 3 alignment option used a slightly different operating pattern that includes stops at park-and-ride lots rather than median stations, and more point-to-point express services. This option more closely approximated the "simpler" BRT service suggested by many commenters; the option also had the lowest ridership of the proposed Build Alternatives.

To the extent possible, the BRT and Metrorail alternatives were designed to be similar. However, due to several constraints, it was not possible for BRT to provide the same person-moving capacity through the corridor or to provide the same level of service to Tysons Corner.

Space considerations at West Falls Church limited the ability to increase the number of BRT bus bays at this station to support more than the proposed 80 vehicles per hour in the peak period. Moreover, at this flow rate, vehicles would have arrived at West Falls Church every 45 seconds, on average. More frequent arrivals would have likely resulted in delays as buses are forced to wait for an open bay until buses in front of them pull out.

In Tysons Corner, providing the same level of service as Metrorail with BRT would have reduced the cost and timing advantages associated with the BRT Alternative. Operating the BRT service on congested roadways in Tysons Corner to provide more direct connections to destinations would have increased travel times and offered little benefit over driving. Such a system would not have bees an attractive travel alternative, and would not have likely attracted high ridership. However, Fairfax County and VDOT would have been unlikely to dedicate a lane for exclusive bus use, given that many roadways in Tysons Corner were expected to operate at or above capacity in the future, even after implementing capacity increases (see Chapter 6 in the Final EIS).

Therefore, the only way to provide the same level of service and directness would have been to operate BRT on a grade-separated route through Tysons Corner. Both an elevated route and an underground route would have added considerable expense and construction time to the project, thereby diminishing two of the primary advantages of BRT in the Dulles Corridor. An elevated roadway would also have had the same degree of visual impacts as an elevated Metrorail alignment. Because a grade-separated alignment for BRT through Tysons Corner would increase the cost, construction time, and impacts of the alternative, this was not considered an advantageous configuration for the BRT Alternative, especially given that it would still have required a transfer at West Falls Church, reducing overall ridership as compared to the Metrorail Alternative.

Travel Time Comparisons. The analysis presented in Chapters 6 and 10 of the Draft EIS confirmed that both the BRT and Metrorail alternatives offered similar travel times for many of the analyzed origin-destination pairs. In many of these cases, travel times were competitive with those for automobile travel. For trips within the corridor, Metrorail was and is the most time competitive with automobiles. However, for some of the trips traveling between the corridor and other regional locations, the analysis shows that BRT did offer slightly faster travel times.

Because the BRT operating plans included multiple route patterns, some of which only include stops at a few stations, some individual routes did experience higher average speeds than Metrorail. However, because the alternative could not have provided a direct connection to Tysons Corner and forced a transfer at West Falls Church, the BRT Alternative still had lower ridership overall.

The Draft EIS did not include any conclusions regarding the shortest travel times for trips within Tysons Corner. Rather, as discussed above, the analysis showed that Metrorail generally had the shortest travel times for trips with one end in Tysons Corner.

Public Education. Every public outreach activity conducted as part of the public involvement program, which was outlined in Chapter 11 of the Draft EIS, provided information to the public about bus rapid transit and its unique features. The efficiencies afforded by the BRT Alternative have been shown in the numerous project materials that provide comparative data about the alternatives under consideration. It would be inappropriate to promote one mode under consideration over other modes through the public involvement program.

Ridership. The ridership estimates presented in Tables 6.3-8 and 10.1-5 of the Draft EIS support the statement that Metrorail will deliver the highest ridership (more than twice as much as BRT), the highest number of new riders (more than three times as many as BRT), and would result in a higher percentage of people using transit. Information on how the travel demand models work, the assumptions employed by the Project Team, and the model results can be found in the Travel Demand Forecasting Methodology and Results Technical Report (June 2002).

The General Accounting Office study referenced by the commenter seems to address the relative benefits of regional rapid transit systems that are bus-based versus regional systems that are rail-based. It is not clear from this comment whether the study addressed the relative benefits of the different modes when expanding an existing system. As noted earlier, the BRT Alternative for the Dulles Corridor was intended to function as an extension of the existing regional rail system. It was not intended to serve as a competing regional rapid transit system.

Vehicle Capacity, As the commenter notes, some BRT vehicles are capable of carrying much higher passenger loads than the vehicles proposed for the Dulles Corridor Rapid Transit Project. The BRT system in Bogotá, Colombia, uses 60-foot articulated buses that accommodate approximately 160 passengers (approximately 43 seated and 114 standing). This standee load is based on an area of 4 persons per square meter, or 2.7 square feet per person—a standard that most riders would find very uncomfortable (at this density contact with other persons is unavoidable). In Curitiba, Brazil the BRT system uses an 80-foot bi-articulated vehicle with a capacity of 270 persons, but again, the bus has approximately 57 seats, so most of these passengers are standees.

Loading vehicles to these capacities would not be appropriate or safe in the Dulles Corridor. The Transportation Research Board's Transit Capacity and Quality of Service Manual (1999) notes that, "High-speed bus service on busways and HOV lanes should not allow standees, so capacity calculations should assume that every passenger may be seated" (Page 2-41). In addition, a high reliance on standees is characteristic of a system with short trip lengths—such as Transmilenio, not Dulles. Within the Dulles Corridor, many trips are projected to cover at least two-thirds of the length of the corridor (20 to 30 minutes). Standing for this length of time on a bus would be unacceptable to many travelers. Moreover, because BRT does not have the same quality of ride as Metrorail, loading passengers to a "crush" level would not be tolerated by most patrons.

Station Capacity vs. System Capacity. As described in Chapter 6 of the Draft EIS, transit capacity in the corridor represents the amount of physical space available to carry passengers and provides an understanding of the number of riders that can be comfortably accommodated in the corridor during peak travel times. Total capacity will vary according to the number of vehicles in service and the capacity of each of those vehicles. These calculations are not dependent on the number of stations for each alternative or the size of these stations.

Station size was generally determined based on the peak vehicle requirements generated by projected demand. As outlined in Section 2.3 of the Draft EIS, various BRT platform lengths and station configurations were evaluated in the Draft EIS. Under the BRT 1 alignment option, most stations would have had the same 600-foot platforms as the Metrorail Alternative. BRT 2 would have had 260-foot platforms. The Draft EIS Facilities General Plans (Volume IV), sheets 733 through 738 showed these two configuration options for the Wiehle Avenue Station.

As described in Chapter 2 of the Draft EIS, the operating plan for BRT would have resulted in approximately 80 BRT vehicles serving the eastern end of the corridor in the peak hour in the peak direction. With approximately 61 seats per vehicle, the peak-hour capacity provided by the BRT Alternative would have been 4,880 passengers. The Metrorail operating plan would result in 10 trains traversing the corridor in the peak hour in the peak direction. With 8 cars per train and a loading goal of 120 passengers per car per hour, the Metrorail Alternative would provide capacity for 9,600 passengers during the peak hour. Therefore, Metrorail capacity in the Dulles Corridor would be approximately twice that of BRT.

As noted earlier, space considerations at West Falls Church limit the ability to increase capacity further by increasing the number of BRT vehicles operating in the corridor during the peak hour.

For different applications in other cities, where the same limitations on standees and the volume of buses do not apply, BRT systems can have much higher capacities. In some cases, BRT systems carry the same level of demand as rail systems (as noted by the commenter).

Frequency of Service. As described in Chapter 6 of the Draft EIS, the peak-period headways for the BRT alternative would have generally been 6 to 12 minutes. Some of the routes for BRT 2 and BRT 3 would have operated with 4-minute headways. Many of the high-demand BRT routes would have operated with 6-minute service frequencies using two-vehicle platoons. These two-vehicle platoons can be thought of as bus trains, where the two vehicles run in tandem, though not physically connected like rail cars. In the off-peak period, service would have operated at 12- to 24-minute frequencies. These service frequencies were comparable to Metrorail service frequencies. BRT routes that operated with 12-minute headways in the peak period and 24-minute headways during the off-peak period did so because more frequent service was not required to meet the low demand projected for these routes.

Dedicated Rights-of-Way As described in Chapter 2 of the Draft EIS, the BRT Alternative primarily operated on the relatively exclusive travel way along the DIAAH, and was permitted to use the eastbound shoulder of the Dulles Connector Road during periods of severe congestion, when such use did not present a safety hazard to general-purpose traffic. This would have been no different than bus operations on the shoulder today. Some BRT vehicles would also have used the HOV lanes of the Dulles Toll Road, in certain limited areas between Route 28 and Route 7.

As shown in Table 6.1-2 in the Draft EIS, the DIAAH operates at Level of Service (LOS) C during the peak period. This level of service represents moderately congested conditions and relatively free-flow travel speeds. By 2025, the DAAR is expected to operate at LOS D. This level of service represents more congested conditions, but speeds are only reduced moderately, and, in practice, it is widely considered an acceptable level of service.

Table 6.2-1 showed that, for the BRT Alternative in 2025, the DIAAH was projected to operate at LOS C—an improvement over the LOS D projected for the No-Build Alternative. Tables 6.1-2 and 6.2-1 also showed that the HOV lane on the Dulles Toll Road operates at LOS and is expected to continue operating at LOS C under all alternatives. Therefore, introducing BRT vehicles to the DIAAH and the HOV lane did not hinder traffic operations on the roadway, nor did the expected levels of roadway traffic hamper BRT operations.

As described earlier, it would not have been cost effective to provide an elevated guideway for BRT through the core of Tysons Corner. Such an alignment would also have had more severe visual impacts than the alternative proposed in the Draft EIS.

Other. Please note that BRT was advanced in the MIS Supplement as an interim step to rail, and was not envisioned as a stand-alone alternative or system. As summarized in Section 2.1.2 of the Draft EIS, DRPT had concluded that BRT was best suited as an interim transit solution in the

Dulles Corridor, which would have immediately started addressing transit needs and ultimately allow for implementation of rail in the corridor.

Because BRT operated in a relatively exclusive guideway with dedicated slip ramps to access median stations, it would not have required technology enhancements such as queue jumpers or signal prioritization to improve performance. WMATA has been incorporating ITS information capabilities, such as smart cards, next train arrival information, and escalator/elevator outage information, into the existing Metrorail system. Similar information technologies would be incorporated into the final design of the LPA.

The decision-makers considered these factors in their selection of the Metrorail Build Alternative as the Locally Preferred Alternative. Concurrently, the BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.

Public Comment: Second, some attempt should be made to "normalize" the analysis by providing common measures upon which to compare all of the alternatives. There are established techniques, such as cost-per-new-rider and cost-per-revenue mile, that must be included in the EIS to make a fair comparison and rational determination. Such measures are likely to show that Metrorail is a less attractive alternative, because in addition to the high construction costs, most subway systems require operational subsidies in the range of 40 cents per passenger. By contrast, the best BRT systems are not only much cheaper to build, they actually make a profit on their operations, requiring no subsidies from the taxpayer. Lessons can be learned from these systems, and these lessons should be incorporated into the EIS analysis. (0445, 0445-E –7)

Public Comment: Also we believe that BRT is going to be much less expensive than the amount projected in the EIS because the EIS requires these special stations and so forth to be built, but if you just go with BRT, you don't need those. You can use a much simpler type of station, you have more stations. BRT systems typically have three to four times more stations and more consumer choice than the rail can provide. (0138, 0241-T –7)

Response: *As described in Chapter 2 of the Draft EIS, there were three different BRT alternatives representing different approaches to BRT station type and design. The cost estimates for each BRT alignment were presented in Chapters 2, 8, and 10 of the Draft EIS. The BRT 3 alignment option used stops at park-and-ride lots rather than median stations, with more point-to-point types of express service. Although it did not have more stations than other alignments, this option most closely approximated the "simpler" BRT suggested by the commenter; the option also had the lowest ridership of the proposed Build Alternatives.*

The BRT service proposed for the Dulles Corridor Rapid Transit Project was intended to serve the same type of travel needs as the proposed Metrorail service. In the Dulles Corridor, the BRT Alternative took advantage of the relatively exclusive right-of-way in the DIAAH to provide rapid, limited-stop service for long-distance trips between the corridor and the region's core. The alternative was also attractive for short-distance trips between activity centers within the corridor, because it offered time savings over existing corridor transit services for these trips. However, most trips on the proposed alternative were expected to be at least 20 to 30 minutes in length.

An efficient way to serve both these long-distance and short-distance trips was to have stations in the median of the DIAAH. These stations eliminated the need for buses to enter and exit the freeway, reducing overall travel times, even though many operating patterns make multiple stops along the corridor. This station configuration and the proposed operating patterns also allowed the alternative to efficiently provide access for travelers heading to and from multiple, dispersed origins and destinations.

Therefore, for the BRT Alternative proposed in the Draft EIS, it would not have been possible to have "simpler" stations. Median stations (which facilitate more rapid service) require pedestrian

bridges and associated vertical circulation, which includes both elevators and escalators. Dulles Corridor BRT costs also included structured parking at certain stations, new acceleration/deceleration ramps for station access along the DIAAH, and Metrorail vehicle costs for the increased ridership on the Orange Line that would result from the BRT Alternative.

The decision-makers considered these factors in their selection of the Metrorail Build Alternative as the Locally Preferred Alternative. Concurrently, the BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.

Public Comment: In conclusion, my point is that we don't have a -- the EIS doesn't make a fair evaluation of the bus rapid transit, it doesn't make a fair evaluation of the metrorail alternatives, either, because of the problem of connectivity. (0255, 0255-T –7)

Response: *The Final EIS was approved by the Federal Transit Administration for distribution as a fair evaluation of the Build Alternatives under consideration. System connectivity was one of the components evaluated in the Final EIS.*

Public Comment: A review of the DEIS indicates there is a bias toward rail. To have an efficient rail system requires a significant increase in bus service. Therefore, in anticipation that rail is transit choice and that bus service to serve the rail is required, answers to the following questions are required: What will be the increase in bus ridership? What will be the bus unit costs (costs per mile or hour)? What will the cost to operate the required bus service to serve the rail transit needs? What agency will assume responsibility to provide the bus service? What will be the cost to each district? What will be the source of the funding to meet this cost according to each district? (0147, 0459-L –25)

Response*: As stated in Section 6.3.1 of the Draft EIS, operating plans for the No-Build Alternative and each Build Alternative were developed based on a comment set of assumptions. The operating plan for each Build Alternative reflected both rapid transit services operating within the corridor and complementary local and feeder bus service. Data on ridership increases just by bus were not calculated as part of the ridership estimation process for this project. However, new transit trips were outlined in Table 6.3-8. All BRT alignment options and Metrorail alignment options resulted in an increase in regional transit trips. Fairfax and Loudoun Counties contract their bus service to private operators. The per unit cost is simply the fee paid to the contractors. Bus operating unit costs for WMATA were calculated using WMATA's cost model. Operating costs for each alternative for each operator are shown in Chapter 11 of the Transit Operations and Maintenance Plan, (June 2002). Operating agencies responsible for bus service in the corridor would have remained responsible for operations. These agencies include Fairfax County, Loudoun County, and WMATA. Operating costs by district were not calculated since this was not required for project analysis. Funding and subsidy estimates for each jurisdiction in the corridor were shown in the Draft EIS Chapter 8. As noted, local and feeder bus plans were developed for the No-Build and each of the Build Alternatives. These bus plans reflected estimated demand as well as detailed input from the jurisdictions responsible for operating the bus systems. Operations and maintenance costs for each bus service were calculated and included as part for the overall operations and maintenance cost for the project and were included in Section 8.3 of the Draft EIS.*

The decision-makers considered these factors in their selection of the Metrorail Build Alternative as the Locally Preferred Alternative. Concurrently, the BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.

Costs per Rider

Public Comment: What will be the cost per new rider based on cost escalation or failure to reach ridership projections? (0147, 0459-L –30)

Public Comment: What will be cost annually per new rider? (0147, 0459-L –29)

> ***Response****: Using the methodology used by the Federal Transit Administration for New Starts projects, the total cost per new transit rider for the Wiehle Avenue Extension is estimated to be approximately $24.73 (in 2004 dollars). This is based on total annualized capital and operating costs divided by the number of new transit riders, which is estimated in the travel demand forecasting process.*

Public Comment: Over a 20 year career (rider using the rail), what is the gross spending per new rider under the ridership projections? (0147, 0459-L –31)

> ***Response****: The cost per new rider is a measure of cost effectiveness, and is not applicable to being assigned to a specific individual. Once the individual begins to use the transit system, he or she is no longer a new rider, and the incremental cost and ridership are adjusted.*

Public Comment: As projects proceed to implementation, costs often increase. What is the cost per new rider at beginning and at five year increments? (Cost per new rider is calculated using 450 annual trips which is multiplied by the operating and capital cost per new ride.) (0147, 0459-L –32)

> ***Response****: The cost per new rider is a Federal Transit Administration (FTA) cost-effectiveness measure that has specific input requirements. One input measure is that the number of new transit riders in the project's forecast year (2025). Calculation at 5-year intervals would require a new series of ridership estimates combined with the annualized capital and operating costs for the Build Alternatives at 5-year intervals. This is a significant amount of work that would produce results not greatly different from that published in Table 10.2-1 of the Final EIS.*

Concern of Metrorail Delays Not Being Incorporated Into Travel Demand Forecasts

Public Comment: The EIS also ignores the significant delays experienced on Metrorail as a result of mechanical malfunction and other problems. If a car or train on Metrorail experiences a problem, all other trains on the same track will be delayed. For example, just this month, a broken down train on the Red Line caused all Red Line traffic inbound from Shady Grove to come to a stop for twenty minutes, causing major delays for thousands of commuters. Earlier that same morning, a switch broke, requiring single-track operations and causing even more delays. On the other hand, BRT does not suffer from the same vulnerability. BRT vehicles are independent of each other – when one breaks down the entire system is not brought to a standstill. Even when operating in a dedicated right-of-way, a well-designed BRT system can avoid the types of delays that frequently are suffered by Metrorail riders. To properly assess travel times for both systems, the EIS must address the frequency of delays and their impact on the overall system. (0445, 0445-E –13)

> ***Response****: Travel demand forecast models are designed to evaluate travel patterns and volumes under "average" conditions for both the transit and highway system; therefore, "events" such as mechanical breakdowns are not factored into these analyses. Because these types of events are not regular occurrences, and their frequencies are difficult to predict, it would not be practical to include "breakdown" scenarios in travel demand forecasts. Additional information on how the travel demand models work, the assumptions employed by the Project Team, and the model results can be found in the Travel Demand Forecasting Methodology and Results Technical Report (June 2002).*
>
> *The commenter is correct in stating that a breakdown in the Metrorail system would have greater potential for a "ripple effect" on service throughout the system than a breakdown in a BRT system, because it is much easier to route operations around a malfunctioning bus than around a malfunctioning train. However, WMATA's Standard Operating Plan for Metrorail contains plans and procedures to maintain service and safety in emergency situations. This plan provides*

procedures to prevent collisions with other Metrorail cars and disruptions in operations along the line or at stations.

Note that even though a breakdown in the BRT system would have had less potential to affect overall system operations, because BRT in the Dulles Corridor would function as an extension of the existing Metrorail system, a breakdown or delay in the regional system would have affected BRT operations in the corridor to the same extent it would have affected Metrorail operations in the corridor.

Impacts on Reverse Commutes

Public Comment: Shortest Travel Times for Reverse Commutes: The EIS contains no analysis for this conclusion and is not clear regarding the definition of "reverse commute." Moreover, the EIS offers no alternatives to meaningfully analyze the impact on reverse commuters. All of the BRT alternatives connect with Metrorail at West Falls Church. BRT, however, can be configured to connect with many other Metrorail stations in Arlington, the District, or Maryland, most likely at a fraction of the cost of building a Metrorail extension through the Dulles Corridor. These alternatives could provide better travel times for reverse commuters than Metrorail and thus must be considered before a conclusion is reached that Metrorail is the preferred option for reverse commuters. (0445, 0445-E –15)

***Response**: A "reverse commute" is generally understood as a trip from home to work that is in the opposite direction of most commuters. Someone who lives in Washington, D.C. but works in Reston would have a reverse commute, because most people travel from the suburbs to downtown for work. This definition was implied in Chapter 10 of the Draft EIS.*

Tables 6.3-4 and 10.1-4 in the Draft EIS showed forecast travel times for select origin-destination pairs. Because the direction of a trip can be understood by knowing its origin and destination, these tables demonstrate travel times for several reverse commute trips (Union Station to Reston Town Center, Tysons Corner to Dulles Airport). As indicated in the supporting text in Chapter 10, the Metrorail and Phased Implementation alternatives provided the shortest travel time by transit for the reverse commute trips shown.

All alternatives analyzed in the Draft EIS provided service in both the eastbound and westbound directions. Because the travel demand forecasting models used to determine patronage estimates produced estimates of all travel in the region, for all modes and all trip purposes, it was possible to tell from the results of the model the direction of travel and the volume of travel in each direction by all modes. The travel times shown in Tables 6.3-4 and 10.1-4 were one of the numerous model outputs that reflect directional travel and the potential benefits for reverse commuters. Additional information on how the models worked, the assumptions employed by the Project Team, and the model results can be found in the Travel Demand Forecasting Methodology and Results Technical Report (June 2002).

Both BRT and Metrorail were designed to primarily serve the east-west travel demand between existing and emerging activity centers along the Dulles Toll Road, and between these centers and the region's core. As described in Chapter 1, both were intended to function as an extension of the existing Metrorail system, taking advantage of the direct connection this system already provides to Arlington and the region's core. In the context of the Dulles Corridor Rapid Transit Project, BRT was meant to be a complement to the existing regional rapid transit system, not a competing regional system. Therefore, BRT routes that provide direct connections between the Dulles Corridor and Arlington, Washington, D.C., or Maryland rather than connect to the existing Metrorail system at the eastern end of the corridor would not be appropriate in the Dulles Corridor. Moreover, given that BRT vehicles would likely have to travel on congested roadways to reach these regional destinations, it was doubtful they would have offered faster travel times than the existing Metrorail system, which operates on an exclusive guideway.

The decision-makers considered these factors in their selection of the Metrorail Build Alternative as the Locally Preferred Alternative. Concurrently, the BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.

Ability of BRT/Metrorail to Support Comprehensive Plan Goals

Public Comment: Conclusion #4: Metrorail would have higher growth potential in station areas along the corridor due to planned increases in allowable densities at rail stations, and better contributes to the objectives of adopted county master plans. There is no support for this conclusion. According to the EIS, BRT is consistent with the Loudoun and Fairfax County master plans. There is no indication that Metrorail "better contributes" to the objectives of these plans. In addition, there is no indication that Metrorail would create higher growth potential than BRT. One of the hallmarks of BRT is that the station can serve as an attractive and vital link to the community, providing a focal point for investment and transit-oriented development. A BRT station can have all of the attributes of a rail station: advance fare collection, level-boarding platforms, passenger information systems, and ample parking. It also can be high-capacity, providing the passenger throughput necessary to support high density zoning. As mentioned above, however, the BRT stations in the EIS are relatively small and are not designed for the same capacity as Metro stations. (0445, 0445-E –16)

Public Comment: Conclusion #7: BRT does not support land development patterns in Tyson's Corner as well as Metrorail, Combined BRT/Metrorail, or Phased Implementation, and cannot penetrate Tysons Corner to effectively serve its workers, shoppers, and residents. There is no credible information to conclude that BRT cannot support land development patterns in Tyson's. First, all of the BRT alternatives bypass the heart of Tyson's corner, thus making it impossible to assess BRT impact on land development patterns. Second, as mentioned above, the EIS itself concedes that BRT is consistent with the Fairfax and Loudoun Country master plans. BRT stations can be every bit as permanent and attractive to transit-oriented development as Metrorail stations. New alternatives must be developed and analyzed before concluding that Metrorail will better support land-use patterns. (0445, 0445-E –19)

***Response**: Chapters 3, 5, 9, and 10 of the Draft EIS presented information on land use effects and the planned development densities at rapid transit stations in the Dulles Corridor. The conclusions cited above were based on the information presented in these chapters. As indicated below, BRT was consistent with county plans, but did not support the plans as well as Metrorail because density bonuses in Tysons Corner only apply to rapid rail stations.*

Alignment BRT 1 would be consistent with adopted comprehensive plans. However, construction of only Alignment BRT 1, without any Metrorail service through Tysons Corner, would not achieve several of the goals for Tysons Corner, including the creation of transit-oriented development that is allowed only with the construction of rapid rail through the core of Tysons Corner." Similar statements were made in each of the other chapters referenced above.

In Tysons Corner, providing the same level of service as Metrorail with BRT would reduced the cost and timing advantages associated with the BRT Alternative. Operating the BRT service on congested roadways in Tysons Corner to provide more direct connections to destinations would have increased travel times and offered little benefit over driving. Such a system would not have been an attractive travel alternative, and would not have likely attracted high ridership. However, Fairfax County and VDOT would have been unlikely to dedicate a lane for exclusive bus use, given that many roadways in Tysons Corner are expected to operate at or above capacity in the future, even after implementing capacity increases (see Chapter 6 in the Final EIS).

Therefore, the only way to provide the same level of service and directness would have been to operate BRT on a grade-separated route through Tysons Corner. Both an elevated route and an underground route would have added considerable expense and construction time to the project, thereby diminishing two of the primary advantages of BRT in the Dulles Corridor. An elevated roadway would also have had the same degree of visual impacts as an elevated Metrorail

alignment. Because a grade-separated alignment for BRT through Tysons Corner would have increased the cost, construction time, and impacts of the alternative, this was not considered an advantageous configuration for the BRT Alternative, especially given that it would still have required a transfer at West Falls Church, reducing overall ridership as compared to the Metrorail Alternative.

The decision-makers considered these factors in their selection of the Metrorail Build Alternative as the Locally Preferred Alternative. Concurrently, the BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.

Need to Leverage Prior Transportation Investments in the Corridor

Public Comment: Conclusion #6: Metrorail would provide the best opportunity to capture previous investment made in regional infrastructure. This conclusion is not supported in the EIS. Among other things, the EIS does not adequately address BRT's ability to leverage prior investments in both the region's roads and in Metrorail. Without such an analysis, it is impossible to reach the conclusion set forth in the EIS. For example, a BRT vehicle carrying sixty or more passengers is a far better use of roadway assets than sixty or more cars carrying one passenger each. Moreover, technologies such as signal prioritization actually increase the speed of all traffic, not just the BRT vehicle, because cars can move through the signals with the BRT vehicle. Similarly, even under the flawed BRT alignments contained in the EIS, BRT will transport a significant number of passengers to the Orange Line at nearly one-tenth the cost of the Metrorail extension. This will provide Metrorail with significant revenue opportunities at relatively little cost, thus leveraging previous investments in Metrorail. Other potential BRT alignments, not considered in the EIS, could transport passengers to other Metrorail lines, such as the Yellow and Blue lines. More analysis is required before a conclusion is warranted regarding which mode will best recapture prior investments in regional infrastructure. (0445, 0445-E –18)

Response: *The BRT Alternative was developed to provide high-quality service akin to a rapid rail system. It was intended to provide rail-like service and amenities at a lower cost. The intent was to evaluate a lower-cost, lower-impact alternative to see if it could have provided the same level of benefit as a Metrorail Alternative.*

Every effort was made to leverage prior transportation investments in the Corridor. The BRT Alternative made use of the relatively exclusive travel way in the DIAAH to provide rapid, limited-stop service for long-distance trips between the corridor and the region's core. However, operating the BRT service on congested roadways, particularly in Tysons Corner, to provide lower cost transit solutions would have increased travel times and offer little benefit over driving. Such a system would not have bees an attractive travel alternative, and would not likely have attracted high ridership. In addition, Fairfax County and VDOT would have been unlikely to dedicate a lane for exclusive bus use, given that many roadways are expected to operate at or above capacity in the future.

Therefore, BRT would need to operate on a grade-separated route through Tysons Corner. Both an elevated route and an underground route would have added considerable expense and construction time to the project, thereby diminishing two of the primary advantages of BRT in the Dulles Corridor. Because a grade-separated alignment for BRT through Tysons Corner would have increased the cost, construction time, and impacts of the alternative, this was not considered an advantageous configuration for the BRT Alternative, especially given that it would still have required a transfer at West Falls Church, reducing overall ridership as compared to the Metrorail Alternative.

The decision-makers considered these factors in their selection of the Metrorail Build Alternative as the Locally Preferred Alternative. Concurrently, the BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.

Need to Provide Comparable Level of Accessibility for Minority and Low-Income Populations

Public Comment: Conclusion #9: BRT does not provide the same level of accessibility for minority and low-income populations to regional job choices that include Metrorail. This conclusion does not make sense and is not supported by the EIS. BRT, unlike Metrorail, has the ability to travel on arterial streets and into neighborhoods. Thus, BRT alignments could be designed to pick up low income and minority customers and feed them into the Metrorail system. This would provide greater access for minority and low income customers than Metrorail alone. Moreover, it could reduce the need for many of these customers to purchase vehicles to transport themselves to a Metrorail station, thus reducing congestion and helping low income people reduce transportation expenses. Much more research and analysis must be conducted before the above conclusion can be reached. (0445, 0445-E –21)

> ***Response****: The information presented in Sections 3.8 and 10.1.5 of the Draft EIS demonstrated that low-income and minority populations near the proposed Route 28 Station would not have been served by the BRT 2 and BRT 3 alignment options, because these options did not include a station or stop at this location. In addition, because the BRT Alternative (all alignment options) would not have included the Tysons East Station, it would not have provided the same level of access for a concentration of minority residents along the south side of the Dulles Connector Road near the Route 123 interchange at the eastern edge of Tysons Corner.*
>
> *Overall, all Build Alternatives would have provided improved accessibility between jobs in the corridor and low-income and minority populations throughout the region by providing a direct rapid transit connection to the regional Metrorail system. However, the BRT Alternative did not provide the same level of access for minority populations in Tysons Corner as the other alternatives. BRT 2 and 3 did not provide the same level of access for minority populations in the vicinity of Route 28 as other alternatives.*
>
> *The decision-makers considered these factors in their selection of the Metrorail Build Alternative as the Locally Preferred Alternative. Concurrently, the BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Need for Clarification on Measures of Effectiveness

Public Comment: I found that the use of different measures in the various tables and statistics made developing a baseline virtually impossible; e.g., passenger miles vs. passenger trips, years presented in varying increments, etc. Recommendation: Review the document and define the data in common terms. (0427, 0427-E –1)

> ***Response****: Chapter 10 of the Draft EIS presented the evaluation of alternatives relative to numerous measures, which were based on the project goals and objectives. For major transportation investments, an evaluation plan that relies exclusively on weighting schemes or cost analysis comparisons can be too rigid, making it difficult to compare attributes that are more qualitative or difficult to assign a cost value. Rather, an evaluation that clearly outlines performance relative to a project goals, and summarizes the essential differences between alternatives or the various trade-offs involved in selecting one over the other, is a more instructive and useful tool for decision makers.*
>
> *The analysis presented in Chapter 10 reflected not only the cost effectiveness of each alternative, but also each alternative's effectiveness in meeting more qualitative or non-monetary project goals, such as "supports future development," "supports environmental quality," and "serves low-income and minority populations." The final summary of the relative benefits and impacts of each alternative were outlined in Table 10.2-1. Table 2.7-4 presented the anticipated costs, impacts, and benefits of all alternatives then under consideration for the Dulles Corridor Rapid Transit Project, including the No-Build Alternative.*

The decision-makers considered these factors in their selection of the Metrorail Build Alternative as the Locally Preferred Alternative. Concurrently, the BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.

Concern of Travel Demand Forecasts Used in Considering Alternatives

Public Comment: Please reconsider the evaluation of alternatives set forth in the draft EIS to increase the forecast ridership for alignment T4. (0084, 0458-E –5)

Public Comment: Reduce your estimate of the visual and aesthetic impact on the residential community along Westpark [from T4]. (0084, 0458-E –6)

Public Comment: Please reconsider the evaluation of alternatives set forth in the draft EIS to increase the forecast ridership for alignment T4 and to reduce your estimate of the visual and aesthetic impact on the residential community along Westpark. (0084, 0084-L –7)

***Response**: The demand forecasting model used to estimate ridership for each of the Metrorail alignments in the Draft EIS took into account a number of factors including overall trip time (including access to the station), station proximity to key employment concentrations, station proximity to residential concentrations, and ease of station access for pedestrians, autos, buses, and other modes. The same model algorithms and procedures were applied to each alternative in order to ensure consistent results. It should be noted that transfers do carry a penalty in calculating trip times. This was because surveys have shown that riders perceive wait times for transfers to be longer than the wait times actually are. Because of this people avoid transfers and will often not make a trip by transit if a transfer is required. This transfer penalty is reflected in the lower ridership numbers associated with Alignment T4. As an example, anybody wishing to go east who boards at Tysons Central A or Tysons Central B under Alignment T4 would first have had to go west to the Tysons West station, where they would then have had to transfer to a westbound train. This added time to the overall trip and included the transfer penalty as well. The same held true for eastbound passengers who wished to go to Tysons Central A or Tysons Central B. Finally anybody making a trip to Tysons from the east and wishing to get to Tysons Central C or Tysons Central D (the commercial core of Tysons) would have had to stay on the train through Tysons and then transfer at Tysons West for an eastbound trip.*

A more detailed description of the demand-forecasting model is available in the Travel Demand Forecasting Methodology and Results Technical Report (June 2002).

Assessment of visual and aesthetic impacts is more qualitative than patronage estimates. As outlined in Section 3.4 of the Final EIS, the Federal Highway Administration visual assessment methodology was used in assessing visual impacts. The assessment of significant impact from Alignment T4 was due to the relatively high aerial structures, and the large aerial station structures that would be built in proximity to residences.

Public Comment: Some have advocated measuring the success of an alternative by the number of people who use the system in a given year, such as 2025. I think this is a flawed measure of success because the rail system would result in raising tolls on the Toll Road to finance it, and this would naturally divert people off of the highway and onto the alternative. (0286, 0286-T –3)

***Response:** As described in Chapter 10 of the Draft EIS, the cost effectiveness for the alternatives in the Dulles Corridor Rapid Transit Project was measured using the then Federal Transit Administration's uniform method for analyzing costs and benefits. This method reflected the relative benefits of the proposed improvements, in terms of the number of riders attracted to the system, as compared to the costs to construct and operate the improvements.*

The travel demand models used to estimate patronage and the anticipated traffic volumes on area roadways accounted for all costs associated with a particular travel choice, including tolls, fares, parking costs, and the perceived "costs" of travel time. The output of the models reflected the choices travelers would be likely to make based on knowledge of travel times, costs, and other socioeconomic factors. In the Draft EIS, the model did not assume the toll increases proposed in the financing plan; rather it applied the current toll structure and expiration date (toll varies from $0.50 to $0.85 in each direction; tolls expire in 2016). The ridership estimates used to determine the cost effectiveness of the Build Alternatives did not reflect the effect of potential toll increases, because increasing the tolls was one of the many options under consideration for financing the project. Since increases in the tolls have been determined to be an appropriate way to fund the LPA, the effects of raising the tolls have been included in the Final EIS. Additional information on how the models worked and the assumptions employed by the Project Team can be found in the Travel Demand Forecasting Methodology and Results Report (June 2002).

Note that the toll increases proposed in the capital funding plan of the Draft EIS would result in tolls that are lower than the proposed transit fares for most trips on the proposed rapid transit alternatives. As outlined in Chapter 8 of the Draft EIS, the proposed toll increases would have resulted in a maximum toll of approximately $2.35 on the Dulles Toll Road in 2015. It is assumed in the Draft EIS that the Dulles Corridor transit line would use the same fare structure as the existing Metrorail system and that this fare would be adjusted for inflation over time. The maximum fare on the Metrorail system is $3.25 at the time of the Draft EIS. For trips between most parts of the corridor and Arlington and the core, the maximum fare would apply. In addition, parking fees would apply at rapid transit stations. Since the Metrorail has been selected as the Locally Preferred Alternative, and the ultimate funding plan includes extending or increasing the tolls, then the transit ridership projections and cost effectiveness measures in the Final EIS have been updated to reflect the effect the toll increases have on transit ridership.

Overall, the analysis presented in Chapter 10 of the Draft EIS reflected not only the cost effectiveness of each alternative, but also each alternative's effectiveness in meeting more qualitative or non-monetary project goals, such as "supports future development" and "serves low-income and minority populations." The final summary of the relative benefits and impacts of each alternative were outlined in Table 10.2-1.

Mode Capacity

Public Comment: The EIS also ignores the significant difficulties experienced by Metrorail in obtaining new rail cars. Without an adequate supply of reliable and reasonably priced cars, it is difficult to imagine how Metrorail will continue meeting demand. More alternatives must be developed, and additional analysis must be conducted, before a fair conclusion can be reached regarding whether Metrorail is more likely to provide greater future capacity than BRT. (0445, 0445-E –11)

***Response**: In preparing the Final EIS , the Project Team developed and evaluated the No-Build Alternative with the assumption that WMATA would be funding and implementing eight-car train operations to satisfy forecast demand prior to the Project. WMATA has been emphasizing to the Commonwealth of Virginia and to the Project's other funding partners the critical importance of the implementation of eight-car train operations. Under its Metro Matters campaign (see www.wmata.com/about/metro-mattersfactsheet.pdf), WMATA is presently seeking the absolute minimum funding of its near-term capital needs to sustain the Metrorail and Metrobus systems. Within the $3.3 billion Metro Matters campaign, there is over $600 million for the eight-car train operations.*

As outlined in Chapter 2 of the Draft EIS, the operating plan for BRT would have resulted in approximately 80 BRT vehicles serving the eastern end of the corridor in the peak hour in the peak direction. With approximately 61 seats per vehicle, the peak-hour capacity provided by the BRT Alternative would have been 4,880 passengers. The Metrorail operating plan would have resulted in 9 trains traversing the corridor in the peak hour in the peak direction. With 8 cars per

train and a loading goal of 120 passengers per car per hour, the Metrorail Alternative would provide capacity for 8,640 passengers during the peak hour. Therefore, Metrorail capacity in the Dulles Corridor would be approximately twice that of BRT.

Public Comment: The rail alternative is projected to carry 9600 passengers per hour, compared with 2370 for bus rapid transit. Rail, with the ability to carry 50 to 60,000 passengers per hour, has the capacity over the long term to serve the growing trip demands in the corridor. (0131, 0131-T –7)

Response: *The commenter's first statement reflects data shown in Table 10.1-3 of the Draft EIS. This table presents the capacity provided by each alternative at the Wiehle Avenue Station, not projected passenger demand.*

Although the capacity provided by Metrorail at the Wiehle Avenue Station reflects the capacity provided through the whole corridor (9,600 passenger per hour), this was not true for the BRT Alternative. Because not all of the "routes" proposed in the BRT operating plan included a stop at Wiehle Avenue, the capacity shown for this station was lower than the capacity provided by the BRT Alternative throughout the corridor. Overall, the BRT Alternative provided for 80 buses in the peak hour in the peak direction. With a vehicle capacity of 61 passengers, this volume of service resulted in a capacity of 4,880 passengers per hour for BRT.

Metrorail as defined in the Dulles Corridor does not have the ability to carry 50,000 to 60,000 passengers per hour. As noted above, it would have a maximum capacity of 9,600 passengers per hour.

Public Comment: Bus service, even if equal to rail service in all respects, would attract only seventy (70) percent of the rail passengers that rail service would, according to Transportation Research Board Special Report 1221 of 1989. A more recent TRB report by Professor Gregory L. Thompson found in an analysis of the 1990 US Census in Sacramento's suburbs that electric rail service attracted sixty to seventy (60-70) percent more riders than equal bus service would. These are not theoretical computerized projections. These are mathematical measurements of the real world. (0013, 0013-L –9)

Response: *Metrorail does provide many advantages over bus service, including higher passenger capacity and higher operating speeds. These advantages were reflected in the higher estimated ridership for the Metrorail Alternative.*

Public Comment: The Dulles Rail Line should be very similar to BART. Each bus driver can move only 80 passengers maximum comfortably, but a single MetroRail operator can move 720. If buses have their own right-of-way and stations, far more bus labor will required for maintenance and staffing. (0013, 0013-L –12)

Response: *It was correct to comment that BRT would have required more drivers to provide the same level of capacity that a single Metrorail train could provide but there are other operating costs associated with Metrorail, including track maintenance, Metrorail vehicle maintenance, and traction power that were not associated with BRT. Total annual operating costs for each alternative were outlined in Table 6.3 –12 of the Draft EIS. Total operating costs were considered in the selection of the Locally Preferred Alternative.*

Concern for Costs Associated with Metrorail

Public Comment: If metrorail costs eight to 10 times more, is metrorail really worth $2.8 billion to $3 billion more? What are the advantages that would possibly make that the case? (0138, 0169-T –2)

Public Comment: What is it about metrorail that justifies doubling the Dulles road tolls starting next year, increasing the BPOL tax and the sales tax, and imposing a new special tax on commercial office and rental apartments? (0138, 0241-T –4)

Public Comment: METRO has been an unmitigated failure, costing 500% of its estimate to build and running an ever-growing operating deficit every year, both totally different than what the public was told when it was proposed. This is typical of urban mass transit projects. Why would the Dulles Corridor effort be any different? (0299, 0299-E –1)

Public Comment: What is it about metrorail that justifies spending $3 billion more than the BRT costs? (0138, 0241-T –2)

> ***Response:*** *As outlined in Chapter 10 of the Draft EIS, Metrorail had several benefits relative to BRT. In general, Metrorail provided greater improvements in transportation service, greater increases in transit ridership, more support for future development, and it would have better served diverse populations. Specifically, Metrorail would have had the highest ridership, highest number of new riders, and highest corridor transit mode share among the Build Alternatives. Metrorail was the most time competitive with automobiles for trips within the corridor. For these trips, as well as trips to and from the corridor, Metrorail required the fewest number of transfers. Metrorail provided the greatest increase in person-capacity in the corridor. Metrorail also provided the greatest benefits for the Orange Line, in terms of relieving overcrowding on the Vienna service.*
>
> *In addition, Metrorail supported comprehensive plans in Tysons Corner better than BRT, and allowed for higher growth in station areas throughout the corridor. Metrorail also served minority populations in the Tysons Corner area better than BRT.*
>
> *The advantages of BRT relative to Metrorail included improvements in corridor transit service at an earlier date, fewer impacts on the natural environment, fewer noise and visual impacts, lower traffic impacts in the vicinity of stations (though still higher than the No-Build), lower costs, and higher cost effectiveness (while Metrorail attracted more riders than BRT overall, the BRT Alternative cost much less than the Metrorail Alternative to build; therefore, the cost effectiveness for the BRT Alternative was lower). The final summary of the relative benefits and impacts of each alternative were outlined in Table 10.2-1 in the Draft EIS.*
>
> *The decision-makers considered these factors in their selection of the Metrorail Build Alternative as the Locally Preferred Alternative. Concurrently, the BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Ridership Forecasts

Public Comment: ACTION REQUESTED

1. Calculate new riders as someone who is new to using transit, not someone who used the Orange Line or a bus before.
2. Don't count rail riders as two trips if the person arrive by bus.
3. Explain why there are 11,000 fewer boardings at Vienna, Dunn Loring and East Falls Church in 2025 with Dulles rail over the base case (no rail).
4. Use average speeds to determine ridership and ride times, not "permitted attainable speeds." Provide station-to-station travel times for ALL stations, including BRT. A matrix would be helpful.
5. Do any ridership numbers include passengers who shifted from bus to rail?
6. How much of the regionally approved forecast riders (Table 22-2) is from outside the corridor?
7. Why do the total trips differ from table 22-1? What's the difference between riders and boardings? (0112, 0462-L –30)

Public Comment: How much of the regionally approved forecast riders (Table 22-2) is from outside the corridor? (0112, 0382-L –20)

Public Comment: Why do the total trips differ from Table 22-1? What's the difference between riders and boardings? (0112, 0382-L –21)

> ***Response****: The "new riders" information contained in Table 6.3-8 of the Draft EIS reflected totally new transit trips (rail and bus) and did not count people shifting from the Orange Line or other transit modes. They also did not double count people who started their trip on bus and then transferred to Metrorail or BRT. The 11,000 fewer boardings at Orange Line stations reflected the fact that riders living in the Dulles Corridor would board in the corridor rather than driving to an Orange Line Station. Total travel time (which translates into an average speed), not permitted attainable speeds, was used to determine ridership. Station-to-station travel times were included in the Transit Operations and Maintenance Plan (June 2002). Ridership estimates showed that approximately 27,000 rail trips would have been attracted into the corridor from outside the corridor under Metrorail Alignment T6 (the selected LPA). The numbers in Table 22-1 reflected new transit riders on a regional basis. The numbers in Table 22-2 referred to trips in Tysons, Reston, and Herndon. Boardings referred to a specific boarding at a rail station. A trip included all of the legs of a trip, including transfers from bus to rail.*

Public Comment: Only 32,700 of the 71,900 weekday passengers are estimated to be "new" passengers so the difference will be Orange Line passengers and bus riders shifting over to the Dulles Line. This will make more room for Orange Line passengers. In 2002, from 6:45am to 8:45am and from 4:15pm to 6:15pm, the Orange Line moves 164 cars in the prevailing direction, with proper space for 20,000 passengers in each peak period. With Dulles Rail in 2010, there should be 242 cars in the peak two hours, with space for 29,500 passengers. (0013, 0013-L –31)

> ***Response:*** *It was anticipated that passengers from the Dulles Corridor that now drive to Vienna or Dunn Loring to access Metrorail service would board in the Dulles Corridor, thus alleviating crowding on the Orange Line from Vienna. This shift to the Dulles Line was reflected in the car loadings on the Orange Line under the No-Build versus the Metrorail Alternative, as shown in Table 6.3-6 of the Draft EIS. Loadings on the Orange Line decreased for each of the Metrorail alignment options relative to the No-Build Alternative.*
>
> *Existing peak hour, peak direction service on the Orange Line was comprised of a mix of 4 and 6 car trains on two different services (Vienna and 'Tripper' services). Combined, these two services currently provide peak hour passenger carrying capacity of 12,000 based on six minute headways and WMATA's loading standard of 120 passengers per car. This capacity would have increased to 19,200 in 2010 based on an increase in train length (but no change in service frequencies), as analyzed in the Draft EIS.*

Public Comment: With 32,700 "new" passengers, it is likely that only 5,750 will be in the peak two hours, so there should be fewer standees with Dulles Rail than without it. Some Reston, Herndon, and Loudoun commuters who now drive to Vienna or West Falls Church to park will use the Dulles line making room for more new passengers on the Orange Line. (0013, 0013-L –32)

> ***Response:*** *For the Draft EIS, the Project Team did not estimate ridership in the peak two hours. However, based on available data, it was anticipated that passengers from the Dulles Corridor that drive to Vienna or Dunn Loring to access Metrorail service would have boarded in the Dulles Corridor, thus alleviating crowding on the Orange Line from Vienna. This shift to the Dulles Line was reflected in the car loadings on the Orange Line under the No-Build versus the Metrorail Alternative, as shown in Table 6.3-6 on page 6-46 of the Draft EIS. Loadings went down on the Orange Line for each of the Metrorail alignment options relative to the No-Build Alternative, as analyzed in the Draft EIS.*

Public Comment: Mid-day, the Orange Line service will be doubled from East Falls Church east, and the number of cars will increase by 33 percent on busy days and 100 percent on lights days when four-car trains are used. This will be good for every one. As ridership continues to grow in the more distant

years, more cars and more service will be needed, but experience will tell us how much. The capacity will be there, within realistic limits. (0013, 0013-L –33)

> ***Response:*** *Orange Line service will increase under the LPA during the mid-day, east of East Falls Church. Currently mid-day service consists of trains from Vienna running every 12 minutes. Since the Metrorail Alternative has been selected as the LPA, a 12 minute mid-day Dulles service will be added, thus resulting in a combined six minute frequency east of East Falls Church. Future mid-day train lengths on both services will be 4 cars, with the exception of the Vienna-New Carrollton Orange Line in the summer, which will have a mix of 4 and 6 car trains..*

Public Comment: Enough Trains and Seating: During rush-hour on the west end of the Orange Line, if you don't get on the train at Vienna or Dunn Loring stations, you will not ever, ever get a seat. Imagine that there are people who travel the Metro to places between West Falls Church and Farragut West who have never got to sit down going to work or going home. I bet they are looking for an alternative or anything that includes sitting down. (0108, 0108-E –3)

> ***Response:*** *It is anticipated that passengers from the Dulles Corridor that now drive to Vienna or Dunn Loring to access Metrorail service will now board in the Dulles Corridor, thus alleviating crowding on the Orange Line from Vienna. This shift to the Dulles Line was reflected in the car loadings on the Orange Line under the No-Build Alternative versus the Metrorail Alternative, as shown in Table 6.3-6 of the Draft EIS.*

Public Comment: I am looking for ridership estimates for any of the modes? Can you provide those estimates to me by station as well as full length of each line? (0112, 0112-E –1)

> ***Response:*** *Passenger boardings by station or stop for each of the Build Alternatives were included in the Draft EIS in Table 6.3-10. More detailed ridership data was available in the Travel Demand Forecasting Methodology and Results Technical Report Appendix (June 2002). These boardings by station have been replaced by the ridership forecasts of the Wiehle Avenue Extension and Full LPA presented in Section 6.1 of the Final EIS.*

Public Comment: The evaluation of T4 identifies several disadvantages that either appear to be incorrect or can be mitigated. The draft EIS forecasts transit ridership for T4 that is less than the other rail alignments. This forecast is inconsistent with the other data presented in the draft EIS that shows T4 brings transit to the greatest number of residents and employees. The ridership projections are artificially depressed by assuming the one way loop alignment will prevent huge numbers of potential riders from choosing to use transit. (0084, 0084-L –3)

Public Comment: The evaluation of T4 identifies several disadvantages that either appear to be incorrect to can be mitigated. The draft EIS forecast transit ridership for T4 that is less than the other rail alignments. This forecast is inconsistent with the other data presented in the draft EIS that shows T4 brings transit to the greatest number of residents and employees. The ridership projections are artificially depressed by assuming the one-way loop alignment will prevent huge numbers of potential riders from choosing to use transit. The Metro system, like most large transit systems, depends on line transfers. Riders from suburban locations are accustomed to transferring lines to get to their destination. The effect of the additional transfer on one leg of rider's round trip is overstated in the ridership forecasts. Based on the significant difference in station area population and employment, the ridership should be much greater for Alignment T4. Regardless of the effect on longer transit trips, no other alignment creates any internal transit system within and through Tysons Corner, which T4 would. This will also serve to increase ridership. (0084, 0458-E –3)

> ***Response****: For the Draft EIS, the demand forecasting model used to estimate ridership for each of the Metrorail alignments took into account a number of factors including overall trip time (including access to the station), station proximity to key employment concentrations, station proximity to residential concentrations, and ease of station access for pedestrians, autos, buses, and other modes. The same model algorithms and procedures were applied to each alternative in*

order to ensure consistent results. It should be noted that transfers do carry a penalty in calculating trip times. This is because surveys have shown that riders perceive wait times for transfers to be longer than the wait times actually are. Because of this people avoid transfers and will often not make a trip by transit if a transfer is required. This transfer penalty is reflected in the lower ridership numbers associated with Alignment T4. As an example, if Alignment T4 had been part of the selected LPA, anybody wishing to go east who boards at Tysons Central A or Tysons Central B under T4 would have first gone west to the Tysons West station, where they would then have transferred to a westbound train. This added time to the overall trip and included the transfer penalty as well. The same held true for eastbound passengers who wished to go to Tysons Central A or Tysons Central B. Finally anybody making a trip to Tysons from the east and wished to get to Tysons Central C or Tysons Central D (the commercial core of Tysons) would have stayed on the train through Tysons and then transferred at Tysons West for an eastbound trip.

A more detailed description of the demand-forecasting model has been available in the Travel Demand Forecasting Methodology and Results Technical Report (June 2002).

Public Comment: Given the proposed level of improvement afforded by any of the rail alternatives, it's inconceivable to me that the number of new riders in this corridor is as low as claimed in the report and it's impossible to ascertain the validity of these projections with the background information presented. Obviously, the number of new riders is a critical consideration as the cost per new rider is one of the important evaluation factors FTA presently uses to compare projects across the country which are competing for a limited amount of federal funding, a limited amount that's very likely to become even more limited in the future. (0387, 0387-L –8)

***Response**: The methodology for completing the ridership estimates for the Draft EIS was outlined in detail in the Travel Demand Forecasting Methodology and Results Technical Report (June 2002). The NVMISM model used for the Project ridership projections was an adaptation of the Metropolitan Washington Council of Governments model used to estimate regional travel flows and transportation demand. FTA reviewed the forecasting methodology used in the Draft EIS and gave its approval. Additional modifications requested by FTA have been incorporated into the model runs for the Final EIS.*

Public Comment: One also has to question the figure of 31-33,000 new boardings on rail given an anomaly in the boardings data provided in "Travel Demand Forecasting Methodology and Results - Appendix." One of the tables, "Rail/BRT Station Activity: 2025 Base" shows the following total boardings without Dulles Rail, and with the highest ridership projected alternative for Dulles Rail (Alternative T6): Why would there be about 11,000 fewer boardings at the Vienna, Dunn Loring and West Falls Church Orange Line stations in 2025 when Dulles Rail is factored in? (See Exhibit 4) WMATA and VDRPT need to explain this because there are also dropoffs in numbers for other Dulles Rail alternatives. Perhaps one can assume that the reason there are fewer boardings at these three stations is because these folks are using Dulles Rail instead, leading to this question - how much of the boardings you are projecting for Dulles Rail are actually diversions from the Orange Line? It would seem from this phenomena that 1/3 of the boardings are coming off the Orange Line. Obviously, commuters who previously had to drive to Vienna, Dunn Loring or West Falls Church can use the Dulles Rail line instead. But there are no similar data for BRT, so don't know if BRT draws people off the Orange Line. (0112, 0462-L –27)

Public Comment: Why is there a drop in daily boardings in 2025 at the Vienna, Dunn Loring, and West Falls Church stations? I counted about 11,000 fewer boardings at these stations in 2025. Why? Are these boardings folks who would use Dulles Rail instead of the Orange Line? (0112, 0382-L –18)

***Response**: The Vienna, Dunn Loring, and West Falls Church stations are currently the point of access to the Metrorail system for riders from the Dulles Corridor. Once the Metrorail Extension is implemented, Dulles Corridor riders will no longer have to access one of these stations in order to utilize Metrorail, since there will be a station closer to home. This explains the drop in boardings at these stations.*

Data on station boardings under each of the BRT alignment options, versus the No-Build Alternative, were included in the Travel Demand Forecasting Methodology and Results Technical Report Appendix (June 2002). These data showed that there would have been some diversion from the Orange Line to BRT stations, though the shift would not have been as significant as will occur under the Metrorail Extension.

Public Comment: More details on the development of the ridership projections are required. It's not clear how the ridership projections for the Tysons Corner stations, or any of the other stations for that matter, were developed. More information is needed on the service areas assumed for each station, the level of development assumed for each station service area, transit and other shuttle systems feeding the station (particularly in the Tysons Corner area) and especially important, how the number of new riders was determined. (0387, 0387-L –6)

***Response**: The methodology for completing the ridership estimates in the Draft EIS was outlined in detail in the Travel Demand Forecasting Methodology and Results Technical Report, (June 2002). The model used for the project ridership projections was an adaptation of the Metropolitan Washington Council of Governments model used to estimate regional travel flows and transportation demand (the model is adapted from the regionally focused model to one which is more corridor focused). Regarding development levels, the travel demand forecasts in the Draft EIS were based on the Metropolitan Washington Council of Governments' Round 6.2 Cooperative Land Use Forecasts. For the Final EIS, the Round is 6.3. These Rounds forecast represent the regionally adopted population and employment forecasts through 2025, for the metropolitan Washington area, including Fairfax and Loudoun County. By federal regulation, such regionally approved land use forecasts must be used in the travel demand analysis of each alternative studied in an EIS. The feeder bus system for each Build Alternative in the Draft EIS was described in great detail in the Transit Operations and Maintenance Plan Technical Report (June 2002).*

Public Comment: What is the projected increase in the number of people expected to come into the corridor each day as the result of rail being constructed and what percentage of these are expected to use rail or other mass transit? (0454, 0454-E –5)

***Response**: In the Draft EIS, total person trips into the corridor were not anticipated to change significantly under any of the Build Alternatives. Rail trips into the corridor from outside the corridor (this does not include intra-corridor trips) would increase by nearly 27,000 with the Metrorail Alignment T6, which has been selected as the LPA). This data was included in the Production/Attraction tables in the Travel Demand Forecasting and Methodology Results Appendix, June 2002.*

Public Comment: We also encourage you to reexamine the DEIS evaluation of T4, which we believe draws some conclusions that may not be entirely justified. The DEIS forecasts lower transit ridership for T4 than for the other rail alignments, contradicting other data in the DEIS showing that T4 provides Metro access to a larger number of residents and employees. The DEIS projects the one-way loop alignment would decrease ridership by discouraging a large number of potential riders. We contend, however, that this has been overstated and that the effect on ridership of the additional transfer on one portion of a round trip would be insignificant. (0455, 0455-L –2)

Public Comment: Regardless of the effect on longer transit trips, no other alignment creates any internal transit system within and through Tysons Corner, there we assert that T4 would greatly increase ridership. (0455, 0455-L –3)

Public Comment: The Metro system, like most large transit systems depends on line transfers. Riders from suburban locations are accustomed to transferring lines to get to their destination. The effect of the additional transfer on one leg of a rider's round trip is overstated in the ridership forecasts. Based on the significant difference in station area population and employment, the ridership should be much greater for alignment T4. Regardless of the effect on longer transit trips, no other alignment creates any internal

transit system within and through Tysons Corner, which T4 would. This will also serve to increase ridership. (0084, 0084-L –4)

***Response**: The demand forecasting model used to estimate ridership in the Draft EIS for each of the Metrorail alignment options took into account a number of factors when producing ridership estimates. These factors included overall trip time (including access to the station), station proximity to key employment concentrations, station proximity to residential concentrations, and ease of station access for pedestrians, autos, buses, and other modes. The same model algorithms and procedures were applied to each alternative in order to ensure consistent results. It should be noted that transfers did carry a penalty in calculating trip times. This was because surveys have shown that riders perceive wait times for transfers to be longer than the wait times actually are. Because of this people avoid transfers and will often not make a trip by transit if a transfer is required. This transfer penalty was reflected in the lower ridership numbers associated with Alignment T4. As an example, if Alignment T4 had been the selected LPA, anybody wishing to go east who would have boarded at Tysons Central A or Tysons Central B under T4 would have gone west to the Tysons West station, where they would have then transferred to a westbound train. This added time to the overall trip and included the transfer penalty as well. The same held true for eastbound passengers who would have gone to Tysons Central A or Tysons Central B. Finally anybody making a trip to Tysons from the east and wished to get to Tysons Central C or Tysons Central D (the commercial core of Tysons) would have stayed on the train through Tysons and then transferred at Tysons West for an eastbound trip.*

A more detailed description of the demand-forecasting model was available in the Travel Demand Forecasting Methodology and Results Draft Technical Report (June 2002).

Commuting Costs

Public Comment: Will people use BRT? In Maryland, Montgomery County recently made a number if the County's bus routes free to users. Bus ridership increased about 15 percent during that time, which isn't too bad. It says a lot about the sensitivity of area workers about the costs of commuting, and it also shows what the probable reaction will be from the low to moderate-income workers who have to use the Toll Road if the tolls are increased. (0183, 0183-T-7)

***Response:** As shown in Table 6.3-8 in the Draft EIS, between 47,100 and 49,400 people would have ridden BRT per day in 2025, depending on the BRT alignment option. The fares charged to ride BRT would have been consistent with those charged to ride on the Metrorail system.*

Mode Transfers

Public Comment: Most of the travel is to and from Arlington and Washington, D.C. which requires a physical transfer between bus and MetroRail at West Falls Church. This inhibits transit use but would become a bottleneck if use expanded too much as the projected transit travel is too great for such a transfer. The crowding, congestion and delay would severely inhibit use. (0013, 0013-L –6)

***Response:** Transfers between modes (i.e. bus to rail) would increase rider inconvenience and thus could inhibit transit ridership. This transfer penalty was incorporated into the demand forecasting model used on the project. The bus transfer facility on the north side of the West Falls Church station has been near capacity so additional bus service into the facility could, at some point, result in degraded operations.*

Public Comment: While what I call Tysons rail can be appropriate if accompanied by walkability to Tysons, there is not much hope of what I call Western rail to have a good cost-benefit ratio. In fact, I cannot believe that anyone who seriously proposes the Reston rail segment has both ridden transit regularly and looked at the numbers. According to the 1997 Major Investment Study, a mere 1 percent - that's 1 percent -- of the riders of the combined Tysons-Western rail system would be going to or from Dulles airport itself. In contrast, 50 percent of the users of the combined Tysons-Western rail system

would be residents living west of Tysons, commuting all the way into Arlington and D.C. These users are much better served by existing transfer-free, door-to-door express buses. (0134, 0134-T –7)

> ***Response:*** *One of the primary advantages of the Metrorail Alternative in the Draft EIS versus the existing express service was that trips within the Dulles Corridor would be much better served by transit. As noted, the existing express service does a good job of serving peak direction trips into the region's core, including Arlington, Alexandria, and downtown Washington, D.C. However, the existing bus service does not serve intra-corridor trips well. This was proven by the increase in intra-corridor transit mode share versus the No-Build Alternative. This data was contained in the Travel Demand Forecasting Methodology and Results Technical Report Appendix (June 2002). In all instances except one, transit mode share for intra-corridor trips increased over the No-Build. This increase reflected the much higher quality service available to passengers wishing to make intra-corridor trips (the one Origin/Destination pair where mode share falls is for trips within Tysons. This reflected the fact that some bus service serving intra-Tysons trips is modified as part of the Metrorail Alternative in the Draft EIS).*
>
> *In addition, express bus trips might have still required a transfer to Metrorail because there were multiple destinations within the core. It would not be possible to serve all of these multiple destinations with dedicated express service. The Metrorail system is required for the distribution of passengers to multiple destinations.*

Public Comment: As for commuting to Herndon, Reston, places of business, only 12 percent of the users of combined Tysons-Western rail system would be doing that, or about 6000 people. The number is so low, of course, because due to the highway median station placement and unwalkable sprawl development, the people would have to take shuttle or circulator buses after their metrorail rides. More time-consuming, disruptive transfers. (0134, 0134-T –9)

> ***Response:*** *Total transit trips from areas outside of Reston and Herndon to these areas were calculated by the demand forecasting model for the Draft EIS and were included in the Travel Demand Forecasting Methodology and Results Technical Report Appendix (June 2002). The data showed (for Metrorail Alignment T6 and T9 of the Draft EIS) that the number of transit trip going to Reston is 8,767 on a daily basis. The number of trips going to Herndon on a daily basis is 6,747.*

Public Comment: Most of you have probably seen the articles about how much we love our cars. The presumption that commuters will take buses to Metro is unsupported by either evidence or current practice. They're going to use their cars. (0150, 0150-T –5)

> ***Response:*** *Mode of arrival at each station is one of the pieces of data that is generated by the travel demand forecasting model. The model results do show that driving to a station will be the predominant mode of arrival for stations that do have parking, but the data also show that large numbers of passengers will be arriving via both bus and walking. For instance, based on analyses in support of the Draft EIS, 59 percent of passengers are projected to arrive at the Herndon-Monroe station by auto, but 19% are projected to arrive by bus. At Route 28, the percentages are 18 percent and 44 percent respectively, while at Wiehle Avenue the percentages are 24 percent and 45 percent respectively with the selected LPA).*

Characteristics of Express Bus Service

Public Comment: During the FEIS and rail PE process we need hard work on…Many BRT characteristics should be incorporated in an improved express bus system (pre-payment of fares, rapid boarding of buses at park and ride facilities, provision of real-time bus arrival information, accurate schedules at all stops, improvements in neighborhood service, much improved timed-transfer services, fine-tuning of service to fit changing demand, etc.). (0173, 0213-M –7)

***Response**: The express bus services currently running in the corridor are the responsibility of Fairfax and Loudoun counties, respectively. The Project Team has recommended that the existing transit service provided by Fairfax and Loudoun Counties be further enhanced beyond the bus rapid transit elements that have already been added. Prior to the opening of LPA Phase 1, additional bus rapid transit elements—including the expansion of the Herndon-Monroe park-and-ride lot (site of the future Herndon-Monroe Metrorail Station), ITS enhancements, and facility improvements—should be advanced.*

Mode Shift

Public Comment: Are there any shifts from buses to rail in the forecasted ridership? (0112, 0382-L –19)

Public Comment: How many other Dulles Rail passengers are diverted from Metrobus? It is reasonable to assume this. A 1996 COG study found that of 600,000 Metrorail riders, about 450,000 of them were actually previous bus riders. Hence, most of Metro's ridership is not "new people to transit," but people whose bus service was cut out when rail was extended to various locations. So, how many of your 30,000 to 33,000 new riders/trips are people who would have used Metrobus or the Fairfax Connector service? It is reasonable to assume that besides the drift of passengers from the Orange Line to the Dulles line, is it not possible that some of those 30,000-33,000 trips/boardings in 2025 are former bus users? (0112, 0462-L –28)

Public Comment: What percent of automobile trips will be attracted to each transit alternative for each of the areas? (0147, 0459-L –28)

***Response**: Yes. As presented in the Draft EIS, many of the trips now made by bus in the corridor would shift over to BRT or Metrorail. An important set of these trips would be those riders currently using Fairfax Connector express services to West Falls Church Station. Since the Wiehle Avenue Extension has been identified as the first phase of the Full LPA, this service would be provided by Corridor express bus service that will feed into the Wiehle Avenue Station. The last row in Table 6.1-3 of the Final EIS presents new transit trips, not trips that were attracted from another transit mode.*

Data on the specific number of trips once made by automobile that would shift to transit was not calculated as part of the Draft or Final EIS. However, a very good proxy for this is shown in Table 6.1-5 of the Final EIS. This table shows the changes in mode share (the portion of all corridor trips that are completed by transit). The data in this table show that the Full LPA will increase the transit mode share by approximately 4 percent in Tysons Corner, approximately 3 percent in the Reston area, approximately 3.5 percent in the Herndon/Dulles area, and 1. percent in eastern Loudoun County. These overall increases in transit mode share reflect people shifting from their automobiles to transit.

Need for Clarification of "New Riders" Versus "New Trips"

Public Comment: WMATA and VDRPT also express "new trips" and "new riders" interchangeably. They do not explain why there are 11,000 fewer boardings on three Orange Line stations in 2025 when Dulles Rail is factored in - leading to an assumption that of 53,000 estimated boardings on Dulles rail, 11,000 are not new boardings. WMATA and VDRPT also do not explain if any of the new riders are in fact people new to transit, or just people who formerly used buses. (0112, 0462-L –6)

Public Comment: But it is also difficult to distinguish "new riders" from "new trips" and "boardings" for Metrorail alternatives (T1, T4, T6, T9). It appears the terms new trips and new riders are used interchangeably when in fact new riders refer not to new individuals using the facility but new trips. Under this definition a new transit rider traveling to work and back is counted as two new riders. This is very misleading. (See Vol I Chap 6.3.4.1, Tables 6.3-8 and 6.3-9) For argument purposes, I will work with the

"new riders" numbers, which range from 37,300 to 38,500, or "total boardings" in 2025, which ranges from 31,000 to 33,000. (0112, 0462-L –23)

Public Comment: Lack of Definitive New Rider Estimates. The DEIS fails to provide a count of the number of new individuals estimated to make use of Dulles corridor transit. Data presented as "new riders" is actually the number of new trips. Given that most new riders will make multiple trips per day, DEIS estimates significantly overstate the actual number of new persons likely to use this service. The general public needs a more definitive estimate of actual number of new persons using this system. (0446, 0446-E –4)

> ***Response****: Table 6.3-8 of the Draft EIS did use the terms new riders and new trips interchangeably. The new riders column in the table did not refer to a new person or individual now taking transit (a person would presumably make two trips per day) because of implementation of the BRT or Metrorail Alternative. Rather the column referred to the new number of total trips by riders resulting from implementation of either Metrorail or BRT. The Project Team did not estimate new riders because the number of trips, or boardings, is of greatest relevance for station area planning, operations planning, and the Federal New Starts funding process. The fewer boardings at Orange Line stations reflected the fact that Dulles Corridor riders now boarding on the Orange Line would access rail at Dulles Corridor stations in the future. This shift of existing riders was not reflected in the new riders (or new trips, as explained above) column in Table 6.3-9 of the Draft EIS. The numbers in this column reflected entirely new transit trips.*

Model Forecasting Programs

Public Comment: COG version 2 is now available and validated. The project Team should rerun numbers using Version 2, and compare the results with the NVMISM model. (0112 10-1)

> ***Response:*** *For the analysis in support of Final EIS and New Starts criteria, the Project Team chose to retain the NVMISM travel demand forecasting model of the Draft EIS.*

Service Qualities

Public Comment: Express rail service that would bypass Tysons Corner was properly dismissed, but it was not made sufficiently clear that express service would destroy service quality for everyone while increasing costs. Noted that headway degradation and overloaded local versus express trains due to demand for travel to Tysons. Also noted “bunching” effect of differences in travel times for local versus express service. (0013 10-1)

> ***Response****: In response to the above requests, the Project Team evaluated the suggested alternative using the same social, environmental, economic, and transportation factors used for the evaluation of alternatives documented in the* Final Alternatives Analysis Report *(May 2001). This new alternative, called Alignment T12, was not recommended for further consideration in the Dulles Corridor Rapid Transit Project. The reasons for this recommendation are summarized below.*
>
> *Alignment T12 would have numerous deficiencies relative to the alternatives previously considered in the Final EIS. These deficiencies include increased costs, substantial impacts associated with shifting roadways to accommodate the alignment, reduced ridership, and operational complications.*
>
> *The full evaluation for Alignment T12 is documented in a technical memorandum, now part of the Final Alternatives Analysis Report Addendum (October 2004).*

B. Supplemental Draft EIS Comments

Regional Agency Comments

Coordination with Dulles Airport Layout Plan

Regional Comment: Regarding issues to be resolved (page 10-5), it should be noted that the current Airport Layout Plan (ALP) for IAD dated February 2003 does include a rail alignment and a proposed rail yard on Airport property. Although the rail alignment shown on the ALP in the area northeast of the Main Terminal differs somewhat from that shown in the SDEIS, the Airports Authority is committed to working with the Virginia Department of Rail and Public Transportation to facilitate the FAA approvals necessary for the project.
0131 0166-6

> ***Response:*** *The current alignment of the Full LPA was included in an update to the Dulles International Airport ALP that was approved by FAA in March 2004.*

Public Comments

High Rail Cost

Public Comment: Rail simply costs too much and does too little.
0061 0069-15

> ***Response:*** *Comment noted. Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in selecting the LPA.*

No Build is Not Adequate

Public Comment: 4.4 buses will be needed in each direction to carry what Dulles Rail would have carried. Since it is not possible to build 0.4 lane, fire lanes will be necessary, each way. Ten lanes from Washington DC to Herndon VA would cost very roughly $11 billion, over five times as much as Dulles Rail. People need to know. No build is not a choice unless we want to tolerate gridlock, economic stagnation or decline, air pollution, loss of federal financial aid we paid for and intolerable living conditions.
0054 0055-5

> ***Response:*** *Comment noted. Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in selecting the LPA.*

Comments to FTA

Public Comment: Defective DEIS: To the extent the SDEIS relies on the DEIS, we incorporate our comments in our letter to The Honorable Jennifer Dorn, Administrator, Federal Transit Administration, dated Nov. 4, 2003, [Re: New Starts Program: Pending Va. DRPT/WMATA Application for Authorization Preliminary Engineering Dulles Corridor Rapid Transit Project] with attachments.
0072 0150-2

> ***Response:*** *Comment noted. Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in selecting the LPA.*

11.0 COMMENTS, CONSULTATIONS, AND COORDINATION

11.1 Public Involvement

A. Draft EIS Comments

State Agency Comments

Dulles Corridor Steering Committee

State Comment: Pg. 11.16. - Dulles Corridor Steering Committee is "composed of the executives from each of the project's funding partners". Suggest adding that the committee is chaired by a member of Virginia's Commonwealth Transportation Board (CTB), representing VDOT and VDRPT. (0421, 0421-A – 22)

> ***Response****: The following sentence has been added to Section 11.2 of the Final EIS: 'The CTB representative also represents the Virginia Department of Transportation on the Steering Committee.'*

Regional Agency Comments

Need to Identify Best BRT Station/Stop Location

Regional Comment: The Airports Authority has not yet determined the best location for a BRT stop/station at the Terminal Building. Though the general plans call for three bus parking positions at the easternmost end of the commercial vehicle curb, the Airports Authority's desire is to further study the best location for a BRT facility if a BRT system becomes a part of the locally preferred alternative. (0440, 0440-A –17)

> ***Response****: The BRT Alternative was eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Public Comments

Opportunities for Public Input

Public Comment: Perhaps most disconcerting to TMS is the fact that throughout the more than 2 years WMATA was drafting the DEIS, WMATA never approached TMS to express an interest in acquiring or accessing TMS's property. In fact, WMATA never inquired about the effect its plans would have on TMS or the fact the BRT bridge and 2,000-car parking garage could shut down Tysons Self Storage and segregate the property from its neighbors and access to Route 7. It was not until earlier this year when the owners of TMS discovered an anonymous real estate appraiser hired by WMATA to investigate the Tysons Self Storage facility, that TMS realized its property was affected by the Tysons West station and associated facilities. More importantly, only after TMS called WMATA officials to complain about the appraiser and request a meeting did WMATA meet with TMS to advise them of WMATA's plans. That meeting occurred on March 28, 2002. For the first time, WMATA indicated that the DEIS would include designs for an aerial bridge across the TMS Property. By contrast, WMATA has been meeting with affected landowners, community stakeholders and many other citizens for years to discuss the various plans an alternatives; these meetings have even occurred with owners of properties not directly affected. When TMS expressed concerns to WMATA officials about the lack of notice and the impacts of the bridge, WMATA officials encouraged TMS to use the DEIS hearings as the forum to air its concerns; WMATA was not going to amend the DEIS at such a late date. Further, following release of the DEIS and TMS' inquires about shifting the BRT bus bridge off the TMS Property, WMATA suggested that TMS should supply alternative designs that relocate the bridge to neighboring properties, without debating the

need for its construction. For TMS, that is akin to being asked to select the method of its death, rather than being given the option of seeking a reprieve. As was noted earlier, construction of the BRT bridge, whether wholly on TMS's Property or shared with a neighbor, represents a physical and psychological barrier to the opportunity to create pedestrian-friendly, transit-oriented development, as the County's Comprehensive Plan envisions. (0135, 0391-L –18)

***Response**: We apologize for not meeting with TMS regarding the Tysons Self Storage Facility sooner. The public hearings for the Draft EIS provided an excellent opportunity for TMS to participate in the project and to review and comment on the Draft EIS. The BRT/Metrorail and Phased Implementation Build Alternatives that would have affected TMS were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Public Comment: Who is the FTA rep on the project team? (0112, 0382-L –2)

***Response**: The FTA point of contact is Mr. Brian Glenn, Director, Washington Metropolitan Office. He can be reached at (202) 219-3562.*

Public Comment: The above stated items are only the tip of the iceberg. We [Chathams Ford Drive] would gladly entertain a meeting with you and other officials to further discuss these matters. (0383, 0383- L- 7)

***Response**: The Project Team would be happy to meet with the residents of Chathams Ford Drive. Please call the Project INFO Line at 1-888-566-7245 to schedule a meeting.*

Public Comment: Suggests that many of the project meetings were “secret” and not open to the public. (0486 01)

Public Comment: Opposes the use of on-call consultants rather than public agency employees. Suggests that the project is based on improprieties since DRPT was able to bypass state contracting regulations. (0486 02)

***Response:** The Virginia Department of Rail and Public Transportation (DRPT) is the project sponsor. Its approach to project development entails the following: 1) that DRPT is the program manager, Federal grant applicant and recipient, design/build contracting authority and initial owner of the Project, and 2) that WMATA is DRPT`s technical manager of NEPA process, of preliminary engineering (PE) and of the design/build contract and will be the leaseholder of the Project, its operator and ultimate owner.*

DRPT has received FTA approval and funding to conduct preliminary engineering on the first phase of the Project, the Extension to Wiehle Avenue. All preliminary engineering activities that involve FTA grant management, FTA liaison and FTA project management oversight are the responsibility of DRPT. DRPT has negotiated and executed a Comprehensive Agreement with Dulles Transit Partners, LLC (DTP) to be its preliminary engineering consultant. DTP is a partnership of Bechtel Corporation and Washington Group International. WMATA will assist DRPT in the management of DTP.

For development of the project, DRPT is responsible for right-of-way acquisition, environmental permitting, interagency agreements, utility agreements, final financial plan, funding agreements and coordination with Federal, state, and local agencies.

The method used for scheduling meetings between representatives of the Office And Professional Employees International Union, Local No. 2, AFL-CIO and WMATA management is beyond the scope of the Draft EIS, Supplemental Draft EIS and Final EIS. It is suggested that the Local No. 2 representatives request a briefing through normal WMATA channels.

Public Comment: First some brief history so you will understand our justifiable skepticism: Sham Meetings - when the Dulles Access Road was first constructed, many public meetings were held just as is currently being done. The presenters sounded sympathetic but then proceeded to do exactly what suited them without any significant attention paid to the concerns for the impacted citizenry. For example, the radius of the highway curve running along the north edge of the Lemon Road Civic Association was actually reduced to save money with no regard for the increased noise. The 80-100 feet of trees that were going to be left as a buffer were reduced to 0 feet! (0087, 0087-L –2)

Public Comment: Put aside the political issues swirling around and listen to what the community wants. Give them enough information about both sides of this plan, so commuters and the like, can be informed in an educated manner. (0107, 0107-E –2)

> ***Response:*** *The public comments received at the Public Scoping meetings (July 2000) and Public Information Meetings (January 2001) were considered in the development of the alternatives and in determining the range of issues to be studied in the Draft EIS. All comments received during the public hearings on the Draft EIS and proposed General Plans and on the Supplemental Draft EIS and revised General Plans were considered in the selection and revision of the Locally Preferred Alternative by WMATA's Board of Directors and the Commonwealth Transportation Board. Before and after the hearings and between the hearings there have been extensive public involvement activities.*
>
> *The Final EIS is being circulated to inform decision-makers and the public on the selection of the Metrorail extension as the LPA and on the potential consequences of implementing the proposed extension in the corridor. Overall, the potential adverse impacts of the extension on the human and natural environment are expected to be minor. Coordination with the public, stakeholders, resource agencies, and local governments has confirmed these findings.*
>
> *As the project enters preliminary engineering, any design changes will be monitored and if deemed likely to cause potentially significant effects, additional environmental documentation will be prepared to fully document these effects and measures to mitigate the effects if found to be substantial.*

Public Comment: Requests continued dialogue between design team and communities on project impacts and mitigation throughout the design process.(0388 11-3)

> ***Response:*** *As the NEPA process ends and the preliminary engineering begins, DRPT, the project sponsor, will continue an active community outreach program. It will continue to coordinate with adjacent communities and stakeholders*

Stakeholder Concerns

Public Comment: The Draft EIS refers to stakeholders as those who will experience an impact from one or more of the alignments or station locations. Northwestern clearly is a stakeholder, and should be added to the stakeholder list which appears on page J-6-3. (0461, 0461-E –2)

Public Comment: The Draft EIS does not define the term "stakeholders" as such. However, the Draft EIS refers to stakeholders as those that will experience an impact from one or more of the alignments or stations locations. NADA clearly is a stakeholder. Going forward, NADA requests that you add the Association to the stakeholder list that appears on page J-6-3. (0477, 0477-L –3)

> ***Response****: The Project Team has added you to the list of recipients of the Final EIS. Since you were not originally invited or possibly did not attend the stakeholder meetings of December 2000, you did not appear in the list of attendees in Appendix J-6 of the Draft EIS.*

Public Comment: All of the organizations and groups mentioned in the above recommendations should be brought together in another charrette in the near future to brainstorm ideas for implementation of these

and other related goals and objectives (including those in the DEIS, such as mitigation measures for traffic impacts). Following this charrette, Fairfax County should take the lead in establishing the appropriate implementation mechanisms. (0478, 0484-E –25)

> ***Response****: DRPT, the project sponsor responsible for project development, is willing to attend and/or make presentations at charrettes planned by Fairfax County or others.*

Public Comment: The Board of Directors, and through them, the Ownership, are ready to meet with you or other representatives to further discuss the improvement plans, especially Option T-4. Please continue to maintain contact with The Rotonda through our General Manager, Stephen C. Wright. (0220, 0220-M –2)

> ***Response:*** *Alignment T4 Alternative was eliminated from further consideration after the public and interagency review and comment on the Draft EIS. Nevertheless, DRPT, the project sponsor, remains available to continue coordination efforts with the Rotonda Board of Directors and their General Manager in regards to access to the stations of the selected LPA alignment.*

Coordination with Local Entities

Public Comment: You would certainly - should certainly work with local planners and citizens in defining what alternatives to analyze. This is not planning. It is providing your expertise to assist decision makers on these complex issues. It will constitute integration of land use and transportation planning. Hallelujah. Which is a mandate of the regional plan. And it can be part of the EIS. (0158, 0158-T –4)

Public Comment: It is the sincere hope of our [West Falls Village] Association that the Dulles Corridor Rapid Transit Project means it when it says in the EIS that it will "coordinat(e) with local communities to address outstanding issues related to facility design, potential effects, and mitigation." We look forward to seeing that the final project plans will include the construction of a noise barrier to protect our community so that we will be able to support this project. (0435, 0435-E –6)

> ***Response:*** *The Project Team has coordinated extensively with local government, public agencies, the general public, potentially affected property owners, civic associations, homeowners groups, businesses, and other stakeholders throughout the length of the environmental review process of the Project. DRPT will continue this coordination through preliminary engineering, final design, and construction.*

Comprehensive Agreements Among Stakeholders

Public Comment: We have suggested the following specific steps to DCRTP representatives: The negotiation and completion, as soon as possible, of a form of comprehensive agreement between the Dulles Greenway and the DCRTP sponsors, including WMATA, the Virginia Department of Rail and Public Transit (DRPT), and other sponsors who will be involved in the design, permitting, construction and operation of this project. This Comprehensive Agreement would cover such things as: Reimbursement of the Greenway for expenses incurred by the Greenway in connection with the design, permitting, and construction of the DCRTP. Redesign of the DCRTP to eliminate or reduce impacts on the Greenway outside of the existing median. In a nutshell, make it work within the existing median. Stormwater management ponds, tie breaker stations, transfer power switching stations, and the like should be located on land acquired by the project sponsors, outside the Greenway right of way. If the redesigned project cannot eliminate all impacts of the Greenway other than use of the existing median, the Greenway, as a private property owner, expects to be compensated for any use of its land. The agreement should address detailed construction standards and mitigation measures to ensure that construction is performed at night, off peak hour, and in a way that will minimize the impact on the Greenway's customers. The agreement should address detailed standards for operation and ownership of the DCRTP, to make sure that all additional costs, maintenance expenses, and other impacts of this project are borne by the project and not by private property owners such as the Greenway. (0257, 0268-M –3)

Public Comment: In conclusion, we would like to make it clear that the Dulles Greenway will cooperate in a businesslike manner with WMATA and the DRPT in negotiating a detailed agreement that would address these impacts, but will expect to have all impacts of the project on the greenway addressed and dealt with by the project sponsors. (0257,0257-T –10)

Public Comment: The greenway sent its position statement to WMATA in early June so that everyone involved with the sponsorship and promotion of this project would understand that the greenway had serious concerns. We requested and had a separate meeting several weeks ago at which we further discussed these concerns. We want to reiterate that the greenway's cooperation over and above the existing median cannot be taken for granted. (0257, 0257-T –3)

Public Comment: First, the negotiation and completion of a comprehensive agreement between the Greenway and the project's sponsors, whether WMATA, Department of Rail and Public Transit or others, to cover such things, as redesigning this project to eliminate or eliminate or reduce the impacts of the greenway outside of the existing median. In a nutshell, make it work within the existing median. (0257, 0257-T –4)

Public Comment: The agreement should address detailed construction standards and mitigation measures to ensure that construction is performed at night, off peak hour, and in a way that will minimize the impact on the Greenway's customers. (0257, 0257-T –6)

> ***Response:*** *The Comprehensive Agreement between TRIP II and the State Commission of the Commonwealth of Virginia requires that TRIP II dedicate the median of the Dulles Greenway to rail. As stated by the Project Team in a separate meeting referenced above, this dedication of the median of the Dulles Greenway has attendant effects, some of which TRIP II must bear. These effects will be considered as the DRPT continues its coordination with TRIP II on the LPA's overall effects to this private Toll Road and on the development of a comprehensive agreement for the Metrorail Extension to Route 772. The Project Team can clearly respond that the Project cannot be solely within the existing median and therefore will require the relocation of Greenway lanes at the Route 772 Station, Route 606 Station, and the junction of the revenue tracks with the yard lead tracks.*
>
> *During the construction of the Metrorail Extension, it would be necessary to permanently relocate the lanes on the Dulles Greenway around the Route 606 and Route 772 stations and around the yard leads for the Metrorail Service and Inspection Yard. DRPT and its technical manager, WMATA, will coordinate with TRIP II on the application of best management practices to minimize the disruption of traffic. These practices would be modeled after TRIP II's recent experience during the widening of the Dulles Greenway from four to six lanes. With respect to construction of the Metrorail line, yard leads, and stations in the median of the Greenway, again best management practices would be used for construction methods, access, haul routes, etc., to minimize disruption of traffic. Installation of the three pedestrian bridges over the Dulles Greenway will have minimal impacts, because any lane closures will be during the off-peak hours, when traffic volumes are lowest.*

Compliance with Americans with Disabilities Act

Public Comment: I do appreciate the informative open house that you held. I understand that ADA specifications will be followed to enable access for persons with disabilities under the current ADA requirements. (0259, 0259-T –1)

Public Comment: We need to make sure that the intermodal -- that there is an intermodal transportation system that is accessible for persons with disabilities, its facilities and its vehicles, and that para-transit is provided throughout the corridor, including Loudoun County, and that needs to be taken into account. (0157, 0157-T –4)

Response : *All of the facilities and vehicles of the Metrorail Extension fully comply with the ADA Accessibility Guidelines.*

Public Comment: We also would like to request that you include persons with disabilities at the table when you are making these transit decisions. (0259, 0259-T –5)

Response: *The selection and revision of the Locally Preferred Alternative was made by the Commonwealth Transportation Board and the WMATA Board of Directors. Public input on the alternatives considered and selected was obtained throughout the length of the study process at the Public Scoping Meetings (July 2000), Public Information Meetings (January 2001), the Public Hearings for the Draft EIS (July 2002), and the Public Hearings for the Supplemental Draft EIS (December 2003) as well as many meetings held with community groups, civic associations, stakeholders, businesses, and public agencies. All of these meetings were open to the general public, including members of the public with disabilities. In addition, the facilities and vehicles of the Metrorail Extension fully comply with the ADA Accessibility Guidelines.*

Public Comment: And lastly, Madam Chair, persons with disabilities need to be a part of the process, and they need to be consulted in the design of this process. We stand ready to help you with this and we look forward to providing written comment, but we want to be assured that accessible formats are going to be available. They were not available here tonight, and we only have until August 28th, and I understand that accessible formats might not be readily available at this time. (0157, 0157-T –5)

Response: *In response to this comment at a public hearing on the Draft EIS in July 2002, the Project Team contacted the commenter after learning that the presentation materials were needed in an alternate format. The information requested was mailed to the commenter in several formats and additional help for answering questions was also offered.*

Freedom of Information Act Requests

Public Comment: We request that information collected by the study be available on demand to any interested member of the general public, as if the study were governed by the Freedom of Information Act. (0162, 0162-M –19)

Public Comment: We request that information collected by the study be available pursuant to the Freedom of Information Act. (0184, 0184-T –16)

Response: *DRPT has responded to requests for information under the Virginia Freedom of Information Act. WMATA has responded to requests for information under its Public Access to Records Policy. The Project Team does not administer or respond to requests under the federal Freedom of Information Act. Such requests should be made to the Federal Transit Administration. To view information collected by the study team or obtain copies (for the price of the copies), contact the INFO Line at 888-566-7245.*

Quality of Work

Public Comment: The first thing I'd like to do is thank our leadership here for bringing us to this point. Win, lose or draw, it's been a horrendous task, and I for one appreciate it. (0156, 0156-T –1)

Public Comment: The Sierra Club will be submitting more extensive written comments, but I will conclude by saying we are encouraged by the quality of the work we have seen so far on this project and the professionalism of the various parties involved. We look forward to continuing to work for completion of rail in the Dulles corridor. (0158, 0223-M –6)

Public Comment: I wish to express my thanks for the great presentation this afternoon to Centennial Contractors' staff about the Dulles Corridor Rapid Transit Project. You obviously were well prepared and knew the project intimately. The information you provided was well received and answered many

questions about the impact to Tysons Corner. Every person who attended have provided me positive feedback about the presentation. I hope our feedback was also of benefit. Your efforts are evidence of WMATA's commitment to customer service and your professionalism. Thanks again. (0292, 0292-L –1)

Public Comment: Thank you for once again pointing out by planning such ugly commercial facilities for our property that times have changed and a new development pattern needs to be implemented if we are going to maximize the public benefit from the Dulles Corridor Rapid Transit Project. (0464, 0464-L –7)

Public Comment: On behalf of the Claude Moore Charitable Foundation (CMCF) Trustees, the owners of 600+- acres in Loudoun County, Virginia west of the Dulles Greenway and north of the Loudoun County Parkway, we wish to summarize the comments with regards to the Draft Environmental Impact Statement in the vicinity of the Moorefield Station project. We have appreciated the time provided by your staff and WMATA to provide us overview of the DEIS process in the context of our on-going rezoning application with Loudoun County (ZMAP 2001-0003) for mixed use development at the planned transit node at the Route 772 interchange. (0451, 0451-L –1)

Public Comment: I would like to first say that I think while there have been a -- there is a lot of criticism of the EIS process, I think there is a tremendous amount of good work here, and people have worked very, very hard to make it available to the public, and I commend everyone who is involved for what they have done. If you really cared to track it, you could track it all along the review process. (088, 0172-T –1)

Public Comment: All things considered, though, I think this has been a very positive process, and I would urge the, where we have some questions to answer, let's answer them, but let's get on with the work. Let's build a rail system to Dulles and Loudoun County. (088, 0172-T –11)

Public Comment: I want to start by thanking the panel for indulging me at the last two public hearings for the last two evenings, and I will be brief tonight. But I also want to take a moment to thank you for the very professional manner in which these hearings have been conducted, the support that you have given to the public to understand what the questions are before us, the accommodations, aside from the air conditioning last evening, which no one had planned on. We have had, I think, a very successful series of hearings. Again, my thanks and my compliments to you for that. (0131, 0239-T –1)

Public Comment: I am very pleased with the preliminary design alternatives as shown in the draft Environmental Impact Statement and attachments, and commend those who have contributed to the design effort thus far. (0194, 0194-T –1) (0194, 0216-M –1)

Public Comment: This was great. You have done a wonderful job. Thank you for your time and efforts on behalf of Fairfax County Residents, like myself. (0032, 0032-CC-1)

Public Comment: Excellent exhibit area. (0042, 0042-CC-1)

Response: *Comments noted.*

Public Comment: We request that if the selection of the Locally Preferred Alternative is rail, that this choice be placed on the ballot. For example, we could ask the voters in Fairfax and Loudoun if they wish a permanent 5% property tax surcharge and double the rate on the Access Road in exchange for rail rather than BRT. The largest public works project in history for this area deserves a real up and down popular vote. As a comparison, Seattle is asking its voters to approve a much less expensive project than Amtrak to Dulles, their monorail extension, and is being honest about the cost by coupling a dedicated tax with it as part of the referendum. (0162, 0162-M –23)

Public Comment: We request that money spent beyond this point be done pursuant to the provisions of the Virginia Public Procurement Act, so that we know that all transactions are being done in the open and subject to a competitive process. (0162, 0162-M –21)

Public Comment: We request Public Procurement Act status for this. And we think if the Locally

Preferred Alternative is to be rail, that this be placed on the ballot, as Seattle is doing for a less expensive project, along with a dedicated tax. (0184, 0184-T –19)

> ***Response:*** *All work on the project is subject to procurement procedures of Federal Transit Administration and the Commonwealth of Virginia, including its Public-Private Transportation Act of 1995.*

Public Comment: I need three documents: 1. Page 45 of 67 on Acquisition List; 2. GPN-R-046, Sheet No. 059; and 3.) GPN-A-219-TW, Sheet No. 766 (0044, 0044-CC-1)

> ***Response:*** *The Project Team responded to this request.*

Concerns Regarding the Public Review Period

Public Comment: Additional time needs to be extended for more adequate review of the report. (0150, 0150-T –8)

Public Comment; Comment period should be extended to a true 45-day period. Public meetings in July were the first meaningful public notice of the availability of the Final EIS. (0510 11-1)

Public Comment: Unfortunately, the citizens directly impacted by this potential project have had less than one month to review the thousands of pages of documents that were almost inaccessible. I still haven't been able to read the noise technical report. You told us at a meeting in McLean that you couldn't figure out how to put the EIS documents on the web. If you can't figure that out, how are you going to build this project? (0145, 0145-T –2)

Public Comment: My biggest worry is that we are rushing to get this study through without giving enough time for the community to critically review and to analyze this important document. (0147, 0177-T –5)

Public Comment: First, I believe that this hearing should be continued to a later time, say September or October, because of the short amount of time given most of us to analyze the information presented in the massive documents comprising the draft EIS. (0203, 0203-L –1)

Public Comment: The Hunter Mill Defense League will submit a report prior to the August deadline. Although the Hunter Mill Defense League appreciates the extension of the comment period to August the 28th, we still remain concerned that many citizens will not have sufficient time to review the extensive and complicated EIS reports. (0147, 0177-T –1)

Public Comment: We ask that the review period be extended into the fall. We would like the ability to have our comments be more substantive. It would be nice to have this project gather support based on knowledge rather than the result becoming yet another project to remedy its disruption. The time limitation on review of this project is unofficial. There is time to review and comment on it in depth and respond to community concerns. (0179, 1079-T-11)

Public Comment: While I support the expansion of rail to Dulles, I have a number of concerns. The massive DEIS report, after being delayed six to eight months, was only made available to the public in late June, early July. It is cost-prohibitive to obtain a copy and simply viewing it at one of the locations is impractical and unrealistic. There has been insufficient time to review and absorb the vast amount of information presented, particularly with the project of this magnitude that will affect our entire region for years to come. (0150, 0150-T –1)

Public Comment: I am concerned that the public review of the draft EIS has been shortchanged. The late June release of the EIS is the first time that there has been a wide advertisement of the recommended proposals, but with limited access to the report. Many communities have asked that these

hearings be postponed into the fall in order to give us time we need to adequately review the data. This is an extremely complicated report. These requests have been ignored. (0179, 0179-T –2)

Public Comment: Until the release of this report, the information was held close to the chest when we approached officials and consultants regarding the details of the contents. To have limited availability of this report at libraries with static hour for two summer months when many residents are on vacation and only two weeks before holding public hearings does not constitute wide distribution into the general public nor adequate time to discuss this EIS. (0179, 0179-T –3)

Public Comment: The incredibly short period of thirty days to digest and respond to this study provides just another obstacle to surfacing the concerns of people who live along the roadway. Rather than provide material on the web, only hard copies were made available at libraries. (0087, 0087-L –11)

Public Comment: The incredibly short period of thirty days to digest and respond to this study provides just another obstacle to surfacing the concerns of people who live along the roadway. Rather than provide material on the web, only hard copies were made available at libraries. Is it any wonder that the sincerity of this study is in question? (0087, 0227-E –9)

Public Comment: THE PROCESS FAILED TO PROVIDE ADEQUATE TIME FOR LOCAL REVIEW: After issuing so many calls for more time, we find there has NOT been adequate time to convene meetings of interested parties and groups. Efforts to obtain approvals of boards of directors of community organizations have been almost impossible. Numerous civic and business groups have asked for but have been refused more time, including the Hallcrest Heights Homeowners Association, the Hunter Mill Defense League, and MoveIt.org. By our count, there have been only 54 days during which the EIS has been available, and then only under circumstances that made it extremely difficult for working people to view the material. In contrast, other project managers such as Maryland's Department of Transportation recently granted stakeholders an extension of the comment deadline on the Corridor Cities Transitway proposal, which also is looking at either BRT or rail in the upper I-270 area. The MDOT also provided free CD-ROMs of Parts I and II of their EIS. That process builds local support and understanding. We call again today on WMATA and VDRPT to grant an extension of the comment period. (0138, 0476-L –2)

Public Comment: The general public was not given a fair opportunity to review the data presented in the DEIS. Distribution of the information during the summer tends to indicate community input was to be limited. Was this process put in place to discourage effective public participation? We feel that the process did not consider us to be active stakeholders in making decisions. The timing of the material distribution and the volume of material did not empower us to participate in the decision making process. (0147, 0459-L –2)

Public Comment: The comment period must be reopened, to Sept. 30 or later. I would argue that the Project Team only really gave the public 30 days to comment, instead of the federally required 45 days. While the notice of availability of the EIS was issued June 28, the public did not get a real chance to review the documents and alignments until the July 29-31 public hearings. Furthermore, the Project Team forced the public to purchase the most essential documents, such as Parts I and II on CD-ROM for $10 each and forced the public to purchase the technical documentation for as much as $875 for a complete set. (See Exhibit 7). In contrast, in Maryland DOT's "Corridor Cities Transitway" DEIS, the hearings were held a full 45 days before the Aug. 16 comment deadline, and MDOT has since allowed comments to trickle in after Aug. 16. MDOT provided Parts I and II of their EIS on CD-ROM and handled those out for free. The Dulles Project Team went out of its way to make it as difficult as possible for average members of the public to review the technical documents. Its release of the documents in the dead of summer for a project that will cost nearly three times the cost of the Corridor Cities project in Maryland is a violation of the spirit of the National Environmental Policy Act. (0112, 0462-L –48)

Public Comment: How can you say you're giving a 45-day deadline for comments when the notices for the meetings and EIS review arrived in late July? Why not extend the deadline til September 15 or September 30? (0112, 0382-L –1)

Response: *The time made available to review the Draft EIS was 60 days, which exceeds the 45 days required under the Federal Transit Administration and USDOT regulations implementing the National Environmental Policy Act (NEPA). Following publication of notices in the Washington Post, regional newspapers, the project website, and project newsletter on June 27, 2002, the Draft EIS was made available in the following locations: libraries and community centers located throughout Fairfax and Loudoun counties, the project outreach center in Reston, at the project office in Rosslyn, WMATA's headquarters, VDOT's Northern Virginia Office, DRPT's Northern Virginia Office, and by request (for the cost of the copies or CD). The public comment period closed at 5:00 p.m. on August 28, 2002.*

In addition, as required by NEPA and its implementing regulations, a Notice of Availability was published on July 12, 2002 in the Federal Register. As required, the publication was at least 45 days prior to the close of the public comment period.

Public Hearings on the Draft EIS were held during the formal public comment period to provide the public with an opportunity to consult with project staff, learn more about the studies conducted, and provide comments at a public meeting.

It is standard practice to make documents available at public libraries, public offices, and at locations such as project offices and information centers. Copies of the Draft EIS, General Plans and Technical Reports were made available for review at no charge in multiple public places throughout the comment period. As a convenience, copies of the documents cited were also offered to the general public for the cost of producing the documents.

The Supplemental Draft EIS and Final EIS have been placed on the project's web site.

Accessibility of Project Information

Public Comment: We are quite disappointed that in all the years the county had to put this report together, by its own admission there was not enough time to figure out a way to place the data on the web for us to access at times when it is convenient to us, when we will be paying costs for this extension. As Delegate Plum has indicated, if we have waited 25 years for this report, another two-month extension to get it right will be a mere blip on the radar screen. (0179, 0179-T –4)

Response: *The time made available to review the Draft EIS was 60 days, which exceeded the 45 days required under the Federal Transit Administration and the USDOT regulations implementing the National Environmental Policy Act. The Draft EIS was available at more than 20 libraries and community centers located throughout Fairfax and Loudoun counties, the project outreach center in Reston, at the project office in Rosslyn, WMATA's headquarters, VDOT's Northern Virginia Offices, DRPT's Northern Virginia Offices, and by request (for the cost of the copies or CD).*

Public Comment: Why is your address in Arlington since this is NOT involved with that county, so far as I can determine? (0006, 0236-L –4)

Response: *During the NEPA phase, the project office for the Dulles Corridor Rapid Transit Project were located in Arlington (Rosslyn). This location was selected based on its proximity to a Metrorail stop, WMATA's headquarters, and because of the desire to have the offices for the Project in the Commonwealth of Virginia. For the preliminary engineering phase, DRPT has established a new project office in Tysons Corner.*

B. Supplemental Draft EIS Comments

Local Agency Comments

Need for Adequate Public Participation

Local Comment: …while it is very useful to consider alternatives that the public needs to be part of this processes, too. It shouldn't be left relegated solely to land owners and I trust that we will in some fashion be consulted if there's any further development of other alternatives. (0034 11-1)

> ***Response:*** *The McLean Citizens Association was invited and participated in the May 2004 post-hearing conference on the Tysons West Station entrance and facilities.*

Public Comments

Concerns Regarding Project Refinements Since the DEIS

Public Comment: Your reply to my statement ignores the fact that the project was broken into two phases AFTER the decision was made to divert the rail THROUGH Tysons Corner with 4 stops. That decision substantially boosted the cost of the entire project (which you also fail to recognize), forcing it to be broken into two phases and seriously jeopardizing the remaining unfinished leg. If all federal, state and local funds are used up through engineering and construction of the first half (West Falls Church through Tysons Corner to Wiehle), there is NO GUARANTEE that the second half will ever be finished.
Why would you ask for comment, if you are not prepared to reconsider some of the earlier erroneous decisions? The "locally preferred alternative" you cite obviously is not cost effective and is undermining the entire project. The decision makers in this process NEED to be asking whether or not the diversion of the track from the toll road median strip through Tysons Corner makes sense - economically or otherwise. There is an obvious immediate need for rapid mass transit (i.e. rail) from Dulles airport all the way to the District - not just from the District to Wiehle Ave. Please reconsider the decision to divert the track from the median strip through Tysons Corner. If you don't know the cost for engineering and construction to perform the loop through Tysons Corner, then forget it. It is much easier for the Tysons Corner business interests to run buses to stops on the Dulles Toll Road median strip, than for people from Dulles airport and all over western Fairfax and Loudoun Counties to have to take the buses to an interim rail-head. (0082 11-1)

> ***Response:*** *The purpose of the Supplemental Draft EIS is to provide additional opportunities for the public and agencies to comment on refinements that have been made to the LPA since the publication of the Draft EIS Public Hearings Report. A number of alternatives, including various Tysons Corner alignments, were evaluated in detail in the June 2002 Draft EIS and Section 4(f) Evaluation. Additional information on the alternatives considered, and the screening process used to evaluate the alternatives is included in the Final Alternatives Analysis Report (May 2001).*

Coordinate Plans with WEST*GROUP Master Plans at Tyson's East

Public Comment: WEST*GROUP has contracted a major national design firm to do a schematic master plan of the entire area around Tysons East. As soon as FFGA is consummated, we will be filing rezoning applications, annual plan review nominations to implement the "with rail" aspects of the Tysons Plan. It is imperative that the final Tysons East Station plan and its appurtences by carefully coordinated and integrated with WEST*GROUP's master plan. As a dedicator of right of way, rail facilities and a 25% economic stakeholder in the funding of rail, we feel our input demands recognition and we are willing to work with the designers and constructors of rail to come up with the best possible public private plan of the Tysons East Station as well as the balance of the project and look forward to more dialogue as the rail project goes forward. (0123 0158-28)

> ***Response:*** *DRPT and WMATA look forward to ongoing coordination with WEST*GROUP and other stakeholders in order to ensure that the Tysons East Station best meets the needs of all parties involved.*

Need More and Continuing Public Involvement

Public Comment: The public has consistently and dangerously been short-changed and refused meaningful evaluation and input into the nation's biggest mass-transit proposal. This must change going forward. We need, I respectfully submit and must insist, on public participation throughout by frequent public meetings, by a public task force, et cetera. (0068 0076-1)

> ***Response:*** *Public outreach during the circulation of the Draft EIS and Supplemental Draft EIS was conducted in accordance with the National Environmental Policy Act of 1969 (NEPA), as amended, and with the WMATA Compact requirements. Public Hearings were held during the formal public comment period for both the Draft EIS and Supplemental Draft EIS to provide the public with an opportunity to consult with project staff, learn more about the studies conducted, and provide comments in a public forum. In addition to these public hearings, DRPT and WMATA had presentations to various community groups and stakeholders during the public comment period. Please see Chapter 11 of the Final EIS for a summary of these hearings and meetings. The Project Team invites members of the public to call the INFO line (1-800-566-7245) or email (dullescorridor@aol.com) at any time to schedule additional meetings or to ask project related questions.*

Public Comment: There be continued dialogue between the engineering design team and adjacent communities throughout the final design process on project impacts and mitigation. (0026 0027-15)

> ***Response:*** *DRPT and WMATA have analyzed and documented reasonable alternatives that would avoid or reduce adverse impacts. Overall, the impacts of the LPA are anticipated to be minor, especially given the project's length and complexity. In response to comments in the public hearing record, DRPT and WMATA are recommending mitigation measures that are detailed in the Final EIS. Moreover, DRPT will maintain thorough and continuous communication among all public and private stakeholders throughout the implementation of the project in order to minimize impacts and implement the mitigation commitments in the Record of Decision.*

Public Comment: In closing, I urge the relevant agencies and political officials to open this process up to the affected communities, rather than only hold a public forum when federal or state law requires that it be done. To date, there has been far too little community input into such a large project that would have such a disproportionate impact on residents, drivers, transit users and taxpayers. (0068 0173-39)

> ***Response****: As documented in Chapter 11 of Final EIS, the Project Team has conducted a comprehensive public involvement program. A variety of methods were used to encourage citizens to participate in the project since initiation of the Dulles Corridor Rapid Transit Project, including: public meetings, project displays at shopping centers and fairs, project documents at libraries and community centers, and print, radio, and electronic media, project newsletters and updates, and stakeholder meetings with private citizens, community groups, civic associations, and businesses. In addition, prior to public hearings of the Draft EIS and Supplemental Draft EIS, all residents and property owners within 500 feet of the proposed improvements were notified about the hearings.*

Need More Information

Public Comment: There doesn't seem to be any user friendly way to get any specific information or people who have any idea of what you are talking about. (0003 0003-2)

> ***Response****: All Project documents have been made available at libraries and community centers throughout Fairfax and Loudoun counties, at the project office in Rosslyn, at WMATA's headquarters, and at VDOT's Northern Virginia Office. Information can also be found on the project website: www.dullestransit.com or by calling the Project INFO Line at 1-800-566-7245.*

Appreciate the Public Outreach Provided

Public Comment: Thank you very much for your attention and I do appreciate the meetings, the briefings and the field trips that we have been accorded and that is much appreciated. (0036 0062-6)

Public Comment: I would like to thank Ick Thong, Neil Nott, and other members of the WMATA & VA Dept. of Rail and Public Transportation teams for their eagerness to work with our firm and all the parties involved in this process. This public-private partnership will greatly benefit the process. I would also like to thank the Transportation and Planning Offices of Fairfax and Loudoun Counties, and Airport's Authority for their work to help solidify this much needed project. (0052 0053-2)

> ***Response:*** *Comment noted. Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in selecting the LPA.*

Pleased with Noise and Visual Impact Mitigation at WFC Rail Yard

Public Comment: Our community is pleased with the track enclosure at the WFC rail yard and lower Metrorail alignment proposed to mitigate noise and visual impacts. Thank you for hearing us. (0026 0027-1)

Public Comment: Our community is pleased with the proposals to cover the tracks at the West Falls Church (WFC) rail yard and the lower profile of the Metrorail alignment. Thank you for hearing us. (0087 0102-1) (0089 0104-1) (0099 0115-1) (0104 0121-1)

> ***Response:*** *Comment noted. Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in selecting the LPA.*

Would like to participate in Upcoming Hearing or Other Activities

Public Comment: I think it's egregious to require me to type up a letter and put it in an envelope and mail it in order to arrange time to testify at the Dec. 11 hearing! In this day and age, a simple phone call or email should work and I request that you sign me up to speak at the Dec. 11 hearing in ashburn. (0016 0017-1)

Public Comment: We respectfully request that, going forward, we be involved in a significant and meaningful way in the planning for a project that has the potential for a significant positive - or negative - impact on the community in which we live. (0039 0040-11)

> ***Response:*** *As part of its procedures, WMATA requested that all parties wishing to speak at the Project's hearings formally do so in writing, in order to have a record of the registration to speak.*
>
> *Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and were considered by decision-makers in revising the LPA in March and April 2004.*
>
> *As the NEPA process ends and the preliminary engineering starts, DRPT, the project sponsor, will continue an active community outreach program.*

11.2 Agency Coordination

A. Draft EIS Comments

Federal Agency Comments

Federal Aviation Administration Involvement

Federal Comment: If it is determined through the EIS process that this site meets your operational needs and receives environmental approval, land will have to be acquired from the airport. The land on which Site 15 is located is dedicated airport property. The Metropolitan Washington Airports Authority (the Authority) is required to seek FAA approval for the release of any property dedicated for airport purposes as identified on the Exhibit "A" Property Map for the airport. Also, under the **Federal Revenue Diversion Policy,** FAA will be required to publish the intent to release this property in the Federal Register for 30 days to solicit public comments. The Authority would be required to obtain the fair market value in compensation for the property. (0485, 0485 – A –2)

> ***Response:*** *As indicated in Section 3.3 of the Final EIS, the Project Team recognizes the process that it will have to follow for the Project's use of Airport property for the Metrorail S&I Yard. The costs for the acquisition of the necessary property interest for the S&I Yard at fair market value was factored into the capital cost estimate presented in Chapter 8 of the Final EIS.*

Federal Comment: In order for FAA to write a favorable Record of Decision (ROD) for the project, first FTA must issue their ROD. MWAA must show the project on their Airport Layout Plan and obtain FAA approval. (0485 11-1)

> ***Response:*** *Comment noted. FAA role and responsibility is described in Section 1.3 of the Final EIS. The LPA is included in the Airport Layout Plan approved by FAA in March 2004.*

State Agency Comments

Consideration of Public Input

State Comment: I am a strong supporter of public transit for Northern Virginia, including the Dulles Corridor Rapid Transit Project. I also think a major project such as this one requires the serious consideration of citizens' concerns. (0012, 0012-A –1)

> ***Response:*** *All comments received during the public hearings on the Draft EIS and proposed General Plans and on the Supplemental Draft EIS and revised General Plans were considered in the selection and revision of the Locally Preferred Alternative by WMATA's Board of Directors and the Commonwealth Transportation Board. Before and after the hearings and between the hearings there have been extensive public involvement activities.*
>
> *The Final EIS is being circulated to inform decision-makers and the public on the selection of the Metrorail extension as the LPA and on the potential consequences of implementing the proposed extension in the corridor. Overall, the potential adverse impacts of the extension on the human and natural environment are expected to be minor given the extent of the extension project. Coordination with the public, stakeholders, resource agencies, and local governments has confirmed these findings.*

Regional Agency Comments

Disruption of Airport Operations

Regional Comment: Extensive continuing coordination is needed between the DCRTP design team and the Airports Authority throughout project design and construction to avoid potential conflicts between DCRTP and future IAD projects, and to minimize disruption during construction. (0440, 0440-A –10)

> ***Response:*** *The Project Team and the MWAA staff have had continuing coordination meetings throughout the environmental review phase of the project. These meetings were also used as a forum to discuss project proposals relative to alignment, stations, and other facilities. The meetings were also used to investigate and resolve potential conflicts between the proposed Metrorail facilities and proposed MWAA projects. The preliminary engineering phase will continue the coordination meetings to maintain the existing working relationships and information exchange.*

Local Agency Comments

Coordination with Local Entities

Local Comment: Our overall concern is coordination. The County and VDRPT must actively coordinate land use and road planning with the planning and construction of rail. RA will be happy to assist in that continuing coordination. The recommendations of Supervisor Hudgins' 3-day charette are important to good development and to mitigating the effects on our community. (0233, 0426-M –3)

> ***Response:*** *The Project Team has been actively coordinating with VDOT, Fairfax County, Loudoun County, and other state and local agencies since the project's initiation. Please see Chapter 11 of the Final EIS for a summary of the Project Team's coordination activities since the Notice of Intent was published on June 26, 2000. VDOT, Fairfax County, and Loudoun County have had the opportunity to review and submit comments on the Draft EIS and Supplemental Draft EIS. DRPT, the project sponsor, will continue the coordination through preliminary engineering, final design, and construction of the Wiehle Avenue Extension.*

Local Comment: Although supportive of the project, the City [of Falls Church] has some critical issues with regard to the EIS which we feel must be addressed before the project proceeds. Generally we are concerned that although the city of Falls Church will be impacted by the project, our community overall has been overlooked in the EIS. (0122, 0164-T –1)

Local Comment: The [Falls Church] city council and I would appreciate your careful review and attention to these issues on behalf of all our citizens. (0122, 0164-T –12)

Local Comment: The impact area of the project includes the East and West Falls Church metro stations which are located on the perimeter of our city limits. We believe that the impact to the citizens and the environment of the City of Falls Church has neither been assessed nor mitigation measures considered or developed. (0122, 0164-T –2)

Local Comment: The project, while appearing to be beneficial to the region, has a significant and direct negative impact on the City [of Falls Church] in a manner not fully analyzed in the draft EIS. We have previously asked that this impact be thoroughly studied. However, we have now concluded that it has not been given full consideration. Overall, we strongly believe the draft EIS' lack of full analysis could prove disastrous for the City [of Falls Church], the surrounding neighborhoods and our educational structures. (0122, 0164-T –9)

> ***Response:*** *The Draft, Supplemental Draft, and Final EIS fully document the potential significant effects of the No-Build and Build Alternatives. The Project Team initiated meetings with the City of Falls Church during the course of the NEPA process to more fully understand the concerns*

and position of the City as it relates to the project. Issues ranged from parking problems at and near the existing Metro Stations to the perceived and actual noise levels at the West Falls Church Service and Inspection Yard.

Implementation of the LPA would result in increased off-peak service frequencies for eastbound trains at the East Falls Church Station. However, operating plans for the Wiehle Avenue Extension and Full LPA assume no additional feeder bus service, nor any new parking for the off-peak period for this station. Because the station's existing park-and-ride facilities are typically full by 8:00 AM on most weekdays and parking is controlled on local streets, it is not anticipated that increased off-peak Metrorail frequencies would generate additional traffic in and around the East Falls Church Metrorail Station. While the Project Team does anticipate other effects, as there would be no change from existing conditions, additional meetings with the City of Falls Church were held to discuss the issues of overflow parking and cut-through traffic due to the selected LPA, the Metrorail Extension.

Local Comment: In its resolution, the Board specifically cited four matters that need special attention by the Project Team and deserve continuing coordination with the County during the preparation of the Final EIS:

- Noise mitigation at the West Falls Church rail yard and along the Dulles Connector Road.
- Design of the intermodal bus transfer facility at the Tysons Central D Station between the two regional shopping malls.
- Mitigating the traffic impact of the 2,000 space proposed parking structure at the Tysons West Metrorail Station, including consideration of reducing the amount of parking provided at this station, or elimination or relocation of parking if no acceptable mitigation strategy is found.
- Details involved in the operational enhancement of existing express bus services operating in the Dulles Corridor. (0490 11-1)

Response: *For noise mitigation, the Project will enclose a portion of the loop track at the yard's eastern end and the new yard lead in box structures. These noise mitigation measures will reduce the wheel squeal noise of the train movements within the Yard.*

The Project Team has developed a site plan for the bus facilities at Tysons Central 123 Station that is acceptable to the stakeholders and Fairfax County.

The Project Team has reduced the capacity of the park-and-ride structure at Tysons West Station from 2,000 to 500 spaces and proposes that the 500 spaces be incorporated into the redevelopment of parcels in the vicinity of the station.

DRPT will coordinate with Fairfax and Loudoun counties on the enhancement of the Corridor express bus service.

Public Comments

Coordination with Local Entities

Public Comment: Close coordination among VDRPT, WMATA, VDOT and local planning officials is absolutely essential to ensure that the feeder bus system works effectively. Local elected officials bear the primary responsibility in being proactive in ensuring that this close coordination exists. (0088, 0211-M –12)

Public Comment: The history of transit development is in this region and elsewhere proves that a business-as-usual approach will result in enormous missed opportunities. Only if all leaders in the corridor develop a coordinated plan, an effective set of implementation programs, and a viable funding mechanism, will we be able to realize the full potential of Dulles rail. (0478, 0484-E –13)

Public Comment: We strongly urge VDRPT, WMATA and VDOT to work closely with Loudoun County planning officials to give a comprehensive review to the overall parking and access questions related to both transit stations in Loudoun County. (0204, 0204-M –13) (0088, 0211-M –16)

Public Comment: We request that Fairfax County's Dept. of Transportation review the results of the Draft EIS and report their analysis of the least-cost and most cost-effective transit mix in the Dulles Corridor prior to any selection of the Locally Preferred Alternative. (0162, 0162-M –14)

Public Comment: Our overall concern is coordination. We are directing our comments to the Dulles Corridor Rapid Transit Project Team, but both the Fairfax County Government and the Virginia Department of Transportation must actively coordinate land use and roads with planning and construction of Metrorail. The Reston Association will be happy to assist in that continuing coordination. (0210, 0210-M –2) (0170, 0170-T –2)

Public Comment: We request that the Fairfax County Department of Transportation review the results of the draft EIS and report on their analysis of the least-cost and most cost-effective transit mix in the Dulles corridor. (0184, 0184-T –11)

Public Comment: Need for early coordination among government entities to "calm" potentially dangerous cut-through traffic. (0432, 0432-E –3)

> ***Response:*** *The Project Team has been actively coordinating with VDOT, Fairfax County, Loudoun County, and other state and local agencies since the project's initiation. Please see Chapter 11 of the Final EIS for a summary of the Project Team's coordination activities since the Notice of Intent to prepare and EIS was published on June 26, 2000. VDOT, Fairfax County, and Loudoun County have had the opportunity to review and submit comments on the Draft EIS and Supplemental Draft EIS. DRPT, the project sponsor, will continue the coordination through preliminary engineering, final design, and construction of the Wiehle Avenue Extension.*

Public Comment: Probably the most significant thing, I think local officials must in this case be more proactive than they were either able to be or at least than they ultimately were with respect to designing the urban center of Tysons Corner or the station such as Nutley and Dunn Loring and Huntington and others. (088, 0172-T –9)

Public Comment: Local officials must take a more proactive approach to urban design considerations and the planning of internal circulation systems associated with the very urban development anticipated within transit station impact areas. Reacting to private sector proposals is not sufficient. It is already apparent that at several of the transit stations, especially the Reston Town Center and Route 772 stations, exclusive busways, light rail systems, or similar methods must supplement a greatly improved pedestrian circulation system in order for these important activity centers to function effectively. (0204, 0204-M –14)

> ***Response:*** *The Project Team forwarded the Public Hearings Report to Fairfax and Loudoun Counties and the Town of Herndon, which had the opportunity to review the above comments.*
>
> *Fairfax County Supervisor Hudgins has appointed the Wiehle Avenue Steering Committee, which advise the County staff in the creation of a Request For Proposal (RFP) to solicit transit-oriented joint development proposals for mixed-use development of the County-owned parcel adjacent to the station. Using the conclusions from the Supervisor's Reston Charrette as a starting point, the committee is establishing the process, scope and criteria for the RFP. The Supervisor and her committee will conduct special meetings for the community, property owners, and developers to discuss the RFP process, status, and developments to ensure all concerns and issues are identified and addressed accordingly.*

Public Comment: Designate a managing entity to coordinate implementation of the mitigation plan and ensure compliance and reports to stakeholders. In the mitigation plan, designate the specific responsibilities of each agency, along with cost share, timeline, and monitoring. (0388 11-1)

Public Comment: Would like the Project Team to develop a joint mitigation plan that would involve all affected communities. (0388 11-2)

> ***Response:*** *DRPT, the project sponsor, will prepare, implement and monitor a mitigation plan, based on the mitigation commitments and in the FTA Record of Decision.*

B. Supplemental Draft EIS Comments

Federal Agency Comments

Transit-Oriented Development

Federal Comment: The Public Hearings Report indicates that the Project Team will work with local governments to support and implement the Fairfax County and Loudoun County comprehensive plans, which contain guidelines to support transit, higher densities, mixed-use development, and pedestrian and bicycle friendly fostering transit-oriented development along the Dulles Corridor in order to ensure that future transit ridership is maximized. The comment responses contained in the Public Hearings Report show that the Project Team has been adequately responsive to our concerns regarding implementation of supportive station area transit-oriented development as part of the project.(0141 11-1)

> ***Response:*** *The Project Team will continue to coordinate with various agencies to ensure that station area transit-oriented development is implemented to best serve the needs of the Dulles Corridor and region.*

Federal Comment: Concerning FAA's issuance of a Decision for the Environmental Impact Statement.

We understand that Phase 1 of the project would provide rail access to a station at Wiehle Avenue with Executive Bus Service providing access from that station to the airport terminal. This phase also provides for an expansion of the Dulles North Transit Center primarily to provide parking for increased ridership over the existing bus service to points east and to Washington, D.C. Phase 2 of the project would extend the rail service to the airport and construct the rail service yard. Subject to satisfactory completion of the EIS, and after the Federal Transit Administration issues their Record of Decision, we would anticipate issuing an FAA Decision on the entire ultimate project.

Concerning the release of the Dulles Access Highway right-of-way for the Rapid Transit Project:

We believe that the Metropolitan Washington Airports Authority (the Authority), which operates the airport under a lease agreement from the United States of America, can provide a right-of-way on airport property, specifically along and within the median of the Dulles Airport Access Highway, provided that it provides a means for passengers to access the airport. Our office would have to review and approve the proposed Right of Way agreement before it is executed by the Authority. However, our office cannot authorize a "fee simple" release of this Right of Way or of any airport property. We can only concur with the Authority releasing their interest in the land for the remaining life of their lease. We believe that release of a "fee simple" interest in the property would require approval action at the U.S. Department of Transportation level or possibly higher.

Furthermore, we believe that the Authority can release its interest in the Right of Way at no cost to the rail operating authority, provided the rail system accesses and benefits the airport. Executive bus service from the proposed Wiehle Avenue station to the airport would be considered as providing airport access for the purposes of this no-cost land interest transfer. However, if passenger service is not provided from the rail station to the airport then the Authority's interest in the land could not be conveyed at no-cost, and the rail authority would have to pay the fair market value for the land interest.

Concerning the release of airport property for a rail maintenance yard.

While we can concur with the Authority's release of its interest in airport property for the rail maintenance yard, the Authority must receive the fair market value for this land. We could consider a reduction in the fair market value proportional to the airport passengers' share of the use of the rail extension compared to the total passengers. A release of "fee interest" in the land for the rail maintenance yard would require the same approval level as for the access road right-of-way discussed above. (0146 11-1)

> ***Response**: These issues will be the subject of continuing coordination among DRPT, WMATA, FAA, FTA, and MWAA. As discussed in Section 3.3 of the Final EIS, the Full LPA requires the acquisition of property interest in the median and other parts of the Dulles International Airport Access Highway and Dulles Connector Road, and in parts of the Dulles Airport property itself, including the site of the S&I Yard and portions of eight parcels that are currently leased to commercial entities. The Access Highway, Connector Road and Dulles Airport property are owned by the U.S. Department of Transportation (USDOT). MWAA has leased the property from the USDOT through the year 2067 and has sublet certain commercial parcels to businesses. DRPT will seek conveyance of the Access Highway, Connector Road and Airport property interest needed for the Project from the USDOT and MWAA. The acquired property interests will be adequate to assure DRPT's or WMATA's continuing control of the project property throughout the useful life of the project.'*

State Agency Comments

Continued Coordination with Local Entities

State Comment: VDOT is aware of the revisions proposed for the General Plans (PHR, A2). VDOT fully supports continuing, with full participation of transportation staff from Fairfax and Loudoun Counties as well as MWAA and TRIP II, a combined coordination effort with the DCRTP team to insure that the proposed rail alignments and station locations do not preclude potential future roadway improvements. (0091 11-1)

> ***Response:** Comment noted. The Project Team has consistently designed the Project in the General Plans so not to preclude future roadway improvements. To its knowledge, there are no roadway improvements that are precluded, or any future roadway improvements that still need to be accommodated.*

State Comment: VDOT looks forward to continued coordination by the Project Team in determining how to provide complete station access during preliminary engineering. VDOT recommends that the Project consider improving pedestrian and bicycle connections in the general vicinity (within 1 mile radius) of the proposed Station locations. VDOT looks forward to continued coordination on issues of station access-including bicycle/ pedestrian, taxi, bus, park and ride, kiss and ride, etc.

WMATA has listed bicycle and pedestrian accessible routes as the lowest priority for access and proximity to a station. VDOT recommends that in areas where no commuter parking is proposed, such as in Tysons Corner, these modes of transportation (bicycle and pedestrian) should be given a higher priority.

VDOT understands that an updated traffic analysis will be performed during the Final EIS and looks forward to working with the Project team during this critical stage to determine adequate mitigation measures for the project. This traffic analysis should address impacts on the existing transportation system in general.

VDOT looks forward to being part of the future business advisory team during preliminary engineering to discuss and minimize construction effects and maintenance of traffic in Tysons Corner and possibly

elsewhere within the project limits (i.e., Beltway/Route 123 interchange, Reston).VDOT anticipates coordination by the Project Team on a congestion management plan during this phase of the project. (0091 11-2)

Response: *The Project Team will continue to coordinate with Fairfax County, Loudoun County, Town of Herndon, VDOT and other stakeholders on pedestrian and bicycle access issues. As part of the Project, pedestrian, bicycle and vehicular access will be provided at each station site connecting to adjacent public rights-of-way. Comprehensive pedestrian circulation beyond the station areas may be implemented in conjunction with other planned developments, County and/or State projects. All stations would have bicycle racks and/or lockers adjacent to station entrances. Station access issues will continue to be explored in preliminary engineering. New pedestrian and bicycle facilities outside the station area would be beyond the scope of the Project, and would be the responsibility of VDOT and/or the local jurisdictions.*

Continued Coordination on Permitting and Master Agreement

State Comment: VDOT looks forward to continued coordination regarding permitting requirements and possible development of a master agreement between VDRPT and VDOT. (0091 0106-21)

Response: *Comment noted.*

Regional Agency Comments

Mitigate Any Adverse Effects on Dulles Airport Property

Regional Comment: The establishment of construction staging areas on Airport property will need to be coordinated with the Airports Authority to ensure that adequate provisions are made to mitigate potential adverse effects on existing and planned uses of candidate sites. (0131 0166-3)

Response: *During preliminary engineering, DRPT and WMATA will coordinate with the Metropolitan Washington Airports Authority in order to establish the most suitable construction staging areas.*

Local Agency Comments

Procurement Policies

Local Comment: WMATA and VDRPT should consider whether and how such an contractual arrangement for provision of construction services for a public sector project could trigger "disciplines" under GATS and other service agreements…. subject to international trade rules…. (0164 11-1)

Response: *Comments noted. The project will conform to appropriate procurement practices in accordance with federal and Commonwealth guidelines.*

Public Comments

Potential Station Facility Impacts

Public Comment: The proposed Route 28 station facilities north of the Dulles Toll Road may encroach slightly into a new RPA. Project designers should coordinate with the Office of Site Development Services on this issue. (0093 0109-20)

Response: *RPA stands for Resource Protection Area. This issue will be addressed during preliminary engineering in coordination with Fairfax County and VDOT.*

Address Traffic Impacts in Station Areas

Public Comment: I would suggest that the County take the lead in finalizing the design of access to the rail stations and the design of the parking facility. Well-planned, frequent bus feeder service can help reduce the impact of traffic on nearby roadways and neighborhoods in Loudoun County. (0060 0169-14)

> ***Response:*** *During preliminary engineering, DRPT and WMATA will oversee the design of the station facilities. Station access will be via planned roadways that new developments will likely design and construct. Feeder bus services for the two stations could be instituted by Loudoun County once the Full LPA is operational.*

Public Comment: To address concerns about increased congestion at the transit station areas, Fairfax and Loudoun counties need to make greater use of transportation demand management measures and work with developers and employers to provide incentives for carpooling, vanpooling, bicycling, walking, and using transit. Well-planned feeder bus service could help reduce the demand for expensive commuter parking. (060 0169-11)

> ***Response:*** *Comment Noted. Your participation in the public hearings and your opinions regarding what you believe would best serve the needs of the Dulles Corridor and region are important to us and have been considered by decision-makers in selecting the LPA.*

State and Local Coordination Needed for Mitigation and Funding

Public Comment: Where there is shared responsibility for mitigation, like for sound barriers and traffic calming, that state and local transit and transportation agencies: 1) coordinate on evaluating noise and traffic impacts and identifying the division of responsibility for undertaking and funding mitigation measures for the final EIS; and 2) seek their accelerated programming in the Commonwealth and regional transportation plans and budgets. (0026 0027-16)

> ***Response:*** *Proposed mitigation measures for the Project's unavoidable are summarized in Table 2.4-3 of the Final EIS. In each chapter on project effects, these impacts are identified and proposed mitigation measures are discussed. The FTA Record of Decision will include all final mitigation commitments.*

Public Comment: There should be better accountability for coordination between transit and transportation agencies on funding and implementing mitigation. (0087 0102-4) (0089 0104-4) (0099 0115-4)

> ***Response:*** *Comment noted. DRPT and WMATA will continue to coordinate with various agencies to ensure that all funding and mitigation issues are resolved.*

12.0 DEIS / SDEIS PROCESS

A. Draft EIS Comments

Public Comments

Selection of Comparison Years

Public Comment: The Project Team's response to the commenter's concern about comparable cost-effective measurements is unacceptable and fails to address the question of whether heavy rail can ever be justified, and at what point within the next 20-25 years would sufficient demand exist to justify cost. A more fiscally feasible approach starts with BRT and transitions to Metrorail after 2015 or 2020. By providing only opening year and 2025 data, the Draft EIS ignores the question of whether 2010 is a more appropriate year to compare BRT and heavy rail investment, than 2015 is. Officials, property owners, et al, need more comparison markers than the Draft EIS provides. (0446 12-1)

Public Comment: The *Public Hearings Report* ignores question on page 505 that states "DEIS documents that transit improvements are needed in the corridor in both 2010 and 2025." Disappointing that the DEIS fails to provide more guidance on critical issues and asks stakeholders to believe that 2010 and 2025 are the only relevant years. (0446 12-2)

> ***Response:*** *The Draft EIS was prepared in accordance with and meets the requirements of the National Environmental Policy Act (NEPA), as amended, and FTA regulations that implement NEPA and govern the transportation planning process. The selection of comparison years (opening and horizon) was based on standard practice for the evaluation of transportation projects. Planning and project development for a major capital investment focuses on those alternatives that will provide the best long-term solution for a corridor or region's needs. Therefore, alternatives are evaluated at a distant horizon year that allows decision makers to better understand each alternative's full potential. Data for interim years do not necessarily provide a true measure of the effectiveness or value of a proposed alternative, and would not accurately reflect the alternative's cost-effectiveness because it would not have yet reached its full potential. BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

B. Supplemental Draft EIS Comments

No comments pertaining to this topic were received.

12.1 Concerns Over Study Process

A. Draft EIS Comments

Regional Agency Comments

NEPA Compliance

Regional Comment: The primary objective for the DEIS is to demonstrate the project's compliance with the National Environmental Protection Act. The WATF believes this objective was met as the statement demonstrates that none of the proposed alternatives need harm the environment, social justice, or preservation. However, the statement falls far short of proposing a plan that would adequately marry modern transit thinking to the long-term land use plans and transportation requirements of the Dulles Corridor. (0133, 0405-L –2)

> ***Response:*** *The Draft, Supplemental Draft and Final EIS meet the requirements of National Environmental Policy Act (NEPA) and FTA regulations that implement (NEPA) and govern the*

transportation planning process. Local jurisdictions oversee and have updated their land use plans in response to the Project.

Local Agency Comments

Local Comment The draft EIS has failed to meet the legal requirements of an Environmental Impact Statement regarding significant impact analysis in particular area as required by 40 CFR 1502.14 and 40 CFR 1508.9, including the City of Falls Church, which will be impacted by this proposed Project. The draft EIS has failed to fully assess water, traffic, and transportation impacts on the City of Falls Church and thus propose mitigation of these potential impacts. (0122, 0122-A –2)

Local Comment: EIS regulations state that the comprehensive analysis, including the proposed action, is the heart of an EIS (40 CFR 1502.14) and require a rigorous exploration and objective evaluation of reasonable alternatives, including a no action alternative. Reasonable alternatives include those that are practical or feasible from a common sense, technical, and economic standpoint. Federal regulations (40 CFR 1508.9) recommend that the EIS address environmental impacts in proportion to their potential significance. Impact analysis in intended to concentrate on project attributes that have a significant impact or potential for significant impacts. We contend that this EIS overlooked significant impacts as they relate to the City of Falls Church and its environs. (0122, 0122-A –7)

Local Comment: The City of Falls Church welcomes this opportunity to present the concerns of the City to the Virginia Department of Rail and Public Transportation (DRPT) regarding the draft Environmental Impact Statement (EIS) for the Dulles Corridor Rapid Transit Project (the Project). Although supportive of the Project, the City has some critical issues with regard to the EIS, which we feel must be addressed before the Project proceeds. Generally, we are concerned that although the City of Falls Church will be impacted by the Project, our community overall has been overlooked in the EIS. The impacts area of the Project includes the East and West Falls Church Metro Stations, which are located on the perimeter of our City limits. We believe that the impact to the citizens and the environment of the City of Falls Church has neither been assessed nor mitigation measures considered or developed. (0122, 0122-A –1)

Local Comment: The draft EIS has failed to meet the legal requirements of environmental statement regarding significant impact analysis in particular areas as required by 40 CFR 1502.14 and 40 CFR 1508.9, including the City of Falls Church, which will be impacted by this proposed project. (0122, 0164-T –3)

Local Comment: The reality is that Falls Church is the eastern terminus of this project, regardless of which of the alternatives are followed. Our first set of comments, summarized by Mayor Gardner, really relates to the technical, legal and factual issues which must be adequately addressed for a draft EIS and an EIS to pass muster under the law. (0165, 0165-T –1)

Local Comment: The City of Falls Church understands the legal requirements in the framework of the environmental impact statement, which is to assure that all issues, alternatives and concerns are weighed and evaluated for remedy. In attempting to meet these specific requirements, we believe that mitigation of the project impact on the city of Falls Church and its immediate surroundings has not been sufficiently addressed. (0122, 0164-T –7) (0122, 0122-A-6)

Response: *The Draft EIS, Supplemental Draft EIS and Final EIS fully comply with the regulations cited. Each EIS included a detailed analysis and objective evaluation of a No-Build Alternative as well as the Build Alternatives. All alternatives carried forward for detailed study in the Draft EIS were those deemed to be reasonable from an operational, technical, and economic standpoint, as documented in the Final Alternatives Analysis Report.*

The Project Team initiated meetings with the City of Falls Church during the course of the NEPA process to more fully understand the concerns and position of the City as it relates to the project and the EIS'.

The Project Team is confident in the comprehensiveness of the Draft EIS, having received a positive statement from the U.S. Environmental Protection Agency (EPA). EPA has granted the Draft EIS its highest rating for environmental documentation, and remarked that it has not identified any potential impacts that would require substantive changes to any alternative.

Public Comment: Draft EIS does not satisfy the requirements of the National Environmental Policy Act (NEPA). Data presented and methodology used are not sufficient to support selection of a Locally Preferred Alternative. (0510 12-01)

Response: *The Draft EIS fully complies with the regulations cited. The Draft EIS includes a detailed analysis and objective evaluation of a No-Build Alternative as well as four Build Alternatives. All alternatives carried forward for detailed study in the Draft EIS were those deemed to be reasonable from a common sense, technical, and economic standpoint, as documented in the Final Alternatives Analysis Report.*

Need for Additional Assessment of Impacts

Local Comment: Our review of the draft EIS indicates that these key concerns have not yet been addressed for the City of Falls Church. The Project, while appearing to be beneficial to the region, has a significant and direct negative impact on the City in a manner not yet fully analyzed in the draft EIS. Additionally, we believe the Project has large-scale and complex impacts on the City. We have previously asked that these impacts be thoroughly studied (Attachments 1-4), however, we have now concluded that they have not been given full consideration. (0122, 0122-A –10)

Local Comment: Following our review of the Draft EIS, we are particularly troubled that the impacts to the East Falls Church Metro apparently have never been considered. For this reason, we find the EIS significantly flawed and formally request that this are be examined and fully evaluated. (0122, 0122-A – 11)

Local Comment: Page 8 of the summary lists those in four categories: Social effects; environmental effects; economic effects; and transportation effects. We believe that at a minimum this project, regardless of its alternatives, has the following social effects: Community cohesion; displacement and relocation; visual and aesthetic conditions; parklands and recreation areas; and especially safety and security, especially regarding pedestrians and school students in the [Falls Church] area. Secondly, as Mayor Gardner indicated, there may be very significant water resources effect, air quality, noise, vibration, hazardous and contamination materials and other effects. Third, in terms of economic effects, its unequal economic effect is something that deserves additional study. Finally, transportation effects again are inadequately studied under this draft EIS. And they include effects on local and regional roadways, transit parking, and bicycle and pedestrian facilities. And we have a written submission, which we ask be a part of this record. (0165, 0165-T –2)

Local Comment: While a limited analysis was performed for the West Falls Church Metro station, we discovered that project impacts were not considered in many of the Technical Reports including Land Use and Socioeconomic, Air Quality and Economics, and Secondary Development Effects. Although West Falls Church Metro is included in the Noise Technical Report, we are concerned that the full impact has not been analyzed. We believe very strongly that the EIS must be revised to consider impacts in all Technical Reports for both the East and West Falls Church Metro areas. This project impacts our resident' quality of life in a myriad of ways and these impacts must be considered in order to be fully compliant with Federal EIS regulations. (0122, 0122-A –12)

Local Comment: Finally, it is our position that there is still much work to do in order for the Draft EIS to address the long-range concerns that have been previously raised by the City, including the safety concerns that continue to be paramount in the minds of our citizens, and which have not yet been studied, let alone, resolved. (0122, 0122-A –29)

Local Comment: If we address the issues that we have outlined tonight, we believe that this project will

achieve those objectives. If we don't, it fails as an EIS and it will fail as a project that serves the region. (0165, 0165-T –10)

Local Comment: Now as a matter of law and as a matter of fact, we believe that additional work needs to be done, and that the draft EIS and any EIS that fails to address these issues would be inadequate and incomplete as a matter of law. (0165, 0165-T –3)

Local Comment: So for all the reasons indicated, we urge a much more significant study of the issues that we have talked about, that we urge inclusion of mitigating factors, and finally we urge that, not just for the citizens of Falls Church, but all the citizens of this potential region, because if it works for us, it will work for the region. If it doesn't work for us, it won't work for the region, either. (0165, 0165-T –8)

> ***Response:*** *Implementation of the Project would result in increased off-peak service frequencies for eastbound trains at the East Falls Church Station. However, operating plans for the Wiehle Avenue Extension and Full LPA assume no additional feeder bus service, nor any new parking for the off-peak period for this station. Because the station's existing park-and-ride facilities are typically full by 8:00 AM on most weekdays and parking is controlled on local streets, it is not anticipated that increased off-peak Metrorail frequencies would generate additional traffic in and around the East Falls Church Metrorail Station. While the Project Team does anticipate other effects, as there would be no change from existing conditions, meetings with the City of Falls Church were held to discuss the issues of overflow parking and cut-through traffic due to the selected LPA, the Metrorail Extension.*

Public Comments

Need for Additional Assessment of Impacts

Public Comment: Only a systematic approach that considers how the impacts of a change in one part of the system will affect the whole system can have credibility. We feel that this EIS lacks credibility where it assesses environmental impacts. To summarize, we support rail to Dulles. Unfortunately, we believe the EIS as it relates to impacts needs a lot of work. (0145, 0145-T –13)

Public Comment: To summarize, we support the expansion of public transit and rail to Dulles. Unfortunately, we believe the EIS, as it relates to impacts and mitigation, is flawed and needs a lot of work. (0145, 0452-E –11)

> ***Response:*** *The Draft EIS, Supplemental Draft EIS and Final EIS document the systematic approach that was undertaken to assess the potential effects of the proposed alternatives. Each EIS document analyses the effects of the alternatives, cites the relevant laws and regulations considered, describes the methodologies used, defines the study areas assessed, summarizes the existing conditions in the study areas, predicts the direct and construction related effects, and proposed mitigation measures available to reduce the effects of unavoidable impacts.*

Need for Additional Public Outreach

Public Comment: The citizens in the adjacent Victoria farms are not uniformly aware of the current actions recommended in the DEIS. I believe that no one in the Victoria Farms community has a copy of the DEIS and with the exception of those with whom I recently have made contact, is anyone even aware of its content. That seems strange in view of the potentially serious impact on this community and may be an indication of ill advisability of issuing this ~3000 page document in the middle of the summer with a hurry up agenda for review and approval. (0148, 0463-L –3)

Public Comment: Public participation requirements can be found throughout the Council on Environmental Quality's Regulations for Implementing the Procedural Provisions of NEPA (40 CFR Parts 1500-1508). For example, the Council on Environmental Quality Regulations note that public scrutiny is essential to implementing NEPA. We feel that additional effort should have been made to contact

neighborhoods/ communities to encourage and facilitate public participation. This is evidenced in the list where many of the meetings were with groups who held a business interest. (0147, 0459-L –3)

> ***Response:*** *As documented in Chapter 11 of the Draft EIS, Supplemental Draft EIS and Final EIS, the Project Team has conducted a comprehensive public involvement program. A variety of methods were used to encourage citizens to participate in the project since initiation of the Dulles Corridor Rapid Transit Project, including: public meetings, project displays at shopping centers and fairs, project documents at libraries and community centers, and print, radio, and electronic media, project newsletters and updates, and stakeholder meetings with private citizens, community groups, civic associations, and businesses. In addition, prior to the public hearings on the Draft and Supplemental Draft EIS, all residents and property owners within 500 feet of the proposed improvements were notified about the hearings.*

Public Comment: The EIS process must be put on hold. While the EIS is on hold, additional bus service by Fairfax County, Metrobus and Loudoun County ("Yellow") can be put in place to handle additional demand for transit capacity - at much lower cost than any of the "build" alternatives in the DEIS. VDRPT should assist in this regard. (0112, 0462-L –47)

> ***Response:*** *The purpose of the environmental review process is the study of various alternatives that meet the project's purpose and need. Express bus service and enhanced express bus service, which are part of the existing conditions in the Dulles Corridor, were considered in this Draft EIS under the No-Build Alternative.*

Public Comment: We do have serious issues, however. These would be about noise and traffic - both during and after construction! For our purposes, neither of these issues is sufficiently addressed, if at all, in the EIS. I and others have personally attended all public meetings on this issue over the last two years, and in speaking with project representatives at such meetings, we were assured that our concerns would be addressed in detail. Sadly, this has not happened. (0126, 0199-M –2)

> ***Response:*** *Traffic and noise issues are addressed in the Final EIS.*

Need for Appropriate Mitigation of Impacts

Public Comment: As indicated at the beginning, we are not obstructionists and we are not playing the NIMBY card - in fact quite opposite. However, we urge you please to address the impacts which we have discussed here, and do what needs to be done to mitigate the problems. Let's make a win-win proposition for all concerned. (0126, 0126-E –8)

Public Comment: The point here is that as citizens directly affected by a massive public project, the EIS has told us nothing about it's assumptions, it's projections, or it's mitigation plans - as it relates to street traffic, and noise impacts, in the immediate area of West Falls Church Metro Station. We are essentially being asked to "take it on faith" that everything will be taken care of. This is patently unrealistic; there are several levels of government involved here, and experience shows sadly that these entities do not work well in a situation like this. Bottom line, no one is going to mitigate someone else's problem. The game ultimately becomes one of finger pointing, with nobody responsible, and the effected citizens living with the results. (0126, 0126-E –7)

Public Comment: The point here is that as citizens directly effected by a massive public project, the EIS has told us nothing about it's assumptions, it's projections, or it's mitigation plans - as it relates to street traffic, and noise impacts, in the immediate area of West Falls Church Metro Station. We are essentially being asked to "take it on faith" that everything will be taken care of. This is patently unrealistic; there are several levels of government involved here, and experience shows sadly that these entities do not work well in a situation like this. Bottom line, no one is going to mitigate someone else's problem. The game ultimately becomes one of fingerpointing, with nobody responsible, and the effected citizens living with the results. As indicated at the beginning, we are not obstructionists and we are not playing the NIMBY card - in fact quite the opposite. However, we urge you please to address the impacts which we have

discussed here, and do what needs to be done to mitigate the problems. Let's make this a win-win proposition for all concerned. (0126, 0199-M –7)

Response: *The Final EIS describes the assumptions, existing conditions, potential effects, and measures to mitigate any significant or unavoidable impacts. Proposed mitigation measures are detailed in the Final EIS and formal mitigation commitments will be included in the FTA Record of Decision.*

Document Bias Towards Heavy Rail

Public Comment: I believe the study is biased toward heavy fixed rail partly because of the methodology to computer ridership and alignments chosen for BRT and rail stations, in essence to enhance the values of specific developers. (0112, 0462-L –1)

Public Comment: THE DEIS IS SUBSTANTIALLY BIASED TOWARDS RAIL:
The bias towards MetroRail in this DEIS is blatant. Much of the information in the DEIS has been contorted to make heavy rail appear much better than it really is. Some examples are:

§ inflated ridership estimates compared to no build and BRT;

§ exaggerated travel times compared to actual experience on existing MetroRail facilities;

§ counting trips diverted from the Orange Line as new trips and boardings on Dulles Rail;

§ unrealistic land use proposals to create extra density to justify the inflated ridership figures;

§ gerrymandered traffic analysis zones that do not match those used by Fairfax County's plans. (0138, 0476-L –4)

Public Comment: THE DEIS IS HEAVILY BIASED AGAINST BRT: The bias against BRT include the following examples:

§ The DEIS fails to assume dedicated express lanes for the entire BRT route;

§ Fails to include BRT stops in Tysons Corner;

§ Insists on assuming BRT is merely a prelude to MetroRail instead of assuming BRT can be the single long-term solution; the assumption that BRT has to lead to MetroRail then leads to cost problems that lead to assumptions of fewer stations per mile than other BRT systems use;

§ fails to locate and design BRT stations in the most cost-effective manner;

§ fails to recognize that BRT routes can terminate anywhere, not just at West Falls Church station, thereby allowing customized routing that rail cannot match;

§ fails to provide frequency of service [headways] comparable to that offered by most existing BRT systems;

§ fails to utilize the flexibility of BRT;

§ failure to recognize and value how quickly BRT can be operating;

§ fails to value the feeder bus-express bus integration that is possible with BRT;

§ in short, fails to design a BRT that uses the advantages the system has exhibited in the cases where it already is in operation. (0138, 0476-L –5)

Response: *The ridership forecasts for the various alternatives were conducted using a patronage forecasting model (NVSIM) that was developed for the region and the corridor, and has been approved for patronage forecasting by the Federal Transit Administration. As described in Chapter 6 of the Final EIS, travel demand forecast results are based on the Metropolitan Washington Council of Governments (MWCOG) Round 6.3 Cooperative Land Use Forecasts. The Round 6.3 forecasts represent the regionally adopted population and employment forecasts,*

through 2025, for the metropolitan Washington area, including Fairfax and Loudoun counties. By federal regulation, such regionally approved land use forecasts must be used in the travel demand analysis of each alternative studied in an EIS. More specifically, model assumptions regarding socioeconomic variables and land use must be consistent among alternatives so as to not bias the results of the travel demand forecasting process. Therefore, the ridership estimates presented for the project do not reflect recent amendments to county comprehensive plans to permit additional residential, retail, and office development around stations, and do not reflect the ridership that would be anticipated with increased development in station areas.

Run time analysis data presented in the Transit Operations and Maintenance Plan (June 2002) show that the Full LPA, which includes 11 stations between the end of the line and the East Falls Church Station, has a travel time of approximately 41 minutes from East Falls Church to Route 772, resulting in an average speed of 35.4 mph for this 24-mile segment. WMATA's website shows that for a trip between Shady Grove and Metro Center (a section that includes 13 intermediate stations and no transfers) travel times are 34 minutes for a 17-mile distance. The average speed for this trip would be 30 mph. Although the average speed for the Dulles Corridor is higher, it is not inconsistent with experience on existing Metrorail facilities. The Dulles Corridor line is longer than the Shady Grove-Metro Center section, it includes fewer intermediate stations, and it includes two station-to-station intervals that are approximately 5 to 6 miles in length. Therefore, a slightly higher average speed would be expected.

The ridership estimates presented in Table 6.1-3 of the Final EIS do not count trips diverted from the Orange Line as new transit trips. As described in the Final EIS, the number of regional new riders is calculated by subtracting the total number of transit trips expected under the No-Build Alternative (this include all modes of transit in the region) from the total number of transit trips expected under each Build Alternative. Any increase in the number of regional transit riders is counted as new riders. A person switching from the Orange Line to the Dulles Corridor line would not register as an increase in the number of total transit trips.

The boardings presented in Table 6.1-3 represent a trip maker getting on the Dulles Corridor train at a station in the corridor. Whether this person is a new transit rider or a person that previously boarded the Metrorail Orange Line, the fact that he now boards the train in the Dulles Corridor reflects demand for the Dulles Corridor line. This line is a more convenient travel alternative for this trip maker. And given that the Orange Line currently experiences overcrowding, the Dulles Corridor line's ability to attract riders away from the western end of the Orange Line benefits the regional transit system. Only the analysis of development-related traffic effects in Tysons Corner and the mid-corridor used a refined a more refined geographic data structure. This structure was co-developed by Fairfax County, and allowed a much more detailed analysis than was possible with the land use data structure developed by the MWCOG.

Public Comment: A review of the DEIS and the associated technical reports indicate that the analysis reflects a strong support for the metrorail alternative. This is reflected in the analysis of BRT, assessment of social and economic factors and the remaining categories of assessment areas. The DEIS is deficit as evidenced by the lack of specificity in the community and neighborhood impact assessments. (0147, 0459-L –1)

Response: *The Draft EIS and its Technical Reports did not indicate a preference for any of the alternatives considered. The social, environmental, economic, and transportation related effects of the BRT Alternative were assessed using the same methodologies as the other alternatives studied. The impact assessment for the community and neighborhoods, including the methodologies used, existing conditions, and predicted effects are presented in the Draft EIS in summary form for its four Build Alternatives and in the Final EIS for its two Build Alternatives.*

NEPA Compliance

Public Comment: The DEIS failed to address the issues coupled with full implementation of 23 USC 109 (h). The DEIS failed to follow the NEPA process by limiting the geographical study area around the transit stations. (0147, 0459-L –7)

> ***Response:*** *Full implementation of 23 USC 109(h) is the responsibility of the Secretary of Transportation and was supplemented by publication of the regulations contained at 23 CFR Part 771. The geographic study areas defined depended on the resource under study as illustrated by the following examples. For example, air quality effects were considered for the entire Washington metropolitan region (to study ozone) as well as areas near transit stations (to study carbon monoxide levels). For noise, a distance of 1,000 feet from the proposed alignments was used to determine the number, location, and types of noise-sensitive receptors along the corridor. For neighborhoods and parklands, the study area was generally 300 feet on both side of the proposed alignments and greater in areas where the noise and/or visual impact assessment predicted effects at distances beyond 300 feet.*

Public Comment: In the published document I was unable to locate the applicable Federal Regulation cite such as 23 CFR 777, 40 CFR-1502, etc. As a citizen this information should have been contained in the report in order to perform an effective analysis to ensure that the requirements have been complied with fully. (0189, 0448-E –1)

> ***Response:*** *The Draft, Supplemental Draft and Final EIS' were developed in accordance with FTA regulations governing the transportation and environmental planning process (23 CFR 771) and Council on Environmental Quality's regulations that implementing the National Environmental Policy Act (40 CFR 1500).*

Public Comment: Accordingly, in reviewing the DEIS, I found it inadequate as to prevent a meaningful analysis, and as such I am hereby requesting a supplemental DEIS be undertaken to address my concerns and other concerns raised by concerned citizens. (0189, 0448-E –10)

> ***Response:*** *The Draft, Supplemental Draft and Final EIS have met the requirements of National Environmental Policy Act (NEPA) and FTA regulations implementing (NEPA) and govern the planning process.*

Public Comment: Impact of a Potomac River Crossing up-stream of the American Legion Bridge was not considered. It is submitted that such a crossing would impact on the Dulles Corridor transit routes used to enter/exit DIA both the passenger and commercial traffic. (0427, 0427-E –5)

> ***Response:*** *A new crossing of the Potomac River upstream from the American Legion Bridge is not part of the Dulles Corridor Rapid Transit Project, as defined in Chapter 2 of the Final EIS. In addition, such a bridge is not part of any program, ongoing planning study, or long-range plan.*

Need for Additional Assessment of Impacts

Public Comment: Community impacts deserve serious consideration in project planning and development. Public involvement should be fully integrated within planning and project development. For the community near the Golf Park, I believe the process as implemented failed in this respect. (0148, 0463-L –4)

> ***Response:*** *Comment noted. No effects are projected for communities in proximity to the Golf Park located on Hunter Mill Road. The two Build Alternatives of the Final EIS do not result in any changes in this section of the corridor and no noise, vibration, or visual effects are projected. Any increase in densities allowed by Fairfax County as a result of the Project are not anticipated within this neighborhood.*

Public Comment: The Draft Environmental Impact Statement (EIS) on the Dulles Corridor Rapid Transit Project in the Dulles Corridor is flawed, incomplete and inadequate in its analysis of the impact on Reston residential neighborhoods of this project and accompanying densities. (0454, 0454-E –1)

> ***Response:*** *The Land Use and Socioeconomics Technical Report (June 2002) describes the effects of the alternatives on neighborhoods in Reston. This analysis is supplemented in the Economics and Secondary Development Effects Technical Report (June 2002). The analysis documents that increasing densities in the transit station areas will increase traffic and create the potential for spillover parking that could affect several neighborhoods in Reston, primarily those located along Sunrise Valley Road. These impacts are presented in Sections 3.5 and 3.9 of the Final EIS.*

Public Comment: We would like to express our concern that the Draft Environmental Impact Statement for the proposed Dulles Rapid Transit Project does not comprehensively address effects on the human environment, as required by the National Environmental Protection Act. It is our belief that a project of this magnitude will have residual impact on the residential communities of the historic Hunter Mill Road Corridor and that Congress intended those impacts to be identified and thoroughly evaluated before a Dulles transit alternative is chosen. (0460, 0460-L –1)

> ***Response:*** *No effects are projected for communities in proximity to Hunter Mill Road. The two Build Alternatives of the Final EIS do not result in any changes in this section of the corridor and no noise, vibration, or visual effects are projected. Any increase in densities allowed by Fairfax County as a result of the Project are not anticipated within this neighborhood.*

Public Comment: The study was conducted using "traditional transit" approaches and estimating procedures; however, an undertaking of this magnitude - and the implications of this study - should not be addressed simply from a "transit" perspective. The social and economic perspectives should be examined. (0235, 0235-E –1)

> ***Response:*** *The effects of the proposed alternatives were assessed from a social, environmental, economic, and transportation perspectives as documented in Chapters 3, 4, 5, and 6 of the Final EIS. In addition, the performance of the two Build Alternatives was assessed against the No-Build Alternative in Chapter 10 of the Final EIS.*

B. Supplemental Draft EIS Comments

Public Comments

NEPA Compliance

Public Comment: I requested the project team to explain how it can avoid comparing rail to express bus, AND publishing a Federal Register notice BEFORE embarking on an SDEIS, when the FTA rules read: "A supplement is to be developed using the same process and format (i.e., draft EIS, final EIS, and ROD) as an original EIS, except that scoping is not required." (0016 12-01)

> ***Response:*** *A Notice of Intent was published for the Dulles Corridor Rapid Transit Project Final EIS in the Federal Register on June 26, 2000 (Volume 65, Number 123). Pursuant to 23 CFR Part 771, Environmental Impact and Related Procedures, a Notice of Intent is not required for a Supplemental Draft EIS.*

Public Comment: Because WMATA was selected as the study consultant, the Locally Preferred Alternative recommendation was a forgone conclusion. “Study” and public hearing process nothing more than window-dressing. Federal law requires an independent non-conflicted analysis of the alternatives, and this was not done. (0162 12-1)

Response: *The Draft EIS, Supplemental Draft EIS and Final EIS document the systematic approach that was undertaken to assess the potential effects of the proposed alternatives. Each EIS document analyses the effects of the alternatives, cites the relevant laws and regulations considered, describes the methodologies used, defines the study areas assessed, summarizes the existing conditions in the study areas, predicts the direct and construction related effects, and proposed mitigation measures available to reduce the effects of unavoidable impacts.*

Public Comment: There was no consideration at all to slug lines or HOT lanes. Combining these with enhancements to existing bus service would meet transit needs for the foreseeable future. (0162 12-2)

Response: *While NEPA requires an evaluation of all reasonable alternatives, it allows alternatives to be eliminated prior to detailed studies as long as the reasons for eliminating them are discussed in the EIS. The process used for evaluating the initial list of alternatives for the Dulles Corridor Rapid Transit Project was a two-phase process: initial screening and intermediate screening. The process applied increasingly detailed and comprehensive measures of effectiveness to a decreasing number of alternatives. For the initial evaluation, most measures were qualitative. The alternatives advanced or carried forward for further evaluation at the end of each phase were those alternatives that best met the transportation needs of the corridor, relative to the other alternatives under consideration.*

Neither the Project Team nor VDOT could develop facilities with the express purpose of encouraging just-in-time ridesharing (also known as "slugging" or casual carpooling) because of the tremendous liability risk associated with such activities. While these agencies recognize the benefits that have been gained in the I-95/I-395 corridor through this informal ridesharing arrangement, the random pairing of drivers and passengers inherent in this form of commuting presents risks that most public agencies are not prepared to assume.

Public Comment: Agrees with the article from the American Planning Association regarding cost over-runs, and believes that the Project Team has intentionally underestimated the project costs in order to sway decision-makers. (0162 12-3)

Response*: Chapter 8 of the Final EIS discusses the capital cost estimates and capital funding strategies for the two Build Alternatives. Every effort is being made to avoid cost overruns. The ultimate cost of the LPA relies on a number of assumptions, including project schedule, major cost drivers, inflation rates, expenditure forecast, funding availability, and financing requirements. During the Project's next phase of preliminary engineering, DRPT will prepare a final financial plan for the Wiehle Avenue Extension, which will include an update of the capital cost estimate and a formal risk assessment. Section 8.3 of the Final EIS provides an initial discussion of risks and uncertainties.*

The recent completion (January 2001) of the original Metro 103-mile system was done on or ahead of schedule and considerably under budget.

Public Comment: Suggests that the Project Team is pushing the Metrorail Alternative because interested parties (i.e., the Project Team and decision makers) have a vested interest and could profit from the selection of Metrorail, thereby side-lining the cheaper alternatives. (0162 12-4)

Response: *The Draft EIS, Supplemental Draft EIS and Final EIS document the systematic approach that was undertaken to assess the potential effects of the proposed alternatives. Each EIS document analyses the effects of the alternatives, cites the relevant laws and regulations considered, describes the methodologies used, defines the study areas assessed, summarizes the existing conditions in the study areas, predicts the direct and construction related effects, and proposed mitigation measures available to reduce the effects of unavoidable impacts.*

Public Comment: Again suggests that the Project Team is pushing Metrorail by increasing the costs of BRT in comparison to those of light rail. Supports BRT with HOV lanes because it is the cheapest alternative and would benefit the most people. (0162 12-5)

> ***Response****: Comment noted. Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to us and have been considered by the decision-makers in the selection of the Locally Preferred Alternative (LPA).*

No Comparisons to Alternatives Other Than No-Build

Public Comment: While rail to Tysons alone might be a good idea this SDEIS is still flawed because it does not compare rail to any other alternative than "no build." (0016 0122-2)

> ***Response:*** *Other modes, including the No-Build Alternative were considered in the Draft EIS published in 2002 for the Dulles Corridor Rapid Transit Project. Based on the analysis contained in the Draft EIS, public hearings held in July 2002, and comments received on the Draft EIS, the Metrorail Alternative (T6/Y15) was selected as the LPA by the Commonwealth Transportation Board (CTB) and by the WMATA Board of Directors in late 2002. The purpose of the Supplement al Draft EIS was to provide additional opportunities for the public and agencies to comment on refinements that have been made to the LPA since the publication of the Draft EIS public hearings report.*

Need to Change the Forecast Horizon Year

Public Comment: County staff questions the evaluation of alternatives using a 2025 forecast horizon year. Results for the full LPA should use a broader forecast horizon year given that the full build LPA would be in operation by 2015. County staff does not feel that a 10 year forecast horizon provides an adequate description. (0084 0099-1)

> ***Response:*** *2025 was used as the project horizon year in the Draft EIS, Supplemental Draft EIS, and Final EIS because it allows a comparison to be made of the proposed alternatives in a future year in which they would have achieved their full potential. In addition, the forecast year also reflects the availability of land use, population and economic projections, which are the basis for the technical analyses conducted as part of the NEPA process.*

Concerns about "WMATA/DRPT Roles in the Project

Public Comment: Virginia and WMATA should rethink their use of WMATA as a technical advisor. Much of the project's opposition is vested in a belief that WMATA's involvement in the design and build of the Dulles Corridor extension as a consultant will guarantee massive cost overruns. This concern is vested in the agency's historic record, in its execution of the DEIS as a contractor to Virginia's DRPT and in its executives' attitude towards Virginia as a customer. (0108 0127-11)

> ***Response:*** *DRPT, as the project sponsor, will be the contracting authority for the project's implementation and the recipient of Federal and non-Federal funds. It will acquire right-of-way, apply for environmental permits and bear responsibility for mitigation commitments. DRPT has engaged WMATA as the technical manager for preliminary engineering, final design, construction, and start-up and testing. WMATA has the expertise and resources to assure that the completed project is ready for safe, secure, efficient operations.*

Public Comment: The proposed rail based transit system for the Dulles Corridor is projected to cost over $3.5 billion. Such costly systems provide lucrative long-term contracts, including the contract to WMATA. CEQ Regs Section 1506.5 (c) "prohibits an entity entering into a contract with a federal agency to prepare the EIS when that party has at that time and during the life of the contract pecuniary or other interests in the outcomes of the proposal." Among some, there is a public perception of bias where the LPA is rail.

How were the conflict of interest issues dealt with in regards to WMATA's responsibility for the preparation of the DEIS and SDEIS? Disclosure statements or evaluation of potential conflicts of interest should have been prepared. Are these documents available for public review? (0109 0128-4)

> ***Response:*** *Under the applicable Council on Environmental Quality (CEQ) regulation [40 CFR Sec. 1501.5(b)], WMATA, an interstate compact transit agency, is a joint lead local agency for NEPA purposes, and it is not classified as a retained outside contractor. By its very creation as an interstate compact agency, WMATA's purpose is to plan, finance, construct and operate a comprehensive mass transit system for the Washington metropolitan area, which includes Metrorail, Metrobus and MetroAccess. Thus, it is the most appropriate party to prepare environmental impact statements for transit projects of its system. There is no monetary gain for WMATA or its Compact member jurisdictions from the planning and implementation of the Project. Rather, WMATA will bear additional subsidy payments to operate and maintain the Project. Pertinent WMATA staff members on an annual basis do complete a Confidential Statement of Affiliations and Financial Interests under the policy, Standards of Conduct for WMATA Employees. There has been no disclosure of potential conflicts of interest by WMATA employees. The statements are confidential. As separately required by 40 CFR Sec. 1506.5(c), the WMATA-retained outside contractors, who are involved in the preparation of the EIS documents, signed notarized continuing disclosure statements regarding potential conflicts of interest as to this Project. For project integrity, the lead federal agency, the Federal Transit Administration, will independently review all the EIS documents for NEPA regulatory compliance, among other effects, prior to its final action regarding the proposed Project.*

Public Comment: Faulty Sponsorship: The project has inadequate sponsorship. WMATA is barely capable of running the existing MetroRail system, as evidenced by the frequent newspaper reports of its financial problems. Until it gets its own house in order, it should not undertake such a massive and economically risky undertaking. (0072 0150-5)

> ***Response:*** *DRPT is the Project sponsor and initial owner. WMATA is DRPT's technical manager and will be operator of the completed extension. Under its Metro Matters campaign (see www.wmata.com/about/metro-mattersfactsheet.pdf), WMATA is presently seeking the absolute minimum funding of its near-term capital needs to sustain the Metrorail and Metrobus systems.*

Public Comment: Apparent conflict of interest: The Project also would result in adoption of a fee schedule that rewards DRPT/WMATA as the project managers for selecting the most expensive system rather than the most cost-effective one under the FTA criteria. (0072 0150-8)

> ***Response:*** *The selection of the Metrorail Build Alternative as the proposed Locally Preferred Alternative by the WMATA Board of Directors and the Commonwealth of Virginia Transportation Board in November and December 2002, respectively, was based on the reasons in the Final Recommendations of the Project Team outlined in the Draft EIS Public Hearing Report Supplement (November 2002).*

Clarifications Regarding Analysis Process and Documentations

Public Comment: Please explain how the failure to model any alternatives to Metrorail in Tyson's Corner is consistent with NEPA's clear requirement to consider all reasonable alternatives. Moreover, please explain the legal and regulatory context used to determine that Phase I has "independent transportation utility" and is an MOS of the full LPA. (0063 0151-3)

Public Comment: How were these determinations made, who made them, was there an analysis conducted, and what authority, standards, and guidance were relied upon? If an analysis was conducted, why was it not included in the SDEIS? (0063 0151-4)

Public Comment: Did the SDEIS meet the legal requirements of NEPA process by terminating the rail at Wiehle? That is the legal question to be answered. (0109 0147-2)

Response: *The Project Team, with FTA and in cooperation with FAA, has prepared the Draft EIS, Supplemental Draft EIS and Final EIS in accordance with the provisions of the National Environmental Policy Act (NEPA), as amended. The Scoping Process Report and the Final Alternatives Analysis Report (and its Addendum) document the identification of alternatives and issues and describe the initial and intermediate screening of alternatives, respectively.*

Public Comment: 40 CFR 1502.10 states that index should be detailed enough so that it is useful for the readers. Please explain why the DEIS and the SDEIS did not have an index. (0109 0128-25)

Response: *The Council of Environmental Quality (CEQ) guidance regulation cited refers to a recommended format to be used for environmental impact statements. The Draft EIS, Supplemental Draft EIS and Final EIS meet CEQ requirements; the Table of Contents provides a detailed listing of the EIS' contents, tables, and figures.*

Public Comment: No bus alternative was compared to the new locally preferred alternative (LPA), i.e., rail from West Falls Church to Wiehle Avenue, yet a "no build" option was studied. Probably more important, it appears that neither FTA for VDRPT and WMATA (henceforth, "the project team") placed a notice in the Federal Register that a supplemental DEIS was being pursued -- as is customary for all FTA projects. Perhaps had the public had an opportunity to provide input on the SDEIS from the get-go, the team would have studied a BRT alternative, as it did with the FTA New Starts Evaluation that went on concurrently. (0016 0122-12)

Response: *A Notice of Intent was published for the Dulles Corridor Rapid Transit Project Draft EIS in the Federal Register on June 26, 2000 (Volume 65, Number 123). Pursuant to 23 CFR Part 771, Environmental Impact and Related Procedures, a Notice of Intent is not required for a Supplemental Draft EIS.*

Project Phasing Concerns

Comment: The SDEIS relies on phased construction "to spread the costs of construction over a longer period of time to reduce annual funding needs" since FTA "may consider the proposed subsequent phase for FTA funding in the future, but has made no commitment to do so. FTA will make a decision on the funding of the first phase without regard to possible future phases." (SDEIS at 1-2). Under NEPA protocols, a severed project which may never continue into phase 2 cannot masquerade as a phased project and does not qualify as a single, segmented project that could be feasibly implemented. The SDEIS must analyze only what the authors refer to here as Phase 1. (0068 0173-4)

Response: *The Supplemental Draft EIS discussed differences in impacts due to phased construction of the LPA. To emphasize the independent transportation utility of the 11.6 mile Metrorail extension to Wiehle Avenue, the FTA and DRPT have renamed 'LPA Phase 1' to be 'Wiehle Avenue Extension'.*

DEIS/SDEIS is not adequate

Public Comment: A New DEIS is required: The SDEIS makes such material changes to the previously-submitted DEIS that it is de facto a new project that needs its own complete DEIS. (0072 0150-1)

Response: *The Supplemental Draft EIS did not make changes but rather discussed differences in impacts due to phased construction of the LPA.*

Public Comment: Deficiencies in claimed environmental benefits: The SDEIS fails to document accurately the environmental impacts that will result from placing the terminus of Phase I at Wiehle Avenue, it fails to properly advance a mitigation plan, and it makes no attempt to show a method to fund the mitigation plan to the extent a rudimentary one is proposed. (0072 0150-9)

Response: *The Project Team, with FTA and in cooperation with FAA, has prepared the Draft EIS, Supplemental Draft EIS and Final EIS in accordance with the provisions of the National Environmental Policy Act (NEPA), as amended. DRPT is the project sponsor. In coordination with VDOT, Fairfax County, Loudoun County and the Town of Herndon, it has determined the improvements for station access, the funding of such improvements, and their ownership and maintenance. Section 6.4 of the Final EIS discusses these roadway improvements.*

Contractors Used in Preparation of DEIS/SDEIS

Public Comment: Identify the contractors who prepared the DEIS and the SDEIS who presently hold contracts with DRPT or with WMATA. Identify the contractors who prepared the DEIS and the SDEIS and can you categorically confirm right now that to avoid conflict of interests, that none of the contractors nor their substantially related entities will be awarded any contracts for the construction of this project in contravention to the aforementioned CEQ Regs. (0109 0128-5)

Response: *The WMATA consulting firms that have prepared the Project's EIS are listed in Appendix A, List of Preparers. The following statement is at the end of Appendix A of the Draft EIS: References throughout this document [Draft EIS] to Capital Transit Consultants refer to a consortium of consulting firms under contract to the Washington Metropolitan Area Transit Authority (WMATA) to provide environmental, planning, engineering, architectural, and management services in support of the preparation of this document. Capital Transit Consultants is a consortium of four firms under separate contract to WMATA. Member firms in the consortium who assisted in the preparation of this document are: DMJM/DELEUW (a joint venture of DMJM+HARRIS, Inc. and Parsons Transportation Group and subconsultants to the joint venture) and Parsons Brinckerhoff Quade & Douglas and subconsultants. The other two members of the Capital Transit Consultants consortium did not participate in the preparation of this document because of potential involvement in the implementation phase of the project. The above three WMATA consulting firms that have prepared the Project's EIS did complete Disclosure Statements on Conflicts of Interest in accord with the CEQ regulation and FTA rule. There was no disclosure of any conflicts of interest. Copies of these disclosure statements are included in Appendix A of the Final EIS.*

Project Scoping

Public Comment: Apparently due to the way the rail proponents are conducting their high-stakes and high-cost business, this SDEIS has been manipulated in its scoping. The effect has been to keep out meaningful debate and informative input. In fact, my request for a meaningfully scoped SDEIS was rejected by WMATA months ago. (0068 0076-2)

Public Comment: How is this extension of Metrorail one bit different than any other project, independent project, that has ever been considered, Phase 1. How would Phase 2 not be a completely independent separate project? It seems to me these are two completely different projects and, as a different project, an independent project, Phase 1 deserves it own complete DEIS. (0072 0082-2)

Public Comment: The scoping of the SDEIS which, we think, is woefully inadequate in that it does not perform the alternatives analysis that is required by the law and the regulations on this topic. (0072 0082-3)

Response: *FTA, the lead Federal agency, DRPT and WMATA regard the Project to be the 23-mile Full LPA that will have two construction phases. Therefore, the Project Team with FTA and in cooperation with FAA has properly prepared the Draft EIS, Supplemental Draft EIS and Final EIS in accordance with the provisions of the National Environmental Policy Act (NEPA), as amended.*

13.0 PROJECT IMPLEMENTATION

13.1 Schedule/Process for Implementation

A. Draft EIS Comments

Regional Agency Comments

Public Private Partnerships

Regional Comment: The Commonwealth should place the design and construction of the preferred alternative in the hands of a Virginia PPTA. Then the best possible cost practices can be applied to blend vision and new thinking with the best of the existing WMATA rail system. (0133, 0221-M –2)

Regional Comment: We believe the Commonwealth should place the design and construction of the preferred alternative in the hands of the Virginia PPTA, the goal being to marry the best possible cost practices with vision and new thinking, with the best of the existing WMATA rail system. (0133, 0133-T – 2)

Regional Comment: To optimize ridership and to reduce the long-term subsidy burden, Virginia should contract with a highly qualified private sector or PPTA team to design, construct, and if at all possible, operate the Dulles Corridor rail system. (0133, 0405- L-14)

> ***Response:*** *On June 11, 2004, DRPT signed a Public-Private Transportation Act (PPTA) Comprehensive Agreement with Dulles Transit Partners, a partnership of Bechtel Corporation and Washington Group International, to engineer, design and build the for the Full LPA, a 23-mile Metrorail extension. The benefits of PPTA for this project are explained at DRPT's web site, www.drpt.virginia.gov.*

Local Agency Comments

Estimated Dates for Implementation

Local Comment: We understand that the state is negotiating with the private sector team, Dulles Transit Partners, to create a public private partnership to engineer and construct the project. We are excited at this opportunity for the private sector to participate and look forward to a design-build process that provides the opportunity to bring rail out to the corridor in advance of the projected 2010 completion date. (0233, 0426-M –36)

Local Comment: Implement the Metrorail alternative as soon as legally and financially feasible, with strong consideration to provide immediate service through the Corridor to Dulles Airport, given it is the most cost-effective option to best serve Hunter Mill residents and businesses. (0437, 0437-E –5)

Local Comment: Immediately begin to implement additional enhancements to the rapid express bus service in the Corridor as interim service prior to Metrorail. (0437, 0437-E –6)

> ***Response:*** *The assumed opening years of the two Build Alternatives of the Final EIS are 2011 for the Wiehle Avenue Extension and 2015 for the Full LPA. The opening years are based on the likely availability of federal and non-federal funding for the project, timely FTA approval to enter final design, timely completion of FFGA negotiations, timely execution of the FFGA and the use of PPTA to procure the design/build contract.*
>
> *The availability of funding will have an impact on the implementation schedule for the two phases of the Full LPA. There are many New Starts projects across the nation that are competing for federal funding, and the Federal Transit Administration may not be able to commit funding in the*

amount needed to meet the schedule. Likewise, there are other transportation needs in the Commonwealth, Fairfax and Loudoun Counties, and at Dulles International Airport, all of which require funding to complete, and the non-federal funding partners may not be able to commit the funds needed to meet the aggressive schedule of the Full LPA. DRPT could choose to finance the funding shortfall but this would increase the capital cost of the Full LPA significantly.

DRPT and WMATA have determined that this project, if advanced, should be constructed using the design/build method. This method has been used successfully on other recent major transit projects and can save time because the owner does not have to first advertise for design contracts, and then advertise for construction contracts after the design is complete. On June 11, 2004, DRPT signed a Public-Private Transportation Act (PPTA) Comprehensive Agreement with Dulles Transit Partners, a partnership of Bechtel Corporation and Washington Group International, to engineer, design and build the for the Full LPA, a 23-mile Metrorail extension. The benefits of PPTA for this project are explained at DRPT's web site, www.drpt.virginia.gov

Local Comment: Neither is a secret public-private partnership an option, the details of which are negotiated behind closed doors and without meaningful citizen involvement but which stick taxpayers with increased payments-- in this case higher tolls on the Dulles Toll Road. (0151, 0297-E –4)

Response: *On June 11, 2004, DRPT signed a Public-Private Transportation Act (PPTA) Comprehensive Agreement with Dulles Transit Partners, a partnership of Bechtel Corporation and Washington Group International, to engineer, design and build the for the Full LPA, a 23-mile Metrorail extension. A copy of the Comprehensive Agreement is available at DRPT's web site, www.drpt.virginia.gov.*

Need to Identify Construction Staging Areas

Local Comment: It is understood that significant portions of construction will be confined to the current Dulles Access and Toll Road corridor. As such many of the attached recommendations will be irrelevant to this project. However, they are provided with the understanding that with projects of this nature construction staging areas are often used outside the right-of-way. Often these do not appear on the construction plans and requests for comment but should be treated as a part of the construction. (0306, 0306-A –7)

Response: *The Final EIS and the final General Plans evaluate and depict potential contractor work areas.*

Public Comments

Estimated Dates of Implementation

Public Comment: I want to know what year we can expect it to be completed. No more "maybe 2010, maybe 2017…". Even a range of 2-3 years is fine. Of course the sooner the better. (0114, 0114-E –3)

Public Comment: Think about it. We are not much like the metropolitan area we were 30 years ago. Most of us don't have to go into D.C. to work, live, or play. We do it here in Tysons, in Reston, in Bethesda, or other areas. We are not a collection of bedroom communities. We are cities in our own right, very different from the vision of metrorail which was really designed to bring people from the suburbs to the city. So the question, how do we solve our commuting nightmares that we face now? The EIS states that metrorail will be in operation by 2010, but it's more likely that the system wouldn't begin operations out to Dulles until at least 2015. (0183, 0183-T –2)

Public Comment: Finally, I hope that the project will move forward expeditiously. I am willing to pay my fair share of the cost through increases in toll road fees, a local sales tax increase, and by other appropriate means. (0194, 0216-M –4)

Public Comment: Metrorail service should begin as quickly as technically possible. Operational segments should come on line as they are completed rather than wait for the entire line to be finished. Service to Tysons could be opened in 2006; to Reston 2007 and to Dulles 2010. If for some reason service through Tysons threatens to delay implementation of service to the rest of the corridor, something akin to the old alternative T-8 should be implemented. This would provide rail service straight down the median of the Dulles Corridor to the rest of the corridor while the issues and construction of the Tysons' stations are settled. Actually, the inclusion of service down the full length of the corridor using the median might be desirable in any case. It would permit an alternate route that may be operationally worthwhile. (0208, 0208-M –3)

Public Comment: The members of the board of directors of LEADER are committed to putting their resources and their position in the region on the line to make Dulles rail a reality. The only thing they ask in return is that delays in this project be minimized and that the ultimate product serves the most people possible. When one thinks about future growth in the Dulles corridor, realizing that over the next 20 yrs. The volume on the already congested toll road could double and reflecting on how long it has taken for this project to reach this stage, the urgency of moving to rail as quickly as possible becomes clear. (0154, 0154-T –4)

Public Comment: Suggest development of a strategy for rail that takes advantage of interest in rail to Tysons as soon as is feasible but no later than 2010 and rail throughout the rest of the corridor to Loudoun as soon as financing can be secured from the federal government. The strategy should provide the ability to implement transit enhancements in the corridor beyond the baseline until rail can be provided. The strategy should examine the benefits -- if any --- of providing rail transit in the Reston-Herndon-Dulles-Loudoun section in a way that allows a few stations to be built initially concurrently with the Tysons section to provide service to Washington-Dulles International Airport as soon as possible and allow for the construction of fill-in stations on a different schedule. The related costs for this strategy should be examined prior to finalizing the EIS. (0396, 0396-L –3)

Public Comment: Also, when you prepare the Final Environmental Impact Statement, you should be a bit more realistic in your time schedule. The current schedule is overly optimistic at best, especially when it comes to funding the project. In relation to the time schedule, I did read one comment by someone who either spoke at a hearing or wrote to one of the local papers. This person asked why the "pure" rail option(s) in the Draft EIS did not include a recommendation, or option, that construction would start at both ends, as was done with the Transcontinental Railroad back in the mid-1800's. Surely this would speed up completion? (0401, 0401- L-7)

Public Comment: Finally, BRT could be up and running in less than two years, with improvements such as additional dedicated right-of-way built over time. Metrorail, even under the most optimistic projections, will not be operational for nearly a decade. (0444, 0444-E –5)

Public Comment: Also, when you prepare the Final Environmental Impact Statement, you should be a bit more realistic in your time schedule. The current schedule is overly optimistic at best, especially when it comes to funding the project. In relation to the time schedule, I did read one comment by someone who either spoke at a hearing or wrote to one of the local papers. This person asked why the "pure" rail option(s) in the Draft EIS did not include a recommendation, or option, that construction would start at both ends, as was done with the Transcontinental Railroad back in the mid-1800's. Surely this would speed up completion? (0401, 0401- L-7)

> ***Response:*** *The assumed opening years of the two Build Alternatives of the Final EIS are 2011 for the Wiehle Avenue Extension and 2015 for the Full LPA. The opening years are based on the likely availability of federal and non-federal funding for the project, timely FTA approval to enter final design, timely completion of FFGA negotiations, timely execution of the FFGA and the use of PPTA to procure the design/build contract.*

The availability of funding will have an impact on the implementation schedule for the two phases of the Full LPA. There are many New Starts projects across the nation that are competing for federal funding, and the Federal Transit Administration may not be able to commit funding in the amount needed to meet the schedule. Likewise, there are other transportation needs in the Commonwealth, Fairfax and Loudoun Counties, and at Dulles International Airport, all of which require funding to complete, and the non-federal funding partners may not be able to commit the funds needed to meet the aggressive schedule of the Full LPA. DRPT could choose to finance the funding shortfall but this would increase the capital cost of the Full LPA significantly.

DRPT and WMATA have determined that this project, if advanced, should be constructed using the design/build method. This method has been used successfully on other recent major transit projects and can save time because the owner does not have to first advertise for design contracts, and then advertise for construction contracts after the design is complete. On June 11, 2004, DRPT signed a Public-Private Transportation Act (PPTA) Comprehensive Agreement with Dulles Transit Partners, a partnership of Bechtel Corporation and Washington Group International, to engineer, design and build the for the Full LPA, a 23-mile Metrorail extension. During preliminary engineering, DRPT and WMATA will determine proposed construction sequence.

Public Comment: To those of you that have the power to make something happen, you need to be looking at the entire picture not just the political aspects of this. You have to consider all the states, Maryland, Virginia, West Virginia and Washington, D.C. Commuters come from all these states and district, crossing over into each of these areas daily to reach their places of employment. You all have to work together because this affects everyone. We can't wait until 2010 or 2015 for some kind of transit system to be completed to find relief, we need something now. We can't wait another 30 years for maybe something to be done. Instead of hearing some really serious ideas, all we hear is more politics. And as a result nothing will ever be done. I am presently 55 years old and I dare to say I will never see anything productive happen in my lifetime. (0123, 0123-L –4)

Response: *The Dulles Corridor Rapid Transit Project is being planned in the context of the regional transportation system for the entire Washington metropolitan area. As part of the Metropolitan Washington Council of Government's (MWCOG) long-range plan, the project is an integral part of the planned regional transportation network. The Dulles Corridor Rapid Transit Project is expected to attract many patrons who are not currently transit riders, many of whom will come from outside the immediate corridor.*

The assumed opening years of the two Build Alternatives of the Final EIS are 2011 for the Wiehle Avenue Extension and 2015 for the Full LPA. The opening years are based on the likely availability of federal and non-federal funding for the project, timely FTA approval to enter final design, timely completion of FFGA negotiations, timely execution of the FFGA and the use of PPTA to procure the design/build contract.

Public Comment: What justifies waiting seven to 15 years longer for metrorail to start service to Dulles and Loudoun than it will take to get the BRT in operation? (0138, 0241-T –3)

Response: *BRT would have been much easier to implement. Its vehicles would have run on existing highway lanes. Metrorail will be more complicated to construct and requires a dedicated right-of-way, the construction of aerial, at-grade, and underground guideway, stations, yards and ancillary facilities. However, the BRT, BRT/Metrorail and Phased Implementation Alternatives were eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Addressing the Needs of Commuters and Tourists

Public Comment: The plans are completed. The right of way was wisely put in the Dulles Corridor when built. We should make it a matter of national and regional and local priority to get this line built within

several years at most. It is a national disgrace that a person arriving at our capital city's main international airport cannot take a metro-train into Washington D.C.; and it is a national disgrace if we can not fix this in a matter of years (at most). (0083, 0083-CC-1)

> ***Response**: Providing direct service to Dulles International Airport is a key goal of this project, and is included in the project's Purpose and Need.*
>
> *The right-of-way for the project is largely in place in the median of the Dulles Connector Road, the Dulles International Airport Access Highway, at Dulles International Airport, and in the Dulles Greenway. There is, however, additional right-of-way that must be procured for stations and parking areas, for the service and inspection yard, and for portions of the alignment in Tysons Corner. Procuring this right-of-way must be accomplished in accordance with federal and Commonwealth laws.*
>
> *The assumed opening years of the two Build Alternatives of the Final EIS are 2011 for the Wiehle Avenue Extension and 2015 for the Full LPA. The opening years are based on the likely availability of federal and non-federal funding for the project, timely FTA approval to enter final design, timely completion of FFGA negotiations, timely execution of the FFGA and the use of PPTA to procure the design/build contract.*

Recommendation for Architectural Firms

Public Comment: I am a resident of Fairfax, VA and unfortunately I could not make the time to come to the recent meetings but I'm sending in my comments that Foster & Partners, Wilkinson-Eyer or Alsop & Stormer architectural firms should be chosen as candidates for extension project into Dulles Airport. They are world renowned for their work and recently worked on the 5 billion dollar extension of London's Jubilee Line. (0113, 0113-E –1)

> ***Response**: On June 11, 2004, DRPT signed a Public-Private Transportation Act (PPTA) Comprehensive Agreement with Dulles Transit Partners, a partnership of Bechtel Corporation and Washington Group International, to engineer, design and build the for the Full LPA, a 23-mile Metrorail extension. The firms that you mentioned are welcome to submit proposals to Dulles Transit Partners.*

Need to Comply with the Americans with Disabilities Act

Public Comment: We also need to have expanded curb-to-curb paratransit system as part of being able to get into the neighborhood so people with disabilities and persons who do not drive can access the terminal station that is proposed, or any other station within the rapid transit project. (0259, 0259-T –4)

> ***Response:** MetroAccess currently serves the Dulles Corridor and should be available upon the opening of the Metrorail Extension. MetroAccess provides curb-to-curb transportation service for eligible riders. MetroAccess operates service to any location in the District of Columbia; to Montgomery and Prince George's counties in Maryland; and to Arlington and Fairfax counties, the cities of Alexandria, Fairfax and Falls Church in Virginia that is within three-quarters of a mile of any fixed-route service operated by Metrorail, Metrobus or any of the above local jurisdictions. MetroAccess provides service during the same hours and on the same days as does regular fixed-route service. All stations will comply with the Americans with Disabilities Act.*

Public Private Partnerships

Public Comment: We request that all financial arrangements between any member of the study team, the public private partnership, WMATA, campaign and coordinating officials, consultants, and any of the groups who comment on this study be made available within the next month. (0162, 0162-M –20

Public Comment: And, finally, are our elected officials willing to hand over the development and financing responsibilities to private people that are not subject to the same decision making transparency and public hearing process as public agencies are and not required to do a Federal environmental impact statement and are expecting to make a profit on this endeavor that may necessarily increase the profit costs? (0181, 0181-T –9)

Public Comment: We request financial arrangements between members of the study team, public-private partnership, WMATA, et cetera, be made completely public so we may study the interrelations. (0184, 0184-T –17)

> ***Response:*** *On June 11, 2004, DRPT signed a Public-Private Transportation Act (PPTA) Comprehensive Agreement with Dulles Transit Partners, a partnership of Bechtel Corporation and Washington Group International, to engineer, design and build the for the Full LPA, a 23-mile Metrorail extension. A copy of the Comprehensive Agreement is available at DRPT's web site, www.drpt.virginia.gov.*
>
> *There are no financial relationships between the WMATA consultants who prepared the Final EIS and the firms that comprise Dulles Transit Partners. In addition, there is no financial or contractual relationship between WMATA and Dulles Transit Partners.*

Public Comment: We want to know if the sponsorship of the current public-private partnership will wish to continue with a final choice of bus rapid transit combined with private transit, with no firm commitment to the wasteful extension of rail beyond Tysons Corner, which we might call Amtrak to Dulles. We are not sure that the present team wants to do that. (0184, 0184-T –8)

> ***Response:*** *After the public and interagency review and comment on the Draft EIS, in November and December 2002, the WMATA Board of Directors and the Commonwealth Transportation Board respectively selected the Metrorail Build Alternative as the Locally Preferred Alternative. The BRT, BRT/Metrorail and Phased Implementation Build Alternatives were eliminated from further consideration.*
>
> *On June 11, 2004, DRPT signed a Public-Private Transportation Act (PPTA) Comprehensive Agreement with Dulles Transit Partners, a partnership of Bechtel Corporation and Washington Group International, to engineer, design and build the for the Full LPA, a 23-mile Metrorail extension. A copy of the Comprehensive Agreement is available at DRPT's web site, www.drpt.virginia.gov.*
>
> *The selection of the LPA and the execution of the PPTA comprehensive agreement were separate acts that followed separate processes.*

B. Supplemental Draft EIS Comments

Local Agency Comments

Land Use Forecast

Local Comment: While 2025 as a forecast horizon year for the Draft EIS may have been appropriate, County staff do not feel this is the case for the Supplemental Draft EIS. The Draft EIS did not anticipate the Locally Preferred Alternative being developed in two phases. Additionally, the Draft EIS anticipates the Locally Preferred Alternative being operational in 2010. The Supplemental Draft EIS anticipates the Locally Preferred Alternative being developed in two phases with phase 2 being operational in 2015. County staff believes that these differences necessitate that a different forecast horizon be used when evaluating the alternatives in the Supplemental Draft EIS**.** (0084 13-1)

> ***Response:*** *The Project Team has used the Metropolitan Washington Council of Government's (MWCOG) Cooperative Land Use Forecasts - Round 6.3, which does have a later forecast year*

of 2030. However, to remain consistent with past NEPA analyses and results that are documented in the Draft EIS and Supplemental Draft EIS, the Team will retain a forecast year of 2025 for the analyses in support of the Final EIS.

Public Comments

Mitigation Plan and Monitoring is Needed

Public Comment: A mitigation plan, ongoing monitoring of the effectiveness of mitigation measures and an independent managing entity of stakeholders, including community representatives, to oversee and monitor implementation of the mitigation plan to ensure agencies comply with their mitigation responsibilities. (0087 0102-11) (0089 0104-11) (0099 0115-11) (0104 0121-9)

Public Comment: A mitigation plan be included in the final EIS to designate the specific mitigation responsibilities of each agency (to include ongoing monitoring to evaluate the effectiveness of mitigation measures), along with cost share and implementation timeline. (0026 0027-17)

Public Comment: A managing entity be designated to coordinate implementation of the mitigation plan and to ensure that individual agencies comply with their mitigation responsibilities by monitoring implementation of mitigation measures and reporting to stakeholders. This managing entity should include representatives of transit and transportation agencies and stakeholders such as property owners and tenants, civic associations, and elected officials. (0026 0027-18)

Response: *DRPT, the project sponsor, will prepare, implement and monitor a mitigation plan, based on the mitigation commitments in the FTA Record of Decision. A summary of proposed mitigation measures is provided in Chapter 2 of the Final EIS. FTA and the state agency responsible for a particular resource area will monitor the effectiveness of the mitigation measures implemented to offset the Project's adverse effects.*

S.0 EXECUTIVE SUMMARY

A. Draft EIS Comments

State Agency Comments

Need for Further Explanation of Environmental Effects

State Comment: Pg S-27, 4th paragraph. (Summary, Environmental Effects) - Next to the discussion for secondary effects of increased development at transit stations, the sidebar comments (right margin) states one of the potential positive effects as being "Reduction in traffic congestion". By itself this statement appears counter-intuitive (you would expect more traffic congestion caused by increased development, as only a portion of new trips are captured by transit). Suggest the margin comment be further explained, such as by "Potential positive effects of concentrated vs. more spread out development". (0421, 0421-A –14)

> ***Response:*** *In the Executive Summary of the Final EIS, the Project Team has replaced the bullet with one that reads '- Enhanced mobility'.*

Public Comments

Use of Photographs to Illustrate Conditions

Public Comment: Even your literature for the unsuspecting public is deceptive, seeking to portray rail as a panacea for alleviating congestion, air pollution and "sprawl." The photos of a congested freeway on page 2 of the slick-four-color "Executive Summary" with a rail station superimposed at Tysons showing a near empty Route 7 in the background is one such example. (See Exhibit 5). Another example (Page S-32) shows a congested freeway captioned: "Dulles Connector Road." That is not correct. This is a photograph of the northbound lanes of VA 123 (an arterial highway, not an access controlled facility such as the Dulles Connector) as it crosses under I-495. (Exhibit 6). (0112, 0462-L –29)

> ***Response:*** *The photographs referenced were not intended to mislead the public. Rather they were meant to communicate that the Dulles Corridor Rapid Transit Project is intended to provide mobility benefits to users. The Executive Summary of the Final EIS does not use the photographic simulation or the photograph that this comment addresses.*

B. Supplemental Draft EIS Comments

No comments pertaining to this topic were received.

GENERAL PLANS

A. Draft EIS Comments

State Agency Comments

Design Considerations

State Comment: Comments below apply to most sheets in a series but have been identified at sheet first encountered.
[a]* Sheet 015 L1 Alignment - Cross over location at 1910+00 is pushing curve out at sta. 1900+00 and will require significant roadway work due to overlap. Can this cross over location be shifted?
[b]* Sheet 103 Sta. 1869+00 Most of gore as loop meets EB Dulles Greenway will need to be reconstructed. Match line likely further back.
[c]* Sheet 019 Sta. 1820+00 1815+00 Can curve be made shallower (increase radius) shifting rail station 1810+00 slightly South East to avoid reconstruction of WB Dulles Greenway.
[d]* Sheet 026/30 – Sta. 1782+00 has a possible SWM pond located in off ramp gore. This would be an un-ideal location as potential hazard to vehicles leaving the road. Would alternate site be available to the southeast of the ramp or further north?
[e]* Sheet 30 - what is clearance from rail structure to shoulders may require roadway widening (bow out) as 6th lane continues in this area. The relatively flat skew at 1757+00 will require a relatively large span bridge does vertical alignment allow for required structural depth and clearance over roadway?
[f]* Sheet 42 - Sta 1480+00 SWM pond widened - evaluate need if further guard rail is required due to proximity of hazard to road. Provide access from Worldgate Dr.
[g]* Sheet 43 - Will pedestrian bridge have adequate clearance over Herndon Park and Ride Ramp Structure?
[h]* Sheet 43/44 - Sta. 1440+00 skew of station results need to rebuild EB DAAR - Can different skew or shallower curve/transit be used to stay within existing DAAR bubble and lessen impacts?
[I]* Sheet 44 - Extend guardrail along ramp to protect TBS/RTC
[j]* Sheet 50 - 1275+00 SWM/BMP protect with guard rail - how will it be accessed or maintained? 1260+00 SWM/BMP will it be maintained / accessed from Sunset Hills?
[k]* Sheet 51 Sta. 1232+00 SW quadrants SWM pond - Coordinate will VDOT Hunter Mill Road Project. May result in joint pond within Loop.
[l]* Sheet 56 - Sta. 1090+00 to 1080+00 drafting issue show the rail alignment within the median. If shoulder really needed to be rebuilt, indicate on other plans.
[m]* Sheet 57 - Configure SWM pond sta. 1061+0 to avoid rebuilding shoulder and guardrail on WB DTR
[n]* Sheet 58 - Sta. 1030+00 structure is spanning loop ramp, a more relaxed curve could allow column placement in area between DTR/outer ramp and loop. This would also pull column out of gore Sta. 1026+00 where it presents a hazard. This might only be achievable if cross over location is moved.
[o]* For Tysons Corner area please incorporate comments made during co-location study.
[p]* Sheet 059 Frontage Road should be maintained between Westwood and Spring Hill Road. Ramp or CD road may some day tie into frontage road system.
[q]* Sheet 060 at Sta. 980+00 Verify that frontage road lane shift at portal meet min. standard.
[r]* Sheet 061 Sta. 946+00 Verify that underground rail (any alternative) is below any interchange configuration with International Drive below Chainbridge Road with Chainbridge Road at present day elevation.
[s]* Sheet 64 Sta. 880+00 - Can curve be modified to avoid column near ramp gore or in Rte. 123 shoulder? Possibly shift to North side of 123.
[t]* Sheet 78 Sta. 980+00 - Ensure TPSS 5 is sufficiently below grade so that interchange configurations shown in Tysons co-location study are not effected or impacted.
[u]* Sheet 79 Station 969+00 - Is blocked out area offset not to impact Route 123/7 configurations shown in Tyson's Co-location study. Move EA out of loop ramp.
[v]* Sheet 82 - See comments for sheet 58
[w]* Sheet 85 - Ensure rail structure is sufficiently below grade to not impact Interchange at Rte. 123/International Drive if Chain Bridge Road Is maintained at present grade. This may be a more stringent requirement than shown in the Co-location Study. Any lack of clearance should be resolved prior

to any construction.
[x]* Sheet 87 - Is Old Spring House Road being realigned or modified?
[y]* Sheet 88 - See comments for Sheet 64
[z]* Over all "T-9 Design Option" with adequate vertical clearances is the alignment that impacts existing and potential future highway improvements the least, while meeting railway over-all objectives. (0421, 0421-A –35)

Response: *The Project Team prepared the following responses and revised the General Plans where noted. References to specific drawings reflect the Final EIS final General Plans unless otherwise noted.*

[a] The crossover location as shown is based on operational requirements for a terminal station. It was placed in one of the few tangent areas available in the median where impacts to the adjacent Greenway could be minimized. (GPN-PP-002)

[*b] Ramp adjustments, including the precise location of the transition between new and existing pavement in the ramp and gore areas, will be addressed during the preliminary engineering phase. (GPN-PP-003)*

[c] The current alignment as designed minimizes the reconstruction to the WB Dulles Greenway. Increasing the radius as suggested would impact the EB Dulles Greenway east of the Route 606 station. This alignment will be further studied in preliminary engineering to assess whether the impacts to the WB Greenway can be further reduced. (GPN-PP-009)

[d] The topographic mapping for this area shows this corner as the lowest point in the quadrant, which would make it suitable for a pond because runoff drains to this point already. The possibility of relocating the pond north will be evaluated during preliminary engineering phase. All adjacent roads will be protected from ponds in accordance with federal and VDOT standards for roadside barrier protection. (GPN-PP-010)

[e] Sheet 118 currently shows approximately 18' of clearance (more than the 16'-6" minimum) over the lanes of the EB Greenway with a structure depth of approximately 9' from top of rail. All clearances will meet VDOT design criteria. (GPN-PP-011)

[f] This is an existing pond that is in operation. If the drainage analysis during the preliminary engineering phase indicates a need for additional stormwater detention capacity, modifications will be included. Access and guardrail protection will be designed during preliminary engineering in accordance with federal and VDOT standards for roadside barrier protection. (GPN-PP-026)

[g] As indicated in the General Plans (the pedestrian bridge will provide 17'-0" of clearance over the existing ramp. (GPN-A-300-HM)

[h] Several options were examined for the Herndon-Monroe Station location and the adjacent track alignment. Of the alignments studied, the current design has the least overall impacts to the DIAAH and adjacent bridge structures. Efforts will be made during preliminary engineering to minimize relocations of the DIAAH in either direction. (GPN-PP-027)

[I] Guardrail placement will be designed during preliminary engineering in accordance with federal and VDOT standards for roadside protection. (GPN-PP-028)

[j] Guardrail placement will be addressed during the preliminary engineering phase. Proposed pond locations throughout the corridor must also be subjected to further analysis during preliminary engineering. If this pond remains at its current location, efforts may be made to obtain access for pond maintenance through the adjacent parking lot. (GPN-PP-033) The pond at STA 1260+00 may have its access through the wide cleared swath of the existing woods. (GPN-PP-034)

[k] The General Plans show approximate sizes, configurations, and locations for all stormwater management facilities. The locations are based on optimum conditions and must be analyzed further during the preliminary engineering phase of the Project, when other factors, including co-location with planned or existing facilities, will be taken into account before final placement of stormwater management facilities. (GPN-PP-035)

[l] Refer to drawing GPN-PP-042 for a more accurate depiction of the alignment relative to the median in this area.

[m] Refer to drawing GPN-PP-043 for a more accurate depiction of the pond. The General Plans show approximate sizes, configuration, and locations for all stormwater management facilities. During the preliminary engineering phase of work, configurations will be developed that minimize or eliminate conflicts with other facilities.

[n] Based on column spacing of approximately 100 to 120 feet, it appears that columns supporting the proposed aerial structure could be located outside of the immediate gore area. Column placement will be examined in more detail during preliminary engineering. The pocket track as shown on the plans cannot be relocated because this would affect the proposed location of the Tysons West station. (GPN-PP-044)

[o] The designs for the various alignment options in Tysons Corner reflected comments incorporated during the VDOT co-location study. To the knowledge of the Project Team, the LPA in Tysons Corner neither precludes nor accommodates the proposed roadway improvements of the co-location study. Additional coordination with VDOT will continue during preliminary engineering to resolve any outstanding issues with co-location.

[p] Maintaining the current frontage road system was a design assumption for all alignment options and will be carried through the preliminary engineering phase for the selected LPA. (GPN-PP-046)

[q] All relocated frontage roads will be designed to meet all applicable VDOT or Fairfax County design criteria. (GPN-S-011)

[r] The LPA Alignment T6 does not preclude a future grade separation of International Drive and Route 123. (GPN-PP-050 & 051)

[s] As part of the Supplemental Draft EIS and revised General Plans, the Project Team eliminated a pocket track east of Tysons East Station and realigned the oblique aerial crossing of Route 123 in order to reduce the costs and visual effects of a complex crossing. The result is that the horizontal alignment is no longer in the referenced gore area. Column placement will be examined in more detail during preliminary engineering. Efforts will be made to locate columns to minimize or eliminate impacts to existing facilities. (GPN-PP-056)

[t] An underground traction power substation in an underground section of Metrorail would typically be located above the Metrorail tracks so that work trains might deliver replacement equipment. Since TPSS 5 in that type of location would likely conflict with the proposed Route 7 interchange with Westpark Drive, the location and configuration of underground TPSS 5 will be adjusted as necessary during the preliminary engineering. (GPN-PP-103)

[u] The current location of the surface South Entrance Pavilion for Tysons Central 7 Station will be examined in more detail during the preliminary engineering phase and may be relocated further west to avoid any conflicts with proposed Route 7 / Route 123 interchange improvements. Final location of emergency access (EA) shafts will be addressed during preliminary engineering phase. EA requirements specify that their location be adjacent to (but not below) a roadway or parking area to allow access for fire and rescue vehicles. (GPN-PP-050)

[v] Column placement will be examined in more detail during preliminary engineering. It appears that columns could be located outside of the gore area without significant changes to alignment geometry. (GPN-PP-044)

[w] The LPA Alignment T6 does not preclude a future grade separation of International Drive and Route 123. (GPN-PP-050 & 051)

[x] Yes, Old Spring House Road is being realigned in accordance with Capital One development plans, such that the Tysons East Station does not straddle the roadway. (GPN-A-100-TE)

[y] See response(s) above.

[z] Alignment T9 and T9 Design Option were eliminated from consideration after the agency and public review and comment period on the Draft EIS.

State Comment: Station at Route 28 Stop has a proposed overpass by others shown with no tie into North Green Drive. Given that this road bisects the development and parking of the South Station and will profoundly affect entrance to North Station, there needs to be an agreement by builder of over pass prior to the construction of these stations and the dedication of right of way (0421, 0421-A –24)

Response: *The Project Team agrees that the alignment, associated right-of-way, and construction schedule for this overpass must be resolved as preliminary engineering advances. The lead agency for this effort is Fairfax County, which has identified this overpass within its Comprehensive Plan.*

State Comment: Sheet 774, Tysons West Station - The frontage road between Westwood Center Drive and Spring Hill Road needs to be available for the frontage road system. (0421, 0421-A –27)

Response: *The station, guideway, and their structural supports will be designed to maintain the roadway cited in this comment.(GPN-A-300 & 301-TW)*

State Comment: Sheet 796 - Do the Pedestrian Tunnels conflict with a depressed Route 7 that would be needed with 7/123 Interchange modifications per the co-location study? (0421, 0421-A –28)

Response: *Based on the information available in the VDOT co-location study, the overall plan is considered feasible without affecting the referenced roadway. During preliminary engineering, the configuration of the station and entrances will be refined and coordinated with VDOT. (GPN-A-300-T7)*

Regional Agency Comments

Design Considerations for Traction Power Substation

Regional Comment: DEIS Figure 2.3-15 indicates the potential location of four traction power substations on airport property. Although it appears that two of these would be located in the north airport, one would be in the vicinity of the Main Terminal and one along the DIAAH. In both these locations, the site selection and facility design will need to take into account potential visual impact on views of the Main Terminal complex and the architectural character of the historic district. It is anticipated that the MWAA Design Manual would dictate the design treatment in order to assure compatibility with the airport's other service structures. (0440, 0440-A –8)

Response: *The locations of the planned Traction Power Substations (TPSS) are preliminary. Substation enclosure designs will be further developed during preliminary engineering. The enclosure design will be context-sensitive and will take into account MWAA design criteria for facilities on Airport property.*

Public Comments

Dulles International Airport Access Highway (DIAAH) Relocation

Public Comment: GPN-PP-032 and Others When the new lanes on the Toll Road were added several years ago, the planning for the stations at Wiehle Avenue and Herndon assumed stations with 36.83 foot track centers. Confirm that the DAAR be relocated without relocating the Toll Road? (0387, 0387-L –21)

Response: *Current WMATA standards require a 30'-6" wide platform (40'-6" track centers). The increased platform width improves access for disabled patrons. The required DIAAH relocations in the corridor can be constructed without relocating the Dulles Toll Road (DTR) at the Wiehle Avenue and Reston Parkway Stations. When the future widening of the DIAAH to six lanes occurs, the DTR would need to be relocated at the Route 28 and Herndon-Monroe Stations.*

Tysons Corner Alignment Considerations

Public Comment: GPN-PP-046 T1 Alignment and Others Since the Tysons West Station will likely be a terminal station for some time, the plan should be amended to include a double x-over inbound of the station to facilitate turnback movements. With a x-over in front of the station, the turnback time can be

reduced from approximately 6 minutes to two minutes or less. This quicker turnback time will be critical to provide the necessary flexibility to ensure that the Dulles service can merge with the Orange Line service at West Falls Church and the Blue Line at Rosslyn without interfering with scheduled service on either of these two lines. (0387, 0387-L –22)

> ***Response:*** *The LPA includes Alignment T6 in Tysons Corner. Its rail geometry precludes a double cross-over inbound of the Tysons West Station. Moreover, because Wiehle Avenue Station will be the interim terminal station of the first phase of the LPA, no turnback function is necessary at Tysons West Station.*

Public Comment: GPN-PP-046 T1 Alignment and Others Again, since the Tysons West Station will likely be serving as a terminal point for some time or as a major interface point for Route 7 traffic after the line is extended west, it is critical that the surface facilities for this station be located on the same side of the street as the station in order to reduce the friction (and resulting ridership loss) associated with the mode transfer with the current configuration with the surface facilities on one side of Route 7 and the station platform on the other. It appears from the drawings that the best design would be to shift the station platform. (0387, 0387-L –23)

> ***Response:*** *During the Major Investment Study of the mid-1990's, the alignment through Tysons was originally located along the median of Route 7, but later placed on the west side at the request of VDOT to avoid conflicts with their proposed widening of Route 7, which will occur mostly on the east side. Moving the alignments to the east side would also significantly affect commercial properties, including the large Ernst and Young office building at the intersection of Route 7 and Westpark Drive. In addition, as shown in the final General Plans (Final EIS Volume V, GPN-A-100-TW), the distance between the platform and station facilities remains a reasonable walking distance.*

Public Comment: GP-N-050 and Others. While the structural sections show typical sections for Cut and Cover and Earth Tunnel sections, no where on these plans does it indicate which type of underground construction is proposed. The type of construction is important as the impacts and costs associated with each are quite different and thus should be addressed in the DEIS. But they're not. With some knowledge, one might be able to surmise which type is being proposed but some of the combinations of alignments and profiles don't make sense. For instance, GP-N-50 shows narrow track centers in the underground section which suggests cut and cover construction, but the profile on GP-N-51 is quite deep which suggests earth or NATM tunnel construction - or very expensive cut and cover construction. If the plan in this area for T1 is for cut and cover construction, the profile should be raised to more closely conform to the surface topography to reduce costs. (0387, 0387-L –24)

> ***Response:*** *The LPA includes Alignment T6 in Tysons Corner. The deep underground section of T6 will likely be mined tunnel while the underground Tysons Central 7 station will likely be cut-and-cover. The Final EIS states this approach and the capital cost estimate reflects these construction methods. A key factor that influenced the Team recommendation of T-6 was the interest of Fairfax County and VDOT to minimize the construction impacts on traffic in Tysons Corner. Cut-and-cover construction of the line section of T6 would affect the operations of both Route 7 and the Route 7/123 interchange.*

Public Comment: GPN-PP-153, 161. The narrow track centers at the Tysons East and West stations eliminate the pocket tracks at these stations and effectively preclude possible short line service that would terminate at these two stations. For that reason alone, T9 and any alternative that calls for stations with narrow track centers at these two stations should be eliminated from consideration. An alternative may be to utilize three track stations at these locations such as those at the National Airport and West Falls Church. (0387, 0387-L –25)

> ***Response:*** *The LPA includes Alignment T6 in Tysons Corner. Alignment T9 would have featured narrow track centers and side platforms, and as a result was the only alignment option of the Draft EIS that did not facilitate a pocket track outbound of Tysons West or inbound of Tysons*

East. The turnback movement, however, would have occurred at the interim terminal, Wiehle Avenue Station.

Public Comment: GPN-PP-157. T9 alternative eliminates the WB 7 to EB 123 ramp in the Route 7/123 interchange. The plan should indicate how this movement is to be replaced as it may involve additional impacts. (0387, 0387-L –26)

Public Comment: GPN-PP-179. T9 Design Option eliminates the Ramps in the northeast quadrant in the Route 7/123 interchange (WB 7 to WB 123 and WB 123 to EB and WB 7). The plan should indicate how these movements are to be replaced as additional impacts will most certainly result. (0387, 0387-L –27)

Response: *The LPA includes Alignment T6 in Tysons Corner. Alignment T9 was eliminated from consideration after the public and interagency review and comment on the Draft EIS. Roadway relocations and ramp improvement concepts proposed during the co-location study with VDOT are not shown on the final General Plans, since the co-location study has no confirmation and standing yet in regional and Commonwealth transportation plans. During preliminary engineering, final roadway modifications will be determined based upon existing conditions, but continuing coordination with VDOT will occur in regards to its study for a future configuration of the Route 7/Route 123 interchange.*

Public Comment: While I'm here today, I did want to focus on a couple of the issues in the Tysons Corner area. Engineering criteria have driven the location and the access facilities for much of the transit stations. I should say that we do support rail and rail now, as Ken Plum said. We support the alternative that would bring the most riders to Tysons Corner and that is the four-station alternative. We're not sure whether we should support the underground version or the aboveground version, but we do urge the county to do some serious urban design planning. I mean people talk about what it's like to cross over on a deck, but you could handle that quite nicely and be able to have buildings that linked up with an aerial structure maybe as well if not better than what you could do with underground tunnels going across Route 7. So we urge the county to follow up with access studies actually for all of the stations, but particularly in making this decision about how to handle the fourth station in Tysons Corner. (0141, 0141-T –4)

Response: *As indicated in the final General Plans (Final EIS Volume V), pedestrian access and connections are provided at each station that provide grade-separated access across Routes 7 and 123. The Project Team coordinated with Fairfax County planning staff, its Non-Motorized Transportation Committee, and VDOT to identify additional opportunities for pedestrian access to stations in Tysons Corner.*

Stormwater Management Facilities

Public Comment: Detention ponds should be designed as year-round landmark water features in the landscape (sub-urban or urban.). (0441, 0441-E –8)

Public Comment: The SWM/BMP Detention Ponds shown on and adjacent to our properties [Hunter Mill East], in addition to being unsightly, present an unnecessary health hazard. A recent study highlighted in the Washington Post found that over 80% of such facilities are mosquito breeding areas and represent a health threat to nearby homeowners, a matter of particular concern with the introduction of the West Nile Virus. (0464, 0464-L –1)

Response: *The design and location of all stormwater management ponds of the LPA will be further developed during preliminary engineering, and will conform to current state and local regulations. The Stormwater Management (SWM) ponds will be designed to provide detention of stormwater runoff, while the Best Management Practice (BMP) ponds will improve water quality while providing storm flow attenuation. Attempts will be made though landscaping and grading to blend the ponds into the natural environment. Concerns about safety and mosquitoes will guide design; it is unlikely that any of the ponds will have a permanent water surface level.*

Public Comment: A regional detention pond which protects Difficult Run was built "downstream" from these proposed ponds, making it more appropriate to participate in that existing facility, or to slightly enlarge it if necessary. (0464, 0464-L –2)

> ***Response:*** *The locations shown in the final General Plans of Best Management Practice (BMP) and Stormwater Management (SWM) ponds throughout the corridor are preliminary and were shown to illustrate a potential need based on current state and local regulations for one of these facilities somewhere in the vicinity of the location shown. During preliminary engineering, a comprehensive drainage study will be undertaken for the entire corridor to address final locations of all BMP and SWM ponds. The results of this effort should result in some facilities being eliminated, consolidated, or relocated to further minimize impacts to the adjacent areas. Enlarging a regional detention pond in the same watershed will certainly be considered as an option if capacity is available or expansion is feasible.*

Public Comment: An extensive and costly fertilizer management program was required of Golf Park by Fairfax County to allay the fears of homeowners on wells in the area regarding groundwater pollution. What types of pollutants do you anticipate seeping into the ground from the proposed SMN/BMP Detention Ponds? (0464, 0464-L –3)

> ***Response:*** *Properly designed, constructed, and maintained, Best Management Practice (BMP) ponds can effectively remove a wide range of pollutants from surface runoff and prevent them from being conveyed to receiving waterways. Pollutants such as metals, hydrocarbons, nutrients, and oxygen-demanding substances can be removed from the runoff and prevented from seeping into the adjacent groundwater by various measures, including the use of BMP ponds.*

Pedestrian Access to Stations

Public Comment: Revise the General Plans to reflect the Reston Charrette, by adding drawings showing compatibility. At a minimum, add options for access from the mezzanine levels to and across Wiehle and Reston Parkway. (0210, 0210-M –6)

Public Comment: Revise the general plans to reflect the Reston charette by adding drawings showing compatibility. At a minimum, add options for access from the mezzanine levels to and across Wiehle and Reston Parkway. Include pathways along the Toll Road between stations. We can begin now to make that area more bicycle and pedestrian-friendly. (0170, 0170-T –11)

> ***Response:*** *The Reston Charrette (held April 11 - 13, 2002, and organized by Fairfax County, the Northern Virginia Regional Commission, the Greater Reston Chamber of Commerce, and the Dulles Corridor Rail Association) resulted in multiple "alternative concepts," with no single, specific plan identified. As designed, the Wiehle Avenue and Reston Parkway stations do not preclude construction of access to adjacent roadway overpasses as suggested in this comment; however, at this time, no specific provisions are planned to accommodate it.*
>
> *Fairfax County Supervisor Hudgins has appointed the Wiehle Avenue Steering Committee, which advise the County staff in the creation of a Request For Proposal (RFP) to solicit transit-oriented joint development proposals for a mixed use development of the County-owned parcel adjacent to the station. Using the conclusions from the Supervisor's Reston Charrette as a starting point, the committee is establishing the process, scope and criteria for the RFP. The design of the Reston Parkway Station will be included in the continuing coordination with Fairfax County.*
>
> *Construction of pathways along the Dulles Toll Road are not within the scope of the Dulles Corridor Rapid Transit Project.*

Design Considerations for Traction Power Substation

Public Comment: Most notable, the location of the traction power substation (TPSS) would require the removal of approximately 11,667 gross square feet of office space based on current parking ratios of 3.0 spaces per 1,000 gross square feet in the existing 168,000 gross square foot building. This results in a reduction of approximately 7% of the office space due to lost parking. This is significant. The building to support the TPSS is likely 10 to 20 feet in height and the prominent location at the intersection will detract from the environment and potentially create sight distance issues at the intersection. (0477, 0477-L –19)

Public Comment: The T-4 alignments calls for a Traction Power Substation located on a portion of NADA's National Headquarters at 8400 Westpark Drive. The massive scale of this infrastructure component will become a visual blight and will eliminate much of NADA's parking capacity. (0477, 0477-L –2)

Public Comment: The proposed configuration of T-4 envisions locating a Traction Power Substation (Substation) on the eastern side of the Association's property at or near the entrance to the building off Westpark Drive. The building is 168,000 gross square feet and is located on a 6.088-acre parcel. The land and the improvements have an assessed value as of January 1, 2002 of nearly $16 million ($16,000,000) (0477, 0477-L –6)

Public Comment: Siting the Substation on NADA's property will reduce NADA's parking capacity by between 5 percent (5%) to 6 percent (6%). Under the applicable provisions of the Fairfax County zoning ordinance, this will reduce the Association's usable FAR and inconvenience tenants in its headquarters building. The Engineering Report states that the Substation "would require the removal of approximately 35 [parking] spaces. These spaces relate to and support approximately 11,667 gross square feet of office space based on current parking ratios of 3.0 spaces per 1,000 gross square feet in the existing 168,000 gross square foot building." Diminished parking will seriously undermine the Association's ability to retain and attract tenants. (0477, 0477-L –8)

Public Comment: As you may remember, the aesthetic police in Fairfax County jailed me for 98 days last year for not moving trees and shrubs to precise arbitrarily required locations on our property. Claiming it would be too "commercial", Fairfax County even denied us the zoning permits to build a nine hole Par 3 golf course on the land here where you are now proposing to build a large unsightly electrical boost station (TPSS 9). Your proposal is doubly ironic in that we were cited for a zoning violation for having a small electrical generator on the property which they deemed to be an unapproved use. (0464, 0464-L –4)

> ***Response:*** *As stated in Section 2.4 of the Final EIS, these ancillary facilities were sited based on systems engineering requirements and environmental and right-of-way constraints. In addition, a power analysis was conducted to determine the number and size of substations required and the optimal spacing for these stations. During preliminary engineering, efforts will be made to minimize impacts to the adjacent areas in terms of their access, architectural treatment, and landscape screening. Substation enclosure designs will be further developed. Individual sites will be taken into account, and enclosure design will be context-sensitive.*

Public Comment: The tax map numbers for the NADA Headquarters are 029-3-01-0061-A and -B. (0477, 0477-L –4)

> ***Response:*** *Alignment T4 in Tysons Corner was eliminated from further consideration after the public and interagency review and comment on the Draft EIS The properties in the above comment are no longer on the Project's Acquisition List.*

B. Supplemental Draft EIS Comments

Local Agency Comments

Further Information on Stormwater Management is needed

Local Comment: The County requests further information regarding proposed stormwater management measures for several of the station facilities (Wiehle Avenue; Tysons West; and Tysons East), as no such measures are identified on the proposed general plans for these facilities. (0083 0098-6)

Local Comment: Vol II, 79, 81, 86, etc. It is not clear if stormwater management measures are being proposed for several of the station facilities (e.g., Wiehle Avenue station facilities; Tysons West facilities; Tysons East facilities), as no such measures are identified on the site plans for these facilities. At a minimum, those facilities that will be provided within Fairfax County should include stormwater management and best management practice controls that are as effective as those required for private development projects. Project designers should also be encouraged to pursue low impact development (LID)/site design measures where appropriate (e.g., bioretention/biofiltration practices in parking lots) in order to reduce potential adverse impacts to streams. Many of the facilities identified in the documentation would lend themselves to such practices. (0093 0109-25)

> ***Response:*** *A comprehensive drainage analysis will be performed during preliminary engineering for the entire corridor. Adequate Stormwater Management (SMW) facilities will be provided at each station site and along the alignment in compliance with state, federal, and local SMW regulations. The latest techniques in water quality and SMW will be utilized.*

Need to Coordinate with Office of Site Development of Department of Public Works and Environmental Services on IDA and RPA Issues

Local Comment: The SDEIS states: "Amendments to the Chesapeake Bay Preservation Ordinance have been proposed by Fairfax County . . ." Amendments to the Ordinance were adopted by the Board of Supervisors on July 7, 2003 and became effective on November 18, 2003. The SDEIS suggests that Intensely Developed Areas (IDAs) would be designated; this has not been done. However, Resource Protection Area (RPA) designations have been revised, with the effect being that the extent of RPAs in Fairfax County has grown considerably (per a State requirement). Several of the proposed stormwater management facility sites (P-6, P-8, P-14, and P-17) are, or may be, located in "new" RPAs. In addition, one of the proposed tie breakers (B- 6) is in an area that has been mapped as a "new" RPA. The RPA designation would not necessarily preclude the construction of these facilities; however, exceptions allowing for these encroachments will need to be pursued and will probably require public hearings. It is noted that the tie breaker site and the site for the proposed pond P-14 are located in areas that have been subject to extensive disturbance. Coordination with the Office of Site Development Services of the Department of Public Works and Environmental Services (703-324-1720) is recommended. (0093 0109-19)

Local Comment: Env. Cond. Sheets - facilities associated with the Tysons East station will, in part, be located in a Resource Protection Area. In addition, an Environmental Quality Corridor has been identified on the site of the proposed Tysons East Kiss and Ride facility. A contractor work area is identified near the Tysons East station site; part of this site is located in the RPA. However, much of the RPA in this area has already been disturbed and is impervious in character. Coordination with the Office of Site Development Services is recommended as early in the process as possible to address possible Chesapeake Bay Preservation Ordinance issues associated with the station location, the Kiss and Ride facility, and the contractor work area. Project staff should also be encouraged to coordinate with DPZ to identify possible approaches to addressing the Environmental Quality Corridor in this area. (0093 0109-23)

> ***Response:*** *Thank you for the updated information on recently revised Resource Protection Areas (RPAs) and conservation easements. Coordination with Fairfax County staff will continue through*

preliminary engineering and final design. Locations of these facilities will be adjusted where required as the project's design is refined.

Sitting of Stormwater Retention Ponds

Local Comment: Page 6, Env. Cond. Sheets - Proposed stormwater management facility P9 is located in an area that has been established as a conservation easement. It is not clear if it would be feasible to construct a Stormwater management facility at this location. (0093 0109-24)

Response: *The proposed P9 facility location was adjusted to avoid impacts to the conservation easement. In general, locations of these facilities will be adjusted where required as the project's design is refined through preliminary engineering and final design.*

Local Comment: Gen. Plans - Ponds P-8 and P-9 (and others?) would be located on the other side of a noise barrier from the highway/rail. These ponds would not, therefore, appear to be able to collect drainage from the project site. Is this the case? Is the idea to establish compensatory controls? If so, what areas will go uncontrolled, and what will be the impacts on downstream water resources? (0093 0109-26)

Response: *A comprehensive drainage analysis will be performed during preliminary engineering that addresses runoff and storage in watersheds for the entire corridor. Adequate Stormwater Management (SWM) measures would handle any increased runoff caused by increases in impervious surfaces of the project. The ponds cited provide SMW for the increase in runoff from the line construction in the median. Runoff would be conveyed to the ponds via drainage pipes, and the ponds would provide storage that will regulate the flow back into the watershed.*

Concerns about the Location of the Contractor Work Area

Local Comment: Vol. II, p. 019 Tysons II development area may not be a realistic "contractor work area", as it will probably be developed prior to or during rail construction. Also, the area shown on this map does not match that shown in the SDEIS, Env. Conditions Sheet 3. (0093 0109-6)

Response: *In consultation with the owner/developer of these parcels during the public comment period of the Supplemental Draft EIS, it was determined that this area would be the last area developed as part of its master development plan, and it should be available as a contractor work area during at least a portion of the rail construction work for LPA Phase 1 prior to 2009 (the then opening year of the now-named Wiehle Avenue Extension). The Final EIS has reconciled the Environmental Conditions Map and the final General Plans. During preliminary engineering, DRPT and WMATA, in coordination with the two counties and VDOT, will determine the contractor work areas.*

Public Comments

Extend Underground Portion of Tysons Loop to Dulles Access/Dulles Toll Road

Public Comment: Equally importantly, we would strongly suggest that the Tysons Loop continue underground until it intersects with the Dulles Access/Dulles Toll Road. Indeed there remains a median in the Route 7 area from Springhill Road to the intersection with the Dulles Access Road/Dulles Toll Road. It is appropriate both to the existing businesses and to the existing transportation network to make this area as free of further congestion as practically possible. An underground extension of this Tysons Loop would make more sense, in all regards. (0004 0004-5)

Response: *The LPA includes Alignment T6 in Tysons Corner; Alignment T4 was eliminated from consideration after the public and interagency review and comment on the Draft EIS. The aerial section of the Alignment T6 was evaluated in the Final EIS for potential impacts. The analysis presented in Section 3.4 shows that aerial alignment would have moderate-to-substantial visual impacts in Tysons Corner. Because the elevated portions of Alignment T6 primarily extend along*

relatively wide roadways, the visual impact for these alignments would not be as substantial. In addition, Alignment T6 includes an underground section along Route 123 and Route 7, reducing the visual effects of this alignment. The most substantial visual effects would occur in the vicinity of the Tysons Central 123 Station, where landscaping would be removed and signage for the Tysons Galleria would be obscured.

Clarify Need for Retained Fill at Future Wolf Trap Station

Public Comment: The SDEIS needs to clarify the contention that a 1400-foot-long section of retained fill is needed to support tracks for accommodation of a future station at Wolf Trap National Park. (0068 0173-35)

Response: *The design of the Metrorail Alternative allows a future side-platform station at Wolf Trap by creating a level track grade along this segment of vertical alignment where the existing ground slopes significantly (3 to 4 percent). Fill and retaining walls up to 20 feet in height are required in the median of the Access Highway for the length cited to accommodate the transitions between the existing slope and the level station platforms. The additional cost is estimated at more than $5 million (YOE). The accommodation for a possible future station would not require any widening of the Dulles International Airport Access Highway or Dulles Toll Road, or require additional track. The future cost of a station at Wolf Trap would depend on the design of the station and the location of the stations support facilities (park-and-ride layout and size, access roads, pedestrian connections). No station design has been completed and therefore no corresponding cost estimate has been developed.*

Clarify Prior Realignment of Dulles Toll Road

Public Comment: The SDEIS needs to clarify the reference to the prior realignment of Dulles Toll Road and the Access Road to accommodate a transit station (at 2-22). (0068 0173-36)

Response: *Concurrent with the addition of HOV lanes to the Dulles Toll Road, portions of the Dulles Toll Road were modified to accommodate the Wiehle Avenue and Reston Parkway Stations. These "bubbles" of the Toll Road were created to allow these two stations to be built in the Access Highway median without impact to the Toll Road. The Access Highway must yet be bubbled at these two stations and at the Herndon-Monroe and Route 28 Stations. For the future six-lane Access Highway, the Toll Road would be bubbled at the Herndon-Monroe and Route 28 Stations. The three-track tail track of Wiehle Avenue Station as an interim terminal station does not appear to require additional bubbling of the Toll Road.*

Concerns with Siting of Infrastructure Facilities

Public Comment: The predominance of stormwater detention pond and substation locations away from Tysons Corner and Reston, as compared with the Hunter Mill-Wolftrap areas, needs to be objectively and adequately explained in detail in the SDEIS. Optically, at least, it looks like these infrastructure facilities are being sited away from commercial properties and to the detriment of residential and natural properties. (0068 0173-38)

Response: *Traction power substations (TPSS), tie-breaker stations (TBS), and Stormwater Management (SWM) ponds are located throughout the Corridor in order to support rail operations and the complete Project. No conscious effort was made to purposely locate these in residential areas to avoid affecting commercial areas. Efforts were made to locate these ancillary facilities in areas that minimize the disturbance to both adjacent residential and commercial properties. The distance between Metrorail station locations and power requirements dictate the locations of TPSS, while TBS are often located near special trackwork such as turnouts and crossovers. A more comprehensive drainage analysis will be performed during preliminary engineering.*

Clarify Proximity of Station/Tracks to Airport Facilities

Public Comment: The SDEIS fails to clarify how close tracks and a future station will be to the runway approach near Dulles Airport. Apparently, "approximately half" of an undefined "site" would be in the runway approach surface (SDEIS, 2-9). (0068 0173-9)

> ***Response:*** *The site plan for Yard 15 is shown in the General Plans (Final EIS Volume V, GPN-A-100-LY). The runway approach surfaces are shown, with all the occupied buildings being shown outside the surfaces. A portion of the yard lead tracks, some unoccupied buildings, and some vehicular parking are located within the approach surfaces, which is permitted by FAA regulations.*

Public Comment: Page 020/021. 1. We strongly object to consideration of Parcel 029-4-050010A (the Cleveland Site) as a "potential Contractor Work Area" because:
a. Such designation is tantamount to a condemnation by designation which would severely negatively impact the value of the property.
b. The Cleveland Site is currently under study for a rezoning application associated with additional density triggered by the FFGA. No one from WMATA has discussed the term the area would be used as a work area, compensation, indemnification from environmental liability, etc.
c. It appears there are other options for work areas other than a site ripe for redevelopment in conjunction with the opening of the Tysons East Station. (0113 0132-12) (0123 0158-14)

> ***Response:*** *The locations of areas identified as Potential Contractor Work Areas are preliminary, and their use will be based on their availability, the timing of plans for redevelopment, and the need for the site when the Project progresses into final design and construction. During preliminary engineering, DRPT and WMATA, in coordination with the two counties and VDOT, will determine the contractor work areas.*

Impacts of Aerial Easements

Public Comment: Permanent aerial easements are shown on the Cleveland Site which may impact zoning bulk regulations and land values. WMATA has not approached WEST*GROUP on the details of shown aerial easements and until details are known, we cannot concur with aerial easements shown. (0113 0132-17)

Public Comment: Permanent aerial easements are shown on the Cleveland Site which may impact zoning bulk regulations and land values. WMATA has not approached WEST*GROUP on the details of shown aerial easements and until details are known, we cannot concur with aerial easements shown. (0123 0158-19)

> ***Response:*** *Permanent aerial easements would be required for areas adjacent to elevated sections of the Metrorail guideway such as the aerial easement shown on the north side of Route 123. DRPT, the project sponsor and initial owner, can provide any requested information on the terms, conditions, and use restrictions of any potential easements. DRPT and WMATA will continue to coordinate with WEST*GROUP and other stakeholders as the project further develops during preliminary engineering, final design, and right-of-way acquisition.*

Utility Impacts at Station 900+00

Public Comment: At station 900+00 there is a new fiber optics telephone, gas and electric vault system that servers the entire CapOne project. You may have foundation conflicts in that area and/or the aerial track may impede access by utility companies. (0113 0132-21) (0123 0158-26)

> ***Response:*** *Thank you for the information. Comprehensive, as-built utility location will be assembled prior to the design of any foundations or substructures during the preliminary engineering phase of the project*.

Concerns about Facilities at the Tysons East Station

Public Comment: Figure 2.3.2. Tysons East Station seems to be overloaded with apparatus and equipment
Stations
· A tie-breaker (TB)
· A traction power substation (TPSS)
· A #10 double crossover
· Mis-labeled flood plain
· Inaccurate RPA limits
· Station is slated to be a Contractors Work Area which is tantamount to a "condemnation by designation" and located in an area that requires crossing a major roadway to construct the East Station (perhaps the I- 495 median or other clover leaf areas may work instead)
· There is no tower or elevated connection from the platform to the Cleveland site and no aerial pedestrian connection except from the platform to the Kiss and Ride on the opposite side of Rt. 123.
These are all objectionable to WEST*GROUP and can be remedied by close coordination and integration of rail plans to our proposed "with rail" long term master plan. (0113 0132-5) (0123 0158-7)

> ***Response:*** *The traction power substation and tie-breaker station would be required in this area due to the power requirements and special trackwork. In response to this and other comments, the double crossover has been relocated approximately 170 feet inbound towards the Dulles Connector Road. The RPA and floodplain limits will be updated in consultation with Fairfax County staff. The locations of areas identified as Potential Contractor Work Areas are preliminary, and their use would be based on their availability, the timing of plans for redevelopment, and the need for the site when the project progresses into final design and construction. A pedestrian bridge is currently shown connecting the south Kiss & Ride to the station mezzanine. The potential for any additional pedestrian bridge connections can be discussed with DRPT and WMATA in terms of future transit-oriented development.*

Public Comment: Why is the area of the cross over so large? How does it impact building, parking, and landscaping? What does it look like? As mentioned above, this issue should be studied very carefully as the design moves forward and appropriate features to provide mitigation of the noise should be included in the final design. (0123 0158-21)

Public Comment: Sheets 045/071 T-6 Notes. TBS-3-T-6 Alignments. The location of the proposed double cross over directly in the middle of the Cleveland Building redevelopment (potentially PRM 3.0 FAR high-rise residential mix use) creates the potential for a crossover "clack" in close proximity to high rise, high density residential development. What assurances do we have that the corridor noise technology or design has improved to avoid this potential nuisance sound. Why is the area of the cross over so large? How does it impact building, parking, and landscaping? What does it look like? (0113 0132-18)

> ***Response:*** *In response to this comment, the Project Team shifted the double crossover approximately 170 feet inbound towards the Dulles Connector Road interchange. Its location is now near the ramp terminal of the interchange and the east property line of the Cleveland Building parcel. The parapet walls that are part of the standard WMATA aerial guideway would provide significant sound attenuation for trains passing through the switches at the proposed double crossover. The size of the double crossover is the standard size shown for 14' (narrow) track centers, which is significantly less than the size of a double crossover for 40.5' (wide) track centers that were previously examined. Tie-breaker Station #3 is shown below at ground level to support the operations of the double crossover. A typical tie-breaker station is approximately 45 feet by 20 feet and about 13 feet high. They break the rail line into sections, allowing power in one or more sections to be shut down for maintenance without affecting the power supply to the rest of the system. Tie-breaker stations would be combined with traction power substations*

wherever possible. The exact locations of tie-breaker stations will be further refined during preliminary engineering.

Should Not Expand to 16 Bus Bays at Wiehle Avenue Stations

Public Comment: The SDEIS is wrong to expand Wiehle Avenue Reston bus bays to 16. This is a temporary terminal. Nine bus bays will serve adequately. Of the 7,200 weekday passengers expected, 2,645 can be expected to use the parking spaces. Another 1,050 can be expected to be dropped off (kiss-and-ride). Perhaps 950 will walk or use bicycles. That leaves 2,555 will be using buses, with 630 in the maximum hour. One bus bay is needed for express buses from Herndon every six minutes to meet each train. One is needed for North Reston Routes 552 and 554. Another is needed for South Reston Routes 551, 553 and 557, one every six minutes. Route 585 will need one. Route 980 should be extended east from Reston Town Center over Sunset Hills Road and will need half a bus bay. RIBS will need one. Three spares seem prudent, perhaps excessive. People need fewer bus bays with shorter walks to their bus and fewer places to hunt for it. (0054 0090-1)

Public Comment We also question the need for 16 bus bays for the interim terminal station at Wiehle Avenue. As Ed Tennyson has pointed out, it appears that nine bays would adequately serve the feeder bus need. (0060 0169-8)

Response: *The calculations for required bus bays at Wiehle Avenue Station are based on the number of physical bus arrivals during the peak hour, including bus platoons wherein two buses on the same route arrive simultaneously (two buses running on the same route together in a platoon is done to provide enough capacity to meet demand that cannot be met with one bus). In addition, because these routes would be arriving very frequently (every six minutes, in order to meet trains running every six minutes), it would not be physically possible to share these bays with other services. In addition to the four premium bus routes, twelve other routes would use the Wiehle facility. Because these buses would arrive less frequently (typically every 20 to 30 minutes), there is an opportunity for bay sharing among the 12 routes. Based on the re-analysis of bus arrivals during the preparation of the Final EIS and final General Plans, it was determined that 12 revenue bays and three layover bays are required at the north side station facilities and that five revenue bays are required at the southside, to be located on the eastbound exit ramp of the Dulles Toll Road.*

Station Mezzanine Impacts to Adjacent Property

Public Comment: The mezzanine design, as proposed, would impact the Aston Martin dealer and the preowned car dealerships operated by HBL at 8601 Westwood Center Drive, which are on the southwest corner of the subject intersection. We believe that these activities will be in place here for the next 10 to 20 years and so, therefore, the mezzanine is located in not the most optimally location. (0053 0139-4)

Public Comment: 5. Mezzanine design has significant impact to the Austin Martin and Pre-Owned car dealerships operated by HBL at 8601 Westwood Center Drive in the SW corner of Route 7/Tyco Road signal, and the mezzanine is optimally located for the existing and anticipated land uses expected in the next 10-20 years. (0053 0054-3)

Response: *The May 18, 2004, post-hearing conference on the Tysons West Station entrance and facilities has resulted in revisions to the Locally Preferred Alternative. The Project Team recommended and the decision-makers approved Option E, which has its station entrance at the inbound, east end of the station near Spring Hill Road.*

The entrance pavilion at the south side of the station is in the front part of the property currently leased by Rosenthal Honda. The station will have its stair towers for emergency exits on property currently leased by HBL Mercedes-Benz and by HBL Pre-Owned Cars. The station support columns will be on all three properties. The entrance pavilion, emergency exit stair towers, and

support columns will displace a limited number of parking spaces and result in alteration of on-site circulation and access for all three businesses.

Alternative Site Plans for Tysons West Station Area

Public Comment: As shown in Exhibit 2, an alternative bus facility in the northeast quadrant of Route 7 and Spring Hill Road intersection would better center bus circulation and reduce impacts on existing C-7 properties in Fairfax County. With a relocation of the mezzanine, the pedestrian access is significantly improved and ingress would be at Spring Hill Road and egress would be at Tyco Road, allows more orderly bus and car transfer points. (0053 0139-7)

Public Comment: A variation of this alternative as shown in Exhibit 3 would orient the Kiss & Ride facilities to the existing Flex industrial buildings along Tyco Road. This alternative keeps walking distances from the bus facilities at less than 1,000 feet and still maintain the car storage areas that are leased behind the Cherner parking lot. (0053 0139-8)

Public Comment: Another alternative is shown in Exhibit 4, and I'll hand out the use of the county property behind existing Tysons Fire Station may provide improved separation of access for bus facilities away from the Route 7 intersections. We believe that this alternative concerned, and it only impact I-4 and I-5 zoning. We have also included in an alternative to look at alternatives along Tyco Road that we believe maintain the integrity of the Fairfax County overlay district. (0053 0139-9)

Public Comment: Additionally, as shown in Exhibit 4, the use of County property behind the Tysons Fire Station on Spring Hill Road could allow the bus entrance to be sifted away from Route 7 while, maintaining shorter transfer distances between the bus spaces and the station entrance. Additional properties would need to be coordinated for parking impacts, and buffers, but the affected properties are zoned I-4 or I-5 and are located away from the Route 7 frontage. (0053 0054-8)

Public Comment: As shown in Exhibit 2, an alternative bus facility northeast of the Route 7/ Spring Hill Road intersection would better center the bus circulation while reducing impacts on existing C-7 commercial zoning. With the relocation of the mezzanine, pedestrian access is significantly improved and ingress via Spring Hill and egress via Tyco Road allows more orderly bus and car transfer points. The sites are currently developed with flex uses and vehicle storage. (0053 0054-6)

Public Comment: A variation on the alternative would be to maintain a bus pull-outs between Spring Hill Road and Tyco Road, but orient kiss and ride facilities to the existing flex buildings along Tyco Road. As shown in Exhibit 3, this alternative keeps walking distances from the bus bays to the platform at less than 1,000 feet and still maintains the storage area used behind the existing Cherner lot. (0053 0054-7)

Response: *The May 18, 2004, post-hearing conference on the Tysons West Station entrance and facilities resulted in revisions to the Locally Preferred Alternative. The Project Team recommended and decision-makers approved Option E, which has its station entrance at the inbound, east end of the station near Spring Hill Road.*

The bus bays and Kiss & Ride facilities are located between Tyco Road and Spring Hill Road, set back from Route 7. Since the conference, the Project Team convened to reconsider the program requirements for bus bays and reduced the number of bus bays. Unlike other options, the Kiss & Ride fully utilizes the undeveloped County land to the rear of Fire and Rescue Station No. 29.

Initial access to Option E facilities from Tyco Road would be for station access only. This roadway and the station facilities would be operated and maintained by WMATA. In response to expressions of interest in having a second access point to the station facilities and in an initiation of a street grid in this area of Tysons Corner, Option E includes a possible, later connection to Spring Hill Road. That connection cannot be advanced at this time due to its proximity to the driveways of Fire Station No. 29.

Fairfax County has formally proposed an Option F in lieu of Option E. This option would relocate Fire Station No. 29 to a more central location within Tysons Corner. DRPT will monitor the County's further development of Option F during preliminary engineering and decide whether the schedule for the project's implementation can accommodate this option.

Improved Bus Stop, Kiss & Ride, Pedestrian Walkways and Pedestrian Access at Herndon Parkway

Public Comment: The walkway to Herndon Parkway shown in the General Plans provides basic access. However, are bus stop slips envisioned on Herndon Parkway near the end of the pedestrian walkway? Where do bicyclists store their bicycles? Where do the kiss & ride vehicles wait? How do transit users from nearby office building to the east and west reach the northside touchdown? How do transit users from the office building north of the Herndon Parkway safely cross the four-lane divided roadway? Minimal improvements such as a signalized crosswalk on Herndon Parkway and multiple pedestrian sidewalks would at least fulfill the intent of the project as described on page 6-16, Section 6.2 of the Supplemental Draft EIS. (0132 0171-04)

Response: *Bicycle racks and lockers would be provided adjacent to the station entry. The issue of pedestrian access beyond what has been shown on the plans, including the possibility of a new crosswalk, will be considered during the preliminary engineering phase of the project in coordination with Fairfax County, Town of Herndon, and existing property owners. However, no additional bus stops or Kiss & Ride facilities would be provided on the north side of the DIAAH as part of the project.*

J PUBLIC AND AGENCY COMMENTS AND RESPONSES

This appendix documents the extensive collection of comments from public agencies, elected officials, business, civic association representatives, interest groups, and the general public received during and after the formal public comment periods that followed publication of the Dulles Corridor Rapid Transit Project's *Draft Environmental Impact Statement (Draft EIS) and Section 4(f) Evaluation* in June 2002 and *Supplemental Draft Environmental Impact Statement (Supplemental Draft EIS) and Section 4(f) Evaluation* in October 2003. Comments and responses are organized by chapter in accordance with the structure of the Final EIS. The outline of this Appendix J is therefore as follows:

Executive Summary

Chapter 1 Purpose and Need

Chapter 2 Alternatives Considered

Chapter 3 Social Effects

Chapter 4 Environmental Effects

Chapter 5 Economic Effects

Chapter 6 Transportation Effects

Chapter 7 Section 4(f) Evaluation

Chapter 8 Financial Analysis

Chapter 9 Secondary and Cumulative Effects

Chapter 10 Evaluation of Alternatives Carried Forward

Chapter 11 Comments, Consultations, and Coordination

Chapter 12 Draft EIS/Supplemental Draft EIS Process

Chapter 13 Project Implementation

General Plans

Indices Last Name, Identification Number and Organization

Comments are placed within the chapter to which they pertain. Within each chapter, the Draft EIS comments are placed first, and are followed by the Supplemental Draft EIS comments. Within the sets of Draft EIS and the Supplemental Draft EIS comments, the comments from government agencies are placed first in the order of Federal, State, Regional and Local. In the case of elected officials, comments are included in the appropriate level of government agency (e.g., Virginia elected officials are included with the other State Agency comments). These agency comments are followed by comments from the general public, organizations, and stakeholder groups. Similar comments are grouped together and answered by a single response.

The comments are identified by a numbering system that includes the commenter, the means of communicating the comment, and the sequence in which the comment was received. The means of communicating the comment may be through letter, public hearing testimony, comment card, e-mail, written statements, miscellaneous or a combination thereof.

The individual comments were entered into a comment database and tracked by both a unique number given to each commenter and by subject matter. The numbering system is as follows:

1. First, the commenter is identified with a unique commenter identification number, which was used for all comments that were received from that commenter.

2. Second, added to the commenter number is a unique number that was given to each piece of communication, or statement, received from the commenter (these were consecutive numbers assigned as statements were received).

3. Third, a letter follows these two numbers, indicating what type of statement was received. Designations are: letter (L), testimony (T), comment card (CC), a statement from an agency (A), email (E), or miscellaneous (M)).

4. Then, a number indicates the individual comment that came from the commenter's statement.

For example, a comment that is labeled 0204, 0247-T-4, indicates that the comment came from commenter number 0204, the comment was the 247th statement received, the statement was in the form of a testimony at one of the public hearings, and the comment is the fourth comment entered from that testimony. In this example, the commenter 0204 has submitted more than one statement for the record. Not shown in the numbering system of this Appendix J is the database code of the subject matter according to topic or sections of the Draft EIS or Supplemental Draft EIS.

Comments may be tracked by referring to the accompanying index tables for the Draft EIS and the Supplemental Draft EIS. These tables identify the commenter by name, organization (if any), government agency or jurisdiction, interest group, company, or general public; the commenter's identifier number; and the specific location and subject area of the individual comments.

The responses to the comments in this Appendix have been updated to reflect the selection and revision of the Locally Preferred Alternative; the consequential elimination of other alternatives; the results of re-analyses in support of the Final EIS; progress in the capital funding plan; and the start of the project's next phase, preliminary engineering. Thus, for many comments, the responses differ from those in the Public Hearings Reports of October 2002 and February 2004.

Within the responses, the terms *decision-makers* and *Project Team* refer to the following:

Decision-makers – The Virginia Commonwealth Transportation Board and the Board of Directors of the Washington Metropolitan Area Transit Authority, which, in similar actions, selected and revised the Locally Preferred Alternative.

Project Team – The staffs of the Virginia Department of Rail and Public Transportation and of the Washington Metropolitan Area Transit Authority, which together made recommendations to the decision-makers, the Commonwealth Transportation Board and WMATA Board of Directors.

APPENDIX J ADDENDUM

This addendum to Appendix J in Volume III of the Final EIS contains comments that the Project Team had previously published in Public Hearing Reports and Report Supplements but did not appear in Appendix J.

A. Draft EIS Comments

Chapter 2 – Alternatives Considered

BRT Under Study in Other Corridors

Public Comment: I want to conclude by saying I just received this bulletin. It came from "Don't Miss the Bus." It came from Metro. On selected high-rise routes, a new type of service called rapid bus is proposed and it could be comparable to rail transit. (0147, 0147-T –10)

> ***Response****: As part of its Regional Bus Study and in alternatives analysis of other corridors in the region, WMATA and other transit agencies have considered bus rapid transit as a mode. Also, the Project Team has acknowledged that BRT systems could carry the same level of demand as rail systems. However, within the Dulles Corridor, BRT could not satisfy the long-term travel demand of the corridor. Therefore, the Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Miscellaneous Draft EIS Comments

Public Comment: General -- The information presented in a DEIS should be presented in a manner that facilitates review by the public and government officials who might not be all that familiar with transit facility plans and analyses. The presentation of the alignment plans is sadly deficient in information that might be valuable to the reviewer of this document. Information on curve radii (which affects acoustical impacts) and design speeds (which affects operations) should be shown on each of the drawings. To have to go back to pages near the back of the set of the drawings is cumbersome and seems to be designed to discourage a thorough review. One possible accommodation which is incorporated in contract drawings is to use the Reference Drawing Box at the bottom of each sheet to indicate the sheet numbers of the pages where all of the alignment data as well structural, systems, traction power facilities may be found. (0387, 0387-L –20)

> ***Response:*** *The layout of the General Plans for presenting alignment data was developed to minimize the amount of re-work required during the development and evolution of multiple alignment alternatives. Detailed alignment data (including curve radii and design speeds) will be added to the plans developed during preliminary engineering phase.*

Chapter 4 – Environmental Effects

Local Comment: The first concern is about the impact of 26 additional rail cars at the WMATA Service and Inspection Yard at the West Falls Church Metrorail Station on homes in the Lemon Road community. Rail cars entering and leaving the yard at late night and early morning hours are a source of increased noise, loud horns and squealing brakes. The Project Team has identified this impact, but has not specifically proposed any mitigation strategies. (0479, 0479-L –10)

> ***Response:*** *With respect to the concerns of communities on the noise of the Metrorail West Falls Church Yard, the Project Team recommended and the decision-makers approved the enclosure of 1) a portion of the existing loop track at the yard's eastern end and 2) the new yard lead in box structures. These noise mitigation measures by the Project will reduce the wheel squeal noise of the train movements within the Yard. The Project Team notes, however, that new residences*

have been recently constructed and occupied adjacent to the West Falls Church S&I Yard without any noise mitigation provided by the residential developer. As during the past ten-year effort to address yard noise, there will be coordination among DRPT, WMATA, Fairfax County officials and staff, and representatives of the communities during preliminary engineering and final design.

The number of additional cars at West Falls Church Yard has increased from 26 in the Draft EIS to 42 in the Supplemental Draft EIS and Final EIS in order to support the Metrorail fleet of the Wiehle Avenue Extension. Wheel squeal from the new yard lead (for Metrorail trains to and from the Dulles Corridor Line) at the east end of the yard was included in the modeling analysis. Based on measured noise levels from the current wheel squeal along a similar radius curve at the yard, exceedances of the FTA impact criteria are predicted at nearby residences. No exceedances are predicted from the Project's aerial guideway in the median of the Dulles Connector Road.

Other sources, such as horns, were not included in the modeling analysis. Brake squeal was not determined to be a major problem. Based on the current operating schedule at the yard, the increase in the overall yard noise due to the cleaning and general operation of 42 additional Metrorail cars needed for the Project is expected to be minimal.

Chapter 6 – Transportation Effects

Local Comment: What about just-in-time riding sharing (works great in Fall Church where I used to live and Dale City for the ability to use HOV lanes - have you planned for that process to happen at the rail stations…are you promoting that to ease congestion??? (0233, 0426-M –21)

Response: *The issues associated with implementing just-in-time ridesharing zones in the Dulles Corridor and the possible benefits of increased HOV were explored as part of the Project Team's review of Dulles Plan B. Neither the Project Team nor VDOT could develop facilities with the express purpose of encouraging just-in-time ridesharing (also known as "slugging" or casual carpooling) because of the tremendous liability risk associated with such activities. While these agencies recognize the benefits that have been gained in the I-95/I-395 corridor through this informal ridesharing arrangement, the random pairing of drivers and passengers inherent in this form of commuting presents risks that most public agencies are not prepared to assume.*

Public Comment: The DEIS has listed a specific set of goals for all of the alternatives. By moving the planned parking garage to the Route 772 station, and by doing so create a true terminus station, the following stated goals could be achieved:
1. Goal 1: Improve Transportation Service - Travel time within the corridor and region could be improved. The forecasted LOS at the critical intersection of Route 789 and Route 606 and the Dulles Greenway links clearly illustrate this fact.
2. Goal 2: Increase Transit Ridership - The Route 772 station would capture the traffic from the populations of the massive Moorefield Station project in addition to the aforementioned Ashburn Village, Ashburn Farms, Belmont, Broadlands and Brambleton communities.
3. Goal 3 - Support Future Development - Common planning guidelines define that transit type stations should be integrated into mixed use developments such as the Moorefield Station plan. The current Director of Planning for Loudoun County, Julie Pastor, stated at the July 11th Seminar and Reception at the Center for Innovative Technology that the Route 606 station would be "challenged" because there are no residential opportunities within the Route 606 station area. Future developments would be choked at the development surrounding the Route 606 station with the planned LOS's of F. This would suffocate developments surrounding the Dulles Airport including the AOL Time Warner and MCI WorldCom campuses.
4. Goal 4: Support Environmental Quality - Should the Route 606 station be developed with the 4,000 car parking garage, the overall majority of cars will pass the Route 772 station resulting in increased commuting times, increased commuting costs and increased pollution. (0003, 0003-L –4)

Response: *As evaluated in the Supplemental Draft EIS as a revision to the selected LPA and further documented in the Final EIS and final General Plans, the Project Team in cooperation with Loudoun County reconfigured the park-and-ride program in Loudoun County. Route 772 Station increased from no park-and-ride facility to two structures of 3,300 spaces combined. Route 606 Station decreased from 4,750 spaces to 2,750 spaces. Loudoun County arranged with two owner/developers for the location of the two park-and-ride structures at Route 772 Station.*

The current station facility plans for the Route 772 Station are designed to integrate the station access points with proposed transit-oriented developments. They also include Kiss & Ride facilities and feeder bus facilities, and would capture a portion of travelers from the station service area and from the transit-oriented developments. Loudoun County recognizes that the Route 772 Station will function as a major intermodal facility for transit bus, shuttle bus, and Metrorail. In fact, WMATA terms the bus-to-rail interface as the heart of the Metrorail system.

As indicated in the General Plans (Final EIS Volume V), construction of the proposed Dulles Greenway overpass is assumed to be carried out by others. Although the Route 772 Station of the revised LPA includes station facilities on both sides of the Dulles Greenway, the Project has determined that transit-related use of this overpass would be limited. Other roadways shown are included in the phased implementation of adjacent developments as approved by Loudoun County. Station access will be the subject of continuing coordination with Loudoun County, property owners, and developers in station area.

The Project Team notes that the morning peak hour for access to the Route 606 Station with its 2,750 park-and-ride spaces will precede any peak traffic for access to adjoining and nearby developments. Based on the evidence of Metrorail system, the park-and-ride facility of Route 606 Station will be full by 7:30 a.m. and more likely earlier. Moreover, the two-hour peak periods of station ingress and egress will have an even distribution of vehicles without a defined surge, at times called the peak of the peak. Therefore, there should be no concerns of traffic congestion due to the Route 606 Station.

Public Comment: The number of Blue Line trains going to D.C. from Rosslyn needs to be decreased to allow better headway on the Orange Line. (0043, 0276-T –5)

Response: *Re-routing of one-half of the Blue Line trains along the Yellow Line rather than through Rosslyn has been identified in the WMATA Core Capacity Study and Capital Improvement Plan as a possible means of increasing Orange Line service reliability but not frequency. This Blue Line reconfiguration was incorporated into the Metrorail operating plans used to prepare the Final EIS.*

Chapter 8 – Financial Analysis

Public Comment: Financing part of the costs with excess toll revenue is not news. The proposal to start raising the tolls in January 2003 is unwise. If tolls must be raised, they should not be raised until at least ground has been broken to begin the project. In no case should the impression be left that they will go up soon go unchallenged. (0208, 0208-M –6)

Response: *As described in Chapter 8 of the Final EIS, the Commonwealth of Virginia will be responsible for 25 percent of the Project's capital costs. For the Wiehle Avenue Extension, the Commonwealth will use revenues from the Virginia Transportation Act of 2000 and Dulles Toll Road revenues. A planned toll increase would raise tolls at the main toll plaza to $0.75 and at each ramp toll plaza to $0.50. For the Full LPA, in addition to the two sources of the Wiehle Avenue Extension, the Commonwealth may consider other sources, including future transportation appropriations.*

Public Comment: I spoke with Joan DuBois this afternoon and she suggested that I send an email to you to request some more information on the impacts of the Rail and BRT alternatives on several parcels

located near the proposed Tysons West Station. Several of my firm's clients are currently property holders in the Tysons West area and are looking for more information. In particular, I am looking for information on whether or not the following parcels will be condemned:
029-1-001-0018
029-1-001-0022A
029-1-001-0011
In speaking with Joan, she said that parcel 18 was not scheduled for relocation. Am I correct to assume that this means that there will not be a taking on this site should any of the alternatives be chosen? She also said that parcel 22A was listed as having a permanent surface easement, but was not scheduled for business relocation. What does that mean? I also understand that there is the possibility that parcel 11 may be taken depending on the alternative chosen. Which alternatives would result in this? (0296, 0296-E –1)

> ***Response:*** *Parcel 029-1-01-0018 had never been affected by any of the Build Alternatives evaluated in the Draft EIS.*
>
> *Parcel 029-1-01-0011 had been affected by the BRT/Metrorail Build Alternative of the Draft EIS. However, the Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. The BRT/Metrorail Alternative was eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*
>
> *Parcel 029-1-01-0022A had been affected by property requirements of the Tysons West Station facilities as part of the Metrorail Build Alternative of the Draft EIS. However, a May 2004 post-hearing conference addressed options to the Tysons West Station entrance and facilities. The selected option, located between Tyco Road and Spring Hill Road, does not affect Parcel 029-1-01-0022A.*

Public Comment: Also, has a timeline for condemnation been established? One of the property owners heard that the condemnation hearings were scheduled to occur before the end of the year. As you can imagine, the property owners that are scheduled for a future taking are interested to learn when this might occur and are concerned about the potential backlash from being listed as a property that will be taken. It can be hard to rent space in a warehouse that is set to be taken in x number of years. (0296, 0296-E –2)

> ***Response:*** *Right-of-way acquisition associated with the Wiehle Avenue Extension is anticipated to begin in early 2006.*

B. Supplemental Draft EIS Comments

Suggestions for Alternatives

Chapter 2 – Alternatives Considered

Public Comment: The subsidy requirements of Dulles Rail are so high that it appears that a bus rapid-transit system running over congestion-free high-occupancy toll lanes will provide superior transit options at a fraction of the cost including a mix of local and express service which is not part of the rail proposal. Accordingly, BRT and HOT needs to be explored as an alternative. (0061 0069-9)

Public Comment: The subsidy requirements of Dulles Rail are so high that it appears that a Bus Rapid Transit System running over congestion free Managed Lanes (High Occupancy Toll or High Occupancy Vehicle) will provide superior transit options at a fraction of the cost, including a mix of local and express service. (0061 0117-11)

Public Comment: BRT on HOT/HOV needs to be explored as an alternative in the Environmental Impact Statements prepared for FTA review. Please calculate the fraction of the capacity of a managed lane (busway, HOT, or HOV) that would be required for the forecasted transit mode. Compare and contrast

your calculations with that of existing managed lanes such as Shirley Highway along I-395 and the El Monte Busway (I-10) in Los Angeles. (0061 0117-12)

Public Comment: Bus rapid transit on H-15 (ph) needs to be explored as an alternative. (0061 0136-10)

Public Comment: --[H]eavy rail currently costs $3 1/2 million per mile per year in annual subsidies. HOT lanes running Bus Rapid Transit should produce a surplus. The two concepts are incompatible, however, due to limitations on the right of way-- an either/or choice. Why is the former being proposed and the latter ignored? (0061 0168-2)

> ***Response****: Your participation in the public hearings and opinion as to which alternatives or alignments you think would best serve the needs of the Dulles Corridor and region are important to the Project Team and were considered by decision-makers in the selection of the Locally Preferred Alternative. The Project Team recommended and the decision-makers selected the Metrorail Extension with Alignment T6 in Tysons Corner as the Locally Preferred Alternative. BRT was eliminated from further consideration after the public and interagency review and comment on the Draft EIS.*

Miscellaneous Supplemental Draft EIS Comments

Chapter 4 – Environmental Effects

Public Comment: While your report on Section 4.7.3 speaks of temporary noise barriers being erected during construction, I would urge that a coordinated agency mitigation effort result in a significant barrier before construction to mitigation not only construction noise, operating noise, but the visual impact all at once. (0036 0062-4)

> ***Response:*** *Construction-related noise effects are described in Section 4.7.6 of the Final EIS. Related mitigation is described in Section 4.7.7 of the Final EIS. DRPT, the project sponsor, will prepare and implement a mitigation monitoring plan, based on the mitigation commitments in the FTA Record of Decision.*

Index J.1-1 Draft EIS Comments by Last Name of Commenter
Index J.1-2 Supplemental Draft EIS Comments by Last Name of Commenter
Index J.2-1 Draft EIS Comments by Commenter ID Number
Index J.2-2 Supplemental Draft EIS Comments by Commenter ID Number
Index J.3-1 Draft EIS Comments by Commenter Organization
Index J.3-2 Supplemental Draft EIS Comments by Commenter Organization

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Alcorn		0144	0190-T -1	1.0 Purpose and Need	J-1-7
Alcorn		0144	0144-T -6	2.1 Alternatives Previously Considered	J-2-17
Alcorn		0144	0144-T -5	2.2 Draft EIS Alternatives	J-2-62
Alcorn		0144	0144-T -1	2.2 Draft EIS Alternatives	J-2-64
Alcorn		0144	0190-T -3	2.2 Draft EIS Alternatives	J-2-62
Alcorn		0144	0261-T -3	2.2 Draft EIS Alternatives	J-2-52
Alcorn		0144	0261-T -2	2.2 Draft EIS Alternatives	J-2-49
Alcorn		0144	0144-T -3	2.2 Draft EIS Alternatives	J-2-82
Alcorn		0144	0144-T -2	2.2 Draft EIS Alternatives	J-2-78
Alcorn		0144	0144-T -7	2.2 Draft EIS Alternatives	J-2-82
Alcorn		0144	0144-T -8	2.2 Draft EIS Alternatives	J-2-84
Alcorn		0144	0144-T -11	2.2 Draft EIS Alternatives	J-2-75
Alcorn		0144	0261-T -1	2.2 Draft EIS Alternatives	J-2-83
Alcorn		0144	0190-T -4	2.2 Draft EIS Alternatives	J-2-75
Alcorn		0144	0144-T -10	5.3 Development Effects/Potential	J-5-32
Alcorn		0144	0190-T -2	8.1 Capital Funding Strategy	J-8-23
Alcorn		0144	0144-T -4	8.1 Capital Funding Strategy	J-8-41
Alcorn		0144	0144-T -9	9.1 Secondary Development Effects	J-9-5
Allahdoust	Virginia Department of Transportation	0421	0421-A -14	S.0 Executive Summary	J-S-1
Allahdoust	Virginia Department of Transportation	0421	0421-A -17	2.0 Alternatives Considered	J-2-2
Allahdoust	Virginia Department of Transportation	0421	0421-A -15	2.0 Alternatives Considered	J-2-2
Allahdoust	Virginia Department of Transportation	0421	0421-A -23	2.0 Alternatives Considered	J-2-32
Allahdoust	Virginia Department of Transportation	0421	0421-A -25	2.0 Alternatives Considered	J-2-33
Allahdoust	Virginia Department of Transportation	0421	0421-A -26	2.0 Alternatives Considered	J-2-33
Allahdoust	Virginia Department of Transportation	0421	0421-A -5	3.2 Neighborhood, Community Impacts	J-3-10
Allahdoust	Virginia Department of Transportation	0421	0421-A -13	3.4 Visual and Aesthetic Conditions	J-3-34
Allahdoust	Virginia Department of Transportation	0421	0421-A -8	3.5 Cultural Resources	J-3-46
Allahdoust	Virginia Department of Transportation	0421	0421-A -33	3.7 Safety and Security	J-3-54
Allahdoust	Virginia Department of Transportation	0421	0421-A -34	3.7 Safety and Security	J-3-54
Allahdoust	Virginia Department of Transportation	0421	0421-A -32	3.7 Safety and Security	J-3-54
Allahdoust	Virginia Department of Transportation	0421	0421-A -31	3.7 Safety and Security	J-3-54
Allahdoust	Virginia Department of Transportation	0421	0421-A -30	3.7 Safety and Security	J-3-54
Allahdoust	Virginia Department of Transportation	0421	0421-A -10	4.1 Geologic Resources	J-4-1
Allahdoust	Virginia Department of Transportation	0421	0421-A -11	4.7 Noise	J-4-33
Allahdoust	Virginia Department of Transportation	0421	0421-A -12	4.8 Vibration	J-4-94
Allahdoust	Virginia Department of Transportation	0421	0421-A -9	4.9 Hazardous and Contaminated Materials	J-4-96
Allahdoust	Virginia Department of Transportation	0421	0421-A -19	5.3 Development Effects/Potential	J-5-12
Allahdoust	Virginia Department of Transportation	0421	0421-A -7	5.3 Development Effects/Potential	J-5-12
Allahdoust	Virginia Department of Transportation	0421	0421-A -1	6.1 Transit Effects	J-6-2
Allahdoust	Virginia Department of Transportation	0421	0421-A -2	6.1 Transit Effects	J-6-4
Allahdoust	Virginia Department of Transportation	0421	0421-A -3	6.1 Transit Effects	J-6-4
Allahdoust	Virginia Department of Transportation	0421	0421-A -20	6.1 Transit Effects	J-6-4
Allahdoust	Virginia Department of Transportation	0421	0421-A -18	6.2 Effects on Roadways	J-6-22
Allahdoust	Virginia Department of Transportation	0421	0421-A -29	6.3 Effects on Other Transportation Facilities and Services	J-6-58
Allahdoust	Virginia Department of Transportation	0421	0421-A -21	8.1 Capital Funding Strategy	J-8-3
Allahdoust	Virginia Department of Transportation	0421	0421-A -4	9.1 Secondary Development Effects	J-9-1
Allahdoust	Virginia Department of Transportation	0421	0421-A -6	9.1 Secondary Development Effects	J-9-1
Allahdoust	Virginia Department of Transportation	0421	0421-A -22	11.1 Public Involvement	J-11-1
Allahdoust	Virginia Department of Transportation	0421	0421-A -35	General Plans	J-GP-2
Allahdoust	Virginia Department of Transportation	0421	0421-A -28	General Plans	J-GP-4
Allahdoust	Virginia Department of Transportation	0421	0421-A -27	General Plans	J-GP-4
Allahdoust	Virginia Department of Transportation	0421	0421-A -24	General Plans	J-GP-3
Allender		0314	0314-L -1	4.7 Noise	J-4-71
Alpert		0341	0341-L -1	4.7 Noise	J-4-71
Anderson		0143	0143-T -6	1.2 Planning Context	J-1-12
Anderson		0143	0143-T -1	2.2 Draft EIS Alternatives	J-2-75
Anderson		0143	0143-T -2	2.2 Draft EIS Alternatives	J-2-138
Anderson		0143	0143-T -7	2.2 Draft EIS Alternatives	J-2-139
Anderson		0143	0143-T -5	2.2 Draft EIS Alternatives	J-2-139
Anderson		0143	0143-T -3	2.2 Draft EIS Alternatives	J-2-138
Anderson		0143	0143-T -4	2.2 Draft EIS Alternatives	J-2-139
Antigone	Dulles Gateway Associates LLC	0248	2-01	2.2 Draft EIS Alternatives	J-2-102
Antigone	Dulles Gateway Associates LLC	0248	2-02	2.2 Draft EIS Alternatives	J-2-115
Antigone	Dulles Gateway Associates LLC	0248	2-03	2.2 Draft EIS Alternatives	J-2-119
Antigone	Dulles Gateway Associates LLC	0248	2-04	2.2 Draft EIS Alternatives	J-2-119

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Antigone	Dulles Gateway Associates LLC	0248	2-05	2.2 Draft EIS Alternatives	J-2-119
Antigone	Dulles Gateway Associates LLC	0248	2-06	2.2 Draft EIS Alternatives	J-2-119
Antigone	Dulles Gateway Associates LLC	0248	2-07	2.2 Draft EIS Alternatives	J-2-119
Antigone	Dulles Gateway Associates LLC	0248	0248-T -1	2.2 Draft EIS Alternatives	J-2-74
Antigone	Dulles Gateway Associates LLC	0248	0248-T -2	2.2 Draft EIS Alternatives	J-2-115
Antigone	Dulles Gateway Associates LLC	0248	0248-T -3	2.2 Draft EIS Alternatives	J-2-115
Antigone	Dulles Gateway Associates LLC	0248	0248-T -5	2.2 Draft EIS Alternatives	J-2-115
Antigone	Dulles Gateway Associates LLC	0248	0248-T -6	2.2 Draft EIS Alternatives	J-2-119
Antigone	Dulles Gateway Associates LLC	0248	0447-L -3	2.2 Draft EIS Alternatives	J-2-118
Antigone	Dulles Gateway Associates LLC	0248	0447-L -2	2.2 Draft EIS Alternatives	J-2-115
Antigone	Dulles Gateway Associates LLC	0248	0447-L -5	2.2 Draft EIS Alternatives	J-2-119
Antigone	Dulles Gateway Associates LLC	0248	0248-T -4	2.2 Draft EIS Alternatives	J-2-117
Antigone	Dulles Gateway Associates LLC	0248	0447-L -1	2.2 Draft EIS Alternatives	J-2-117
Antigone	Dulles Gateway Associates LLC	0248	0447-L -6	2.2 Draft EIS Alternatives	J-2-102
Antigone	Dulles Gateway Associates LLC	0248	0248-T -10	2.2 Draft EIS Alternatives	J-2-101
Antigone	Dulles Gateway Associates LLC	0248	0248-T -9	2.2 Draft EIS Alternatives	J-2-101
Antigone	Dulles Gateway Associates LLC	0248	0248-T -8	2.2 Draft EIS Alternatives	J-2-101
Antigone	Dulles Gateway Associates LLC	0248	0248-T -7	2.2 Draft EIS Alternatives	J-2-101
Antigone	Dulles Gateway Associates LLC	0248	0447-L -4	5.3 Development Effects/Potential	J-5-23
Apple	Sierra Club, Great Falls Group	0188	0217-M -1	2.2 Draft EIS Alternatives	J-2-73
Apple	Sierra Club, Great Falls Group	0188	0188-T -1	2.2 Draft EIS Alternatives	J-2-76
Apple	Sierra Club, Great Falls Group	0188	0217-M -4	2.2 Draft EIS Alternatives	J-2-132
Apple	Sierra Club, Great Falls Group	0188	0188-T -4	2.2 Draft EIS Alternatives	J-2-132
Apple	Sierra Club, Great Falls Group	0188	0217-M -3	5.3 Development Effects/Potential	J-5-43
Apple	Sierra Club, Great Falls Group	0188	0188-T -3	5.3 Development Effects/Potential	J-5-42
Apple	Sierra Club, Great Falls Group	0188	0188-T -5	5.3 Development Effects/Potential	J-5-31
Apple	Sierra Club, Great Falls Group	0188	0217-M -5	5.3 Development Effects/Potential	J-5-31
Apple	Sierra Club, Great Falls Group	0188	0217-M -2	9.1 Secondary Development Effects	J-9-6
Apple	Sierra Club, Great Falls Group	0188	0188-T -2	9.1 Secondary Development Effects	J-9-6
Arguto	U.S. Environmental Protection Agency Region III	0303	0303-A -4	2.2 Draft EIS Alternatives	J-2-29
Arguto	U.S. Environmental Protection Agency Region III	0303	0303-A -3	3.3 Property Acquisition/Displacement	J-3-29
Arguto	U.S. Environmental Protection Agency Region III	0303	0303-A -2	4.6 Air Quality	J-4-19
Arguto	U.S. Environmental Protection Agency Region III	0303	0303-A -1	10.1 Evaluation Relative to Project Goals and Objectives	J-10-1
Babington		0063	0063-CC-2	2.2 Draft EIS Alternatives	J-2-77
Babington		0063	0063-CC-1	2.2 Draft EIS Alternatives	J-2-67
Bado		0351	0351-L -1	4.7 Noise	J-4-71
Baker		0036	1-01	1.0 Purpose and Need	J-1-11
Baker		0036	0275-T -1	2.2 Draft EIS Alternatives	J-2-83
Baker		0036	0036-CC-3	2.2 Draft EIS Alternatives	J-2-83
Baker		0036	0036-CC-1	2.2 Draft EIS Alternatives	J-2-83
Baker		0036	0036-CC-2	2.4 Suggestions for Other Alternatives	J-2-252 & 254
Baker		0036	0275-T -3	2.4 Suggestions for Other Alternatives	J-2-252 & 254
Baker		0036	0275-T -2	2.4 Suggestions for Other Alternatives	J-2-252 &254
Baker	Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.	0161	0161-T -1	2.2 Draft EIS Alternatives	J-2-70
Baker	Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.	0161	0161-T -2	2.2 Draft EIS Alternatives	J-2-45
Baker	Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.	0161	0161-T -3	5.1 Economic Impacts	J-5-5
Barakat		0111	0111-E -1	4.7 Noise	J-4-55
Barber	Union Local 689	025	0253-T -2	2.2 Draft EIS Alternatives	J-2-79 & 100
Barber	Union Local 689	0250	0253-T -5	2.2 Draft EIS Alternatives	J-2-72
Barber	Union Local 689	0250	0253-T -1	2.2 Draft EIS Alternatives	J-2-72 & 86
Barber	Union Local 689	025	0253-T -3	5.1 Economic Impacts	J-2-100 & J-5-2
Barber	Union Local 689	025	0253-T -4	5.1 Economic Impacts	J-2-100 & J-5-6
Barksdale	Fairfax County Coalition for Smarter Growth	0151	0151-T -4	2.1 Alternatives Previously Considered	J-2-10
Barksdale	Fairfax County Coalition for Smarter Growth	0151	0297-E -5	2.1 Alternatives Previously Considered	J-2-10
Barksdale	Fairfax County Coalition for Smarter Growth	0151	0297-E -1	2.2 Draft EIS Alternatives	J-2-40
Barksdale	Fairfax County Coalition for Smarter Growth	0151	0270-L -1	2.2 Draft EIS Alternatives	J-2-41
Barksdale	Fairfax County Coalition for Smarter Growth	0151	0151-T -1	2.2 Draft EIS Alternatives	J-2-40
Barksdale	Fairfax County Coalition for Smarter Growth	0151	0297-E -14	2.2 Draft EIS Alternatives	J-2-41
Barksdale	Fairfax County Coalition for Smarter Growth	0151	0151-T -9	2.2 Draft EIS Alternatives	J-2-41
Barksdale	Fairfax County Coalition for Smarter Growth	0151	0297-E -10	2.2 Draft EIS Alternatives	J-2-41
Barksdale	Fairfax County Coalition for Smarter Growth	0151	0151-T -6	5.3 Development Effects/Potential	J-5-17
Barksdale	Fairfax County Coalition for Smarter Growth	0151	0297-E -9	5.3 Development Effects/Potential	J-5-17
Barksdale	Fairfax County Coalition for Smarter Growth	0151	0297-E -8	5.3 Development Effects/Potential	J-5-17
Barksdale	Fairfax County Coalition for Smarter Growth	0151	0297-E -11	5.3 Development Effects/Potential	J-5-14

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Barksdale	Fairfax County Coalition for Smarter Growth	0151	0297-E -7	6.2 Effects on Roadways	J-6-30
Barksdale	Fairfax County Coalition for Smarter Growth	0151	0151-T -3	8.1 Capital Funding Strategy	J-8-6
Barksdale	Fairfax County Coalition for Smarter Growth	0151	0297-E -3	8.1 Capital Funding Strategy	J-8-6
Barksdale	Fairfax County Coalition for Smarter Growth	0151	0151-T -2	8.1 Capital Funding Strategy	J-8-7
Barksdale	Fairfax County Coalition for Smarter Growth	0151	0297-E -2	8.1 Capital Funding Strategy	J-8-7
Barksdale	Fairfax County Coalition for Smarter Growth	0151	0151-T -8	9.1 Secondary Development Effects	J-9-3
Barksdale	Fairfax County Coalition for Smarter Growth	0151	0151-T -5	9.1 Secondary Development Effects	J-9-3
Barksdale	Fairfax County Coalition for Smarter Growth	0151	0297-E -13	9.1 Secondary Development Effects	J-9-3
Barksdale	Fairfax County Coalition for Smarter Growth	0151	0297-E -6	9.1 Secondary Development Effects	J-9-3
Barksdale	Fairfax County Coalition for Smarter Growth	0151	0297-E -12	10.1 Evaluation Relative to Project Goals and Objectives	J-10-2
Barksdale	Fairfax County Coalition for Smarter Growth	0151	0151-T -7	10.1 Evaluation Relative to Project Goals and Objectives	J-10-2
Barksdale	Fairfax County Coalition for Smarter Growth	0151	0297-E -4	13.1 Schedule/Process for Implementation	J-13-2
Barletta		0075	0075-CC-2	2.2 Draft EIS Alternatives	J-2-65
Barletta		0075	0075-CC-1	2.2 Draft EIS Alternatives	J-2-78
Barletta		0075	0075-CC-3	2.2 Draft EIS Alternatives	J-2-138
Barletta		0075	0075-CC-5	2.2 Draft EIS Alternatives	J-2-138
Barletta		0075	0075-CC-6	2.2 Draft EIS Alternatives	J-2-138
Barletta		0075	0075-CC-4	4.7 Noise	J-4-54
Barresi		0311	0311-L -1	4.7 Noise	J-4-71
Barrett		0191	0191-T -1	1.0 Purpose and Need	J-1-7
Barrett		0191	0191-T -4	2.2 Draft EIS Alternatives	J-2-169
Barrett		0191	0191-T -7	2.4 Suggestions for Other Alternatives	J-2-250
Barrett		0191	0191-T -5	5.3 Development Effects/Potential	J-5-36
Barrett		0191	0191-T -6	5.3 Development Effects/Potential	J-5-41
Barrett		0191	0191-T -3	5.3 Development Effects/Potential	J-5-41
Barrett		0191	0191-T -2	8.1 Capital Funding Strategy	J-8-46
Barry		0082	0082-CC-3	5.3 Development Effects/Potential	J-5-38
Barry		0082	0082-CC-2	8.1 Capital Funding Strategy	J-8-20
Barry		0082	0082-CC-1	8.1 Capital Funding Strategy	J-8-32
Batmanghelidj		0057	0057-CC-1	2.2 Draft EIS Alternatives	J-2-167
Batmanghelidj		0344	0344-L -1	4.7 Noise	J-4-71
Bell, L.		0316	0316-L -1	4.7 Noise	J-4-71
Bell, R.		0115	0115-E -1	2.2 Draft EIS Alternatives	J-2-78
Bell, R.		0115	0115-E -2	2.2 Draft EIS Alternatives	J-2-160
Bellanca		0495	2-01	2.4 Suggestions for Other Alternatives	J-2-253
Belt		0511	2-01	2.2 Draft EIS Alternatives	J-2-85
Belt		0511	2-02	2.2 Draft EIS Alternatives	J-2-168
Bender		0267	0267-L -2	2.2 Draft EIS Alternatives	J-2-46
Bender		0267	0267-L -3	2.2 Draft EIS Alternatives	J-2-155
Bender		0267	0267-L -1	4.7 Noise	J-4-39
Bennett	Hunter Mill Defense League	0147	0147-T -10	2.0 Alternatives Considered	J-A-1
Bennett	Hunter Mill Defense League	0147	0459-L -6	2.1 Alternatives Previously Considered	J-2-13
Bennett	Hunter Mill Defense League	0147	0249-T -2	2.1 Alternatives Previously Considered	J-2-20
Bennett	Hunter Mill Defense League	0147	0459-L -4	2.1 Alternatives Previously Considered	J-2-20
Bennett	Hunter Mill Defense League	0147	0459-L -5	2.2 Draft EIS Alternatives	J-2-104
Bennett	Hunter Mill Defense League	0147	0459-L -9	3.2 Neighborhood, Community Services and Community Cohesion	J-3-15
Bennett	Hunter Mill Defense League	0147	0459-L -18	3.2 Neighborhood, Community Services and Community Cohesion	J-3-15
Bennett	Hunter Mill Defense League	0147	0459-L -17	3.2 Neighborhood, Community Services and Community Cohesion	J-3-15
Bennett	Hunter Mill Defense League	0147	0459-L -10	3.2 Neighborhood, Community Services and Community Cohesion	J-3-13
Bennett	Hunter Mill Defense League	0147	0459-L -8	3.2 Neighborhood, Community Services and Community Cohesion	J-3-14
Bennett	Hunter Mill Defense League	0147	0249-T -3	3.2 Neighborhood, Community Services and Community Cohesion	J-3-17
Bennett	Hunter Mill Defense League	0147	0177-T -3	3.2 Neighborhood, Community Services and Community Cohesion	J-3-21
Bennett	Hunter Mill Defense League	0147	0459-L -12	3.4 Visual and Aesthetic Conditions	J-3-36
Bennett	Hunter Mill Defense League	0147	0459-L -11	4.7 Noise	J-4-64
Bennett	Hunter Mill Defense League	0147	0147-T -4	5.3 Development Effects/Potential	J-5-38
Bennett	Hunter Mill Defense League	0147	0147-T -5	5.3 Development Effects/Potential	J-5-38
Bennett	Hunter Mill Defense League	0147	0147-T -3	5.3 Development Effects/Potential	J-5-11
Bennett	Hunter Mill Defense League	0147	0459-L -14	6.2 Effects on Roadways	J-6-33
Bennett	Hunter Mill Defense League	0147	0459-L -26	6.2 Effects on Roadways	J-6-34
Bennett	Hunter Mill Defense League	0147	0459-L -22	6.2 Effects on Roadways	J-6-33
Bennett	Hunter Mill Defense League	0147	0147-T -2	6.2 Effects on Roadways	J-6-37
Bennett	Hunter Mill Defense League	0147	0147-T -1	6.2 Effects on Roadways	J-6-37
Bennett	Hunter Mill Defense League	0147	0177-T -6	6.2 Effects on Roadways	J-6-38
Bennett	Hunter Mill Defense League	0147	0459-L -27	8.1 Capital Funding Strategy	J-8-26
Bennett	Hunter Mill Defense League	0147	0459-L -24	8.1 Capital Funding Strategy	J-8-24

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Bennett	Hunter Mill Defense League	0147	0177-T -2	8.1 Capital Funding Strategy	J-8-29
Bennett	Hunter Mill Defense League	0147	0147-T -9	8.1 Capital Funding Strategy	J-8-41
Bennett	Hunter Mill Defense League	0147	0249-T -1	8.1 Capital Funding Strategy	J-8-44
Bennett	Hunter Mill Defense League	0147	0459-L -15	8.1 Capital Funding Strategy	J-8-44
Bennett	Hunter Mill Defense League	0147	0459-L -23	8.1 Capital Funding Strategy	J-8-30
Bennett	Hunter Mill Defense League	0147	0177-T -4	9.1 Secondary Development Effects	J-9-14
Bennett	Hunter Mill Defense League	0147	0459-L -13	9.1 Secondary Development Effects	J-9-16
Bennett	Hunter Mill Defense League	0147	0459-L -33	9.1 Secondary Development Effects	J-9-16
Bennett	Hunter Mill Defense League	0147	0459-L -21	9.1 Secondary Development Effects	J-9-13
Bennett	Hunter Mill Defense League	0147	0459-L -20	9.1 Secondary Development Effects	J-9-16
Bennett	Hunter Mill Defense League	0147	0147-T -8	9.1 Secondary Development Effects	J-9-9
Bennett	Hunter Mill Defense League	0147	0147-T -7	9.1 Secondary Development Effects	J-9-5
Bennett	Hunter Mill Defense League	0147	0147-T -6	9.1 Secondary Development Effects	J-9-5
Bennett	Hunter Mill Defense League	0147	0459-L -16	9.1 Secondary Development Effects	J-9-9
Bennett	Hunter Mill Defense League	0147	0459-L -19	9.1 Secondary Development Effects	J-9-10
Bennett	Hunter Mill Defense League	0147	0459-L -29	10.1 Evaluation Relative to Project Goals and Objectives	J-10-15
Bennett	Hunter Mill Defense League	0147	0459-L -30	10.1 Evaluation Relative to Project Goals and Objectives	J-10-14
Bennett	Hunter Mill Defense League	0147	0459-L -31	10.1 Evaluation Relative to Project Goals and Objectives	J-10-15
Bennett	Hunter Mill Defense League	0147	0459-L -32	10.1 Evaluation Relative to Project Goals and Objectives	J-10-15
Bennett	Hunter Mill Defense League	0147	0459-L -25	10.1 Evaluation Relative to Project Goals and Objectives	J-10-14
Bennett	Hunter Mill Defense League	0147	0459-L -28	10.1 Evaluation Relative to Project Goals and Objectives	J-10-30
Bennett	Hunter Mill Defense League	0147	0177-T -5	11.1 Public Involvement	J-11-8
Bennett	Hunter Mill Defense League	0147	0177-T -1	11.1 Public Involvement	J-11-8
Bennett	Hunter Mill Defense League	0147	0459-L -2	11.1 Public Involvement	J-11-9
Bennett	Hunter Mill Defense League	0147	0459-L -3	12.1 Concerns over Study Process	J-12-5
Bennett	Hunter Mill Defense League	0147	0459-L -1	12.1 Concerns over Study Process	J-12-7
Bennett	Hunter Mill Defense League	0147	0459-L -7	12.1 Concerns over Study Process	J-12-8
Bennett		0148	0148-T -7	1.0 Purpose and Need	J-1-7
Bennett		0148	0148-T -1	1.0 Purpose and Need	J-1-11
Bennett		0148	0250-T -1	1.0 Purpose and Need	J-1-11
Bennett		0148	0463-L -3	12.1 Concerns over Study Process	J-12-4
Bennett		0148	0463-L -4	12.1 Concerns over Study Process	J-12-8
Bennett		0148	0148-T -8	2.1 Alternatives Previously Considered	J-2-26 & 155
Bennett		0148	0148-T -6	2.1 Alternatives Previously Considered	J-2-26 & 155
Bennett		0148	0250-T -2	2.2 Draft EIS Alternatives	J-2-150
Bennett		0148	0250-T -3	2.2 Draft EIS Alternatives	J-2-174
Bennett		0148	0250-T -4	2.2 Draft EIS Alternatives	J-2-51
Bennett		0148	0148-T -5	2.2 Draft EIS Alternatives	J-2-163
Bennett		0148	0463-L -5	2.2 Draft EIS Alternatives	J-2-100
Bennett		0148	0463-L -2	2.2 Draft EIS Alternatives	J-2-100
Bennett		0148	03-01	3.2 Neighborhood, Community Impacts	J-3-18
Bennett		0148	03-02	3.2 Neighborhood, Community Impacts	J-3-18
Bennett		0148	03-03	3.2 Neighborhood, Community Impacts	J-3-18
Bennett		0148	03-04	3.2 Neighborhood, Community Impacts	J-3-18
Bennett		0148	03-05	3.2 Neighborhood, Community Impacts	J-3-19
Bennett		0148	03-06	3.2 Neighborhood, Community Impacts	J-3-24
Bennett		0148	0463-L -1	3.2 Neighborhood/Community Impacts	J-3-16
Bennett		0148	0148-T -2	6.1 Transit Effects	J-6-10
Bennett		0148	0148-T -3	6.2 Effects on Roadways	J-6-37
Bennett		0148	0148-T -4	6.3 Effects on Other Transportation Facilities and Services	J-6-64
Bensimon		0321	0321-L -1	4.7 Noise	J-4-71
Benton	Centennial Contractors Enterprises, Inc.	0292	0292-L -1	11.1 Public Involvement	J-11-7
Berger		0114	0114-E -2	2.2 Draft EIS Alternatives	J-2-169
Berger		0114	0114-E -1	8.1 Capital Funding Strategy	J-8-12
Berger		0114	0114-E -4	8.1 Capital Funding Strategy	J-8-10
Berger		0114	0114-E -6	8.1 Capital Funding Strategy	J-8-10
Berger		0114	0114-E -8	8.1 Capital Funding Strategy	J-8-10
Berger		0114	0114-E -5	8.1 Capital Funding Strategy	J-8-11
Berger		0114	0114-E -7	8.1 Capital Funding Strategy	J-8-32
Berger		0114	0114-E -3	13.1 Schedule/Process for Implementation	J-13-2
Berry		0334	0334-L -1	4.7 Noise	J-4-71
Bhilar		0329	0329-L -1	4.7 Noise	J-4-71

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Bishop	Chesapeake Region 2012 Coalition	0153	0153-T -2	1.0 Purpose and Need	J-1-5
Bishop	Chesapeake Region 2012 Coalition	0153	0153-T -3	1.0 Purpose and Need	J-1-9
Bishop	Chesapeake Region 2012 Coalition	0153	0153-T -1	2.2 Draft EIS Alternatives	J-2-85
Bishop	Chesapeake Region 2012 Coalition	0153	0153-T -4	2.2 Draft EIS Alternatives	J-2-83
Blackwell	Reston Association	0196	0196-T -1	2.2 Draft EIS Alternatives	J-2-77
Blackwell	Reston Association	0196	0196-T -2	2.2 Draft EIS Alternatives	J-2-81
Block		0366	0366-L -1	4.7 Noise	J-4-71
Bochner		0387	2-01	2.2 Draft EIS Alternatives	J-2-90
Bochner		0387	2-02	2.2 Draft EIS Alternatives	J-2-127
Bochner		0387	2-03	2.2 Draft EIS Alternatives	J-2-141
Bochner		0387	2-04	2.2 Draft EIS Alternatives	J-2-113
Bochner		0387	2-05	2.2 Draft EIS Alternatives	J-2-91
Bochner		0387	2-06	2.2 Draft EIS Alternatives	J-2-190
Bochner		0387	2-07	2.2 Draft EIS Alternatives	J-2-191
Bochner		0387	2-08	2.2 Draft EIS Alternatives	J-2-191
Bochner		0387	0387-L -4	2.2 Draft EIS Alternatives	J-2-173
Bochner		0387	0387-L -1	2.2 Draft EIS Alternatives	J-2-106
Bochner		0387	0387-L -5	2.2 Draft EIS Alternatives	J-2-173
Bochner		0387	0387-L -9	2.2 Draft EIS Alternatives	J-2-95
Bochner		0387	0387-L -10	2.2 Draft EIS Alternatives	J-2-92
Bochner		0387	0387-L -42	2.2 Draft EIS Alternatives	J-2-93
Bochner		0387	0387-L -3	2.2 Draft EIS Alternatives	J-2-134
Bochner		0387	0387-L -43	2.2 Draft EIS Alternatives	J-2-137
Bochner		0387	0387-L -45	2.2 Draft EIS Alternatives	J-2-140
Bochner		0387	0387-L -41	2.2 Draft EIS Alternatives	J-2-145
Bochner		0387	0387-L -44	2.2 Draft EIS Alternatives	J-2-145
Bochner		0387	0387-L -38	2.2 Draft EIS Alternatives	J-2-144
Bochner		0387	0387-L -40	2.2 Draft EIS Alternatives	J-2-144
Bochner		0387	0387-L -28	2.2 Draft EIS Alternatives	J-2-142
Bochner		0387	0387-L -29	2.2 Draft EIS Alternatives	J-2-142
Bochner		0387	0387-L -30	2.2 Draft EIS Alternatives	J-2-142
Bochner		0387	0387-L -39	2.2 Draft EIS Alternatives	J-2-144
Bochner		0387	0387-L -31	2.2 Draft EIS Alternatives	J-2-143
Bochner		0387	0387-L -32	2.2 Draft EIS Alternatives	J-2-143
Bochner		0387	0387-L -33	2.2 Draft EIS Alternatives	J-2-143
Bochner		0387	0387-L -34	2.2 Draft EIS Alternatives	J-2-143
Bochner		0387	0387-L -35	2.2 Draft EIS Alternatives	J-2-143
Bochner		0387	0387-L -36	2.2 Draft EIS Alternatives	J-2-144
Bochner		0387	0387-L -37	2.2 Draft EIS Alternatives	J-2-144
Bochner		0387	0387-L -46	2.2 Draft EIS Alternatives	J-2-141
Bochner		0387	0387-L -13	3.4 Visual and Aesthetic Conditions	J-3-39
Bochner		0387	0387-L -47	3.4 Visual and Aesthetic Conditions	J-3-39
Bochner		0387	0387-L -18	4.6 Air Quality	J-4-21
Bochner		0387	0387-L -17	4.6 Air Quality	J-4-21
Bochner		0387	0387-L -15	4.6 Air Quality	J-4-25
Bochner		0387	0387-L -16	4.6 Air Quality	J-4-28
Bochner		0387	0387-L -19	4.7 Noise	J-4-49
Bochner		0387	0387-L -12	4.7 Noise	J-4-72
Bochner		0387	4-01	4.7 Noise	J-4-75
Bochner		0387	0387-L -14	6.1 Transit Effects	J-6-13
Bochner		0387	0387-L -7	6.1 Transit Effects	J-6-1 & 11
Bochner		0387	0387-L -11	6.3 Effects on Other Transportation Facilities and Services	J-6-66
Bochner		0387	0387-L -48	8.1 Capital Funding Strategy	J-8-31
Bochner		0387	0387-L -2	8.1 Capital Funding Strategy	J-8-27
Bochner		0387	0387-L -21	General Plans	J-GP-4
Bochner		0387	0387-L -22	General Plans	J-GP-5
Bochner		0387	0387-L -23	General Plans	J-GP-5
Bochner		0387	0387-L -24	General Plans	J-GP-5
Bochner		0387	0387-L -25	General Plans	J-GP-5
Bochner		0387	0387-L -26	General Plans	J-GP-6
Bochner		0387	0387-L -27	General Plans	J-GP-6
Bochner		0387	0387-L -6	10.1 Evaluation Relative to Project Goals and Objectives	J-10-27
Bochner		0387	0387-L -8	10.1 Evaluation Relative to Project Goals and Objectives	J-10-26
Bochner		0387	0387-L -20	11.1 Public Involvement	J-A-1

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Bogard	Loudoun County Board Supervisor	0240	0240-T -3	2.2 Draft EIS Alternatives	J-2-38
Bogard	Loudoun County Board Supervisor	0240	0240-T -4	2.2 Draft EIS Alternatives	J-2-37
Bogard	Loudoun County Board Supervisor	0240	0240-T -1	5.3 Development Effects/Potential	J-5-14
Bogard	Loudoun County Board Supervisor	0240	0240-T -2	8.1 Capital Funding Strategy	J-8-4
Bowers	Loudoun County Administrator	0491	2-01	2.1 Alternatives Previously Considered	J-2-36
Bowers	Loudoun County Administrator	0491	2-02	2.1 Alternatives Previously Considered	J-2-37
Bowers	Loudoun County Administrator	0491	2-03	2.1 Alternatives Previously Considered	J-2-37
Bowles	Loudoun County Administrator	0004	0004-L -1	2.2 Draft EIS Alternatives	J-2-66
Bowles	Loudoun County Administrator	0004	0004-L -2	2.2 Draft EIS Alternatives	J-2-108
Bowles	Loudoun County Administrator	0004	0004-L -3	2.4 Suggestions for Other Alternatives	J-2-251
Bowman		0502	2-01	2.2 Draft EIS Alternatives	J-2-85
Bravo		0430	2-01	2.2 Draft EIS Alternatives	J-2-128
Bravo		0430	0430-E -9	2.2 Draft EIS Alternatives	J-2-153
Bravo		0430	03-01	3.2 Neighborhood, Community Impacts	J-3-22
Bravo		0430	03-04	3.2 Neighborhood, Community Impacts	J-3-20
Bravo		0430	0430- E- 8	3.4 Visual and Aesthetic Conditions	J-3-41
Bravo		0430	0430-E -4	3.4 Visual and Aesthetic Conditions	J-3-34
Bravo		0430	03-02	3.4 Visual and Aesthetic Conditions	J-3-39
Bravo		0430	03-03	3.7 Safety and Security	J-3-59
Bravo		0430	0430-E -10	3.7 Safety and Security	J-3-57
Bravo		0430	0430-E -5	3.7 Safety and Security	J-3-57
Bravo		0430	0430-E -2	4.7 Noise	J-4-49
Bravo		0430	0430-E -3	4.7 Noise	J-4-66
Bravo		0430	0430-E -6	4.7 Noise	J-4-68
Bravo		0430	0430-E -7	4.7 Noise	J-4-56
Bravo		0430	4-02	4.7 Noise	J-4-77
Bravo		0430	4-03	4.7 Noise	J-4-79
Bravo		0430	4-01	4.7 Noise	J-4-76
Bravo		0430	0430-E -1	4.7 Noise	J-4-39
Bravo		0430	0430-E -11	6.2 Effects on Roadways	J-6-34
Bravo		0430	0430-E -12	6.2 Effects on Roadways	J-6-35
Bravo		0430	9-1	9.3 Mitigation	J-9-27
Bravo		0430	9-2	9.3 Mitigation	J-9-27
Brevell		0376	0376-L -1	4.7 Noise	J-4-71
Broussard	McLean Commons Citizens Association	0159	0159-T -3	4.6 Air Quality	J-4-24
Broussard	McLean Commons Citizens Association	0159	0159-T -5	5.3 Development Effects/Potential	J-5-40
Broussard	McLean Commons Citizens Association	0159	0159-T -1	5.3 Development Effects/Potential	J-5-36
Broussard	McLean Commons Citizens Association	0159	0159-T -2	9.1 Secondary Development Effects	J-9-11
Broussard	McLean Commons Citizens Association	0159	0159-T -4	9.1 Secondary Development Effects	J-9-12
Brown		0039	0039-CC-1	2.2 Draft EIS Alternatives	J-2-78
Brown		0039	0039-CC-2	2.2 Draft EIS Alternatives	J-2-92
Brown		0333	0333-L -1	4.7 Noise	J-4-71
Brown		0473	0473-L -9	2.2 Draft EIS Alternatives	J-2-153
Brown		0473	0473-L -8	3.4 Visual and Aesthetic Conditions	J-3-41
Brown		0473	0473-L -4	3.4 Visual and Aesthetic Conditions	J-3-34
Brown		0473	0473-L -5	3.7 Safety and Security	J-3-57
Brown		0473	0473-L -10	3.7 Safety and Security	J-3-57
Brown		0473	0473-L -1	4.7 Noise	J-4-39
Brown		0473	0473-L -2	4.7 Noise	J-4-49
Brown		0473	0473-L -7	4.7 Noise	J-4-56
Brown		0473	0473-L -6	4.7 Noise	J-4-68
Brown		0473	0473-L -3	4.7 Noise	J-4-66
Brown		0473	0473-L -11	6.2 Effects of Roadways	J-6-34
Brown		0473	0473-L -12	6.2 Effects of Roadways	J-6-35
Brown		0483	0483-E -1	1.0 Purpose and Need	J-1-6
Brown		0483	2-01	2.2 Draft EIS Alternatives	J-2-95
Brown		0483	0483-E -2	3.2 Neighborhood, Community Services and Community Cohesion	J-3-14
Brown		0483	03-01	3.4 Visual and Aesthetic Conditions	J-3-41
Brown		0483	4-01	4.7 Noise	J-4-78
Brown		0483	4-02	4.7 Noise	J-4-78
Brown		0483	4-03	4.7 Noise	J-4-79
Brown		0483	4-04	4.7 Noise	J-4-77
Bryan		0023	0023-E -1	2.2 Draft EIS Alternatives	J-2-84
Buchanan	Buchanan Partners, LLC	0242	0242-T -1	2.2 Draft EIS Alternatives	J-2-74
Buchanan	Buchanan Partners, LLC	0242	0242-T -2	2.4 Suggestions for Other Alternatives	J-2-252

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Burkart	Boston Properties	0003	0003-L -1	1.0 Purpose and Need	J-1-10 & J-2-104
Burkart	Boston Properties	0003	0246-T -1	2.2 Draft EIS Alternatives	J-2-74
Burkart	Boston Properties	0003	0246-T -4	6.2 Effects of Roadways	J-6-30
Burkart	Boston Properties	0003	0003-L -3	6.2 Effects of Roadways	J-6-30
Burkart	Boston Properties	0003	0246-T -6	2.2 Draft EIS Alternatives	J-2-114
Burkart	Boston Properties	0003	0003-L -2	2.2 Draft EIS Alternatives	J-2-113
Burkart	Boston Properties	0003	0246-T -2	2.2 Draft EIS Alternatives	J-2-113
Burkart	Boston Properties	0003	0246-T -3	2.2 Draft EIS Alternatives	J-2-114
Burkart	Boston Properties	0003	0246-T -5	2.2 Draft EIS Alternatives	J-2-114
Burkart	Boston Properties	0003	0003-L -4	6.0 Transportation Effects	J-A-2
Burroughs		0072	0072-CC-1	3.1 Land Use and Socio-Economics	J-3-3
Burroughs		0072	0072-CC-2	3.4 Visual and Aesthetic Conditions	J-3-41
Byrne		0279	0279-T -1	5.1 Economic Conditions	J-5-6
Cackler		0432	0432-E -5	2.2 Draft EIS Alternatives	J-2-154
Cackler		0432	0432-E -4	3.4 Visual and Aesthetic Conditions	J-3-37
Cackler		0432	0432-E -7	3.4 Visual and Aesthetic Conditions	J-3-41
Cackler		0432	0432-E -1	3.4 Visual and Aesthetic Conditions	J-3-35
Cackler		0432	0432-E -14	3.7 Safety and Security	J-3-58
Cackler		0432	0432-E -2	4.7 Noise	J-4-53
Cackler		0432	0432-E -11	4.7 Noise	J-4-52
Cackler		0432	0432-E -8	4.7 Noise	J-4-64
Cackler		0432	0432-E -10	4.7 Noise	J-4-65
Cackler		0432	0432-E -12	4.7 Noise	J-4-66
Cackler		0432	0432-E -13	4.7 Noise	J-4-65
Cackler		0432	0432-E -9	4.7 Noise	J-4-65
Cackler		0432	0432-E -6	4.7 Noise	J-4-38
Cackler		0432	0432-E -3	11.2 Agency Coordination	J-11-17
Cain		0343	0343-L -1	4.7 Noise	J-4-71
Cameron		0368	0368-L -1	4.7 Noise	J-4-71
Carlson		0094	0094-CC-3	1.0 Purpose and Need	J-1-5
Carlson		0094	0094-CC-2	1.0 Purpose and Need	J-1-5
Carlson		0094	0094-CC-1	1.0 Purpose and Need	J-1-5
Carroll		0327	0327-L -1	4.7 Noise	J-4-71
Carter	Comstock Homes, Inc.	0256	0256-T -1	2.2 Draft EIS Alternatives	J-2-79
Carter	Comstock Homes, Inc.	0256	0256-T -2	2.2 Draft EIS Alternatives	J-2-117
Carter	Comstock Homes, Inc.	0256	0256-T -4	2.2 Draft EIS Alternatives	J-2-116
Carter	Comstock Homes, Inc.	0256	0256-T -3	2.2 Draft EIS Alternatives	J-2-115
Caruso	Rotonda Condominium Owners Association	0220	0220-M -1	2.2 Draft EIS Alternatives	J-2-168
Caruso	Rotonda Condominium Owners Association	0220	0220-M -2	11.1 Public Involvement	J-11-4
Casey		0342	0342-L -1	4.7 Noise	J-4-71
Cate		0179	0179-T -5	2.1 Alternatives Previously Considered	J-2-26 & 156
Cate		0179	0179-T -1	2.2 Draft EIS Alternatives	J-2-76
Cate		0179	0179-T -10	4.7 Noise	J-4-50
Cate		0179	0179-T -9	4.9 Hazardous and Contaminated Materials	J-4-96
Cate		0179	0179-T -7	6.1 Transit Effects	J-6-10
Cate		0179	0179-T -8	6.2 Effects of Roadways Comments	J-6-35
Cate		0179	0179-T -6	9.1 Secondary Development Effects	J-9-11
Cate		0179	0179-T -11	11.1 Public Involvement	J-11-8
Cate		0179	0179-T -3	11.1 Public Involvement	J-11-9
Cate		0179	0179-T -2	11.1 Public Involvement	J-11-9
Cate		0179	0179-T -4	11.1 Public Involvement	J-11-10
Cavin		0178	0178-T -5	2.1 Alternatives Previously Considered	J-2-12
Cavin		0178	0178-T -4	2.2 Draft EIS Alternatives	J-2-109
Cavin		0178	0178-T -2	2.2 Draft EIS Alternatives	J-2-109
Cavin		0178	0178-T -6	2.2 Draft EIS Alternatives	J-2-26 & 156
Cavin		0178	0178-T -3	2.2 Draft EIS Alternatives	J-2-26 & 155
Cavin		0178	0178-T -1	4.7 Noise	J-4-72
Cavin		0178	0178-T -7	6.3 Effects on Other Transportation Facilities and Services	J-6-62
Chang	Fairfax County Department of Transportation	0479	0479-L -2	2.2 Draft EIS Alternatives	J-2-37
Chang	Fairfax County Department of Transportation	0479	0479-L -3	2.2 Draft EIS Alternatives	J-2-40
Chang	Fairfax County Department of Transportation	0479	0479-L -9	3.2 Neighborhood, Community Services and Community Cohesion	J-3-11
Chang	Fairfax County Department of Transportation	0479	0479-L -5	4.2 Water Resources	J-4-6
Chang	Fairfax County Department of Transportation	0479	0479-L -7	4.6 Air Quality	J-4-19
Chang	Fairfax County Department of Transportation	0479	0479-L -11	4.7 Noise	J-4-36
Chang	Fairfax County Department of Transportation	0479	0479-L -8	4.7 Noise	J-4-35

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Chang	Fairfax County Department of Transportation	0479	0479-L -12	4.7 Noise	J-4-36
Chang	Fairfax County Department of Transportation	0479	0479-L -10	4.7 Noise Service and Inspection Yard Noise	J-A-1
Chang	Fairfax County Department of Transportation	0479	0479-L -6	4.9 Hazardous and Contaminated Materials	J-4-96
Chang	Fairfax County Department of Transportation	0479	0479-L -4	6.2 Effects of Roadways Comments	J-6-25
Chang	Fairfax County Department of Transportation	0479	0479-L -1	10.1 Evaluation Relative to Project Goals and Objectives	J-10-2
Chase	Northern Virginia Transportation Alliance	0446	0146-T -2	1.0 Purpose and Need	J-1-11
Chase	Northern Virginia Transportation Alliance	0446	0146-T -5	1.4 Goals and Objectives	J-1-12
Chase	Northern Virginia Transportation Alliance	0446	0218-M -4	1.4 Goals and Objectives	J-1-12
Chase	Northern Virginia Transportation Alliance	0446	0218-M -5	1.4 Goals and Objectives	J-1-12
Chase	Northern Virginia Transportation Alliance	0446	0146-T -3	1.4 Goals and Objectives	J-1-13
Chase	Northern Virginia Transportation Alliance	0446	0218-M -2	1.4 Goals and Objectives	J-1-13
Chase	Northern Virginia Transportation Alliance	0446	0446-E -3	2.1 Alternatives Previously Considered	J-2-23 & 25
Chase	Northern Virginia Transportation Alliance	0446	0446-E -6	2.2 Draft EIS Alternatives	J-2-44
Chase	Northern Virginia Transportation Alliance	0446	0218-M -1	2.2 Draft EIS Alternatives	J-2-110
Chase	Northern Virginia Transportation Alliance	0446	0146-T -13	2.2 Draft EIS Alternatives	J-2-109
Chase	Northern Virginia Transportation Alliance	0446	0146-T -1	2.2 Draft EIS Alternatives	J-2-110
Chase	Northern Virginia Transportation Alliance	0446	0146-T -14	2.2 Draft EIS Alternatives	J-2-106
Chase	Northern Virginia Transportation Alliance	0446	0218-M -15	2.2 Draft EIS Alternatives	J-2-107
Chase	Northern Virginia Transportation Alliance	0446	0446-E -1	2.2 Draft EIS Alternatives	J-2-107
Chase	Northern Virginia Transportation Alliance	0446	0218-M -3	2.4 Suggestions for Other Alternatives	J-2-253
Chase	Northern Virginia Transportation Alliance	0446	0146-T -4	2.4 Suggestions for Other Alternatives	J-2-252
Chase	Northern Virginia Transportation Alliance	0446	0146-T -10	4.6 Air Quality	J-4-21
Chase	Northern Virginia Transportation Alliance	0446	0218-M -10	4.6 Air Quality	J-4-22
Chase	Northern Virginia Transportation Alliance	0446	0218-M -7	6.2 Effects of Roadways	J-6-44
Chase	Northern Virginia Transportation Alliance	0446	0218-M -9	6.2 Effects of Roadways	J-6-44
Chase	Northern Virginia Transportation Alliance	0446	0146-T -9	6.2 Effects of Roadways	J-6-44
Chase	Northern Virginia Transportation Alliance	0446	0146-T -7	6.2 Effects of Roadways	J-6-44
Chase	Northern Virginia Transportation Alliance	0446	0218-M -12	8.1 Capital Funding Strategy	J-8-15
Chase	Northern Virginia Transportation Alliance	0446	0218-M -13	8.1 Capital Funding Strategy	J-8-15
Chase	Northern Virginia Transportation Alliance	0446	0218-M -14	8.1 Capital Funding Strategy	J-8-16
Chase	Northern Virginia Transportation Alliance	0446	0146-T -12	8.1 Capital Funding Strategy	J-8-15
Chase	Northern Virginia Transportation Alliance	0446	0446-E -2	8.1 Capital Funding Strategy	J-8-27
Chase	Northern Virginia Transportation Alliance	0446	0446-E -7	8.1 Capital Funding Strategy	J-8-45
Chase	Northern Virginia Transportation Alliance	0446	0146-T -11	8.2 Operating Funding Strategy	J-8-61
Chase	Northern Virginia Transportation Alliance	0446	0218-M -11	8.2 Operating Funding Strategy	J-8-61
Chase	Northern Virginia Transportation Alliance	0446	0218-M -8	9.1 Secondary Development Effects	J-9-13
Chase	Northern Virginia Transportation Alliance	0446	0146-T -8	9.1 Secondary Development Effects	J-9-13
Chase	Northern Virginia Transportation Alliance	0446	0446-E -4	10.1 Evaluation Relative to Project Goals and Objectives	J-10-31
Chase	Northern Virginia Transportation Alliance	0446	0146-T -6	10.1 Evaluation Relative to Project Goals and Objectives	J-10-3
Chase	Northern Virginia Transportation Alliance	0446	0446-E -5	10.1 Evaluation Relative to Project Goals and Objectives	J-10-3
Chase	Northern Virginia Transportation Alliance	0446	0218-M -6	10.1 Evaluation Relative to Project Goals and Objectives	J-10-3
Chase	Northern Virginia Transportation Alliance	0446	12-1	12.1 Concerns over Study Process	J-12-1
Chase	Northern Virginia Transportation Alliance	0446	12-2	12.1 Concerns over Study Process	J-12-1
Clarke, J.	Action Committee for Transit	0428	0428-E -1	2.2 Draft EIS Alternatives	J-2-71
Clarke, J.	Action Committee for Transit	0428	0428-E -2	6.1 Transit Effects	J-6-5
Clarke, W.	Action Committee for Transit	0018	0018-E -1	2.2 Draft EIS Alternatives	J-2-84
Cleal		0098	0098-E -1	1.0 Purpose and Need	J-1-8
Cleal		0098	0098-E -3	1.0 Purpose and Need	J-1-8
Cleal		0098	0098-E -2	2.1 Alternatives Previously Considered	J-2-15
Cleal		0098	0098-E -4	2.2 Draft EIS Alternatives	J-2-132
Clemente	Comstock Partners LLC	0095	0095-CC-1	2.2 Draft EIS Alternatives	J-2-85
Clemente	Comstock Partners LLC	0095	0095-CC-2	2.2 Draft EIS Alternatives	J-2-114
Coale	ABS Committee - Reston Interfaith Board of Directors	0193	0238-M -2	2.2 Draft EIS Alternatives	J-2-73
Coale	ABS Committee - Reston Interfaith Board of Directors	0193	0193-T -2	2.2 Draft EIS Alternatives	J-2-76
Coale	ABS Committee - Reston Interfaith Board of Directors	0193	0193-T -4	2.2 Draft EIS Alternatives	J-2-76
Coale	ABS Committee - Reston Interfaith Board of Directors	0193	0193-T -1	2.2 Draft EIS Alternatives	J-2-76
Coale	ABS Committee - Reston Interfaith Board of Directors	0193	0238-M -1	2.2 Draft EIS Alternatives	J-2-73
Coale	ABS Committee - Reston Interfaith Board of Directors	0193	0193-T -3	5.3 Development Effects/Potential	J-5-32
Coale	ABS Committee - Reston Interfaith Board of Directors	0193	0238-M -3	5.3 Development Effects/Potential	J-5-32
Coffin		0381	0381-E -1	2.2 Draft EIS Alternatives	J-2-69

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Cogswell	National Capital Area League of Women Voters	0206	0206-M -1	1.0 Purpose and Need	J-1-11 & J-2-104
Cogswell	National Capital Area League of Women Voters	0206	0264-T -1	2.2 Draft EIS Alternatives	J-2-77
Cogswell	National Capital Area League of Women Voters	0206	0206-M -2	2.2 Draft EIS Alternatives	J-2-77
Connolly		0020	0020-L -1	2.2 Draft EIS Alternatives	J-2-167
Connolly		0020	0020-L -3	2.2 Draft EIS Alternatives	J-2-151
Connolly		0020	0020-L -2	3.2 Neighborhood, Community Services and Community Cohesion	J-3-20
Connolly	Fairfax County Board Supervisor	0130	0289-T -6	1.0 Purpose and Need	J-1-4
Connolly	Fairfax County Board Supervisor	0130	0130-T -7	1.0 Purpose and Need	J-1-4
Connolly	Fairfax County Board Supervisor	0130	0289-T -1	1.0 Purpose and Need	J-1-4
Connolly	Fairfax County Board Supervisor	0130	0289-T -3	1.0 Purpose and Need	J-1-3
Connolly	Fairfax County Board Supervisor	0130	0130-T -1	1.0 Purpose and Need	J-1-3
Connolly	Fairfax County Board Supervisor	0130	0130-T -3	1.0 Purpose and Need	J-1-3
Connolly	Fairfax County Board Supervisor	0130	0130-T -8	2.2 Draft EIS Alternatives	J-2-36
Connolly	Fairfax County Board Supervisor	0130	0289-T -5	2.2 Draft EIS Alternatives	J-2-36
Connolly	Fairfax County Board Supervisor	0130	0130-T -6	2.2 Draft EIS Alternatives	J-2-36
Connolly	Fairfax County Board Supervisor	0130	0130-T -5	2.2 Draft EIS Alternatives	J-2-36
Connolly	Fairfax County Board Supervisor	0130	0130-T -4	2.2 Draft EIS Alternatives	J-2-37
Connolly	Fairfax County Board Supervisor	0130	0308-L -1	2.2 Draft EIS Alternatives	J-2-40
Connolly	Fairfax County Board Supervisor	0130	0439-L -1	2.2 Draft EIS Alternatives	J-2-40
Connolly	Fairfax County Board Supervisor	0130	0289-L -4	3.1 Land Use and Socio-Economics	J-3-2
Connolly	Fairfax County Board Supervisor	0130	0308-L -2	5.3 Development Effects/Potential	J-5-15
Connolly	Fairfax County Board Supervisor	0130	0308-L -3	5.3 Development Effects/Potential	J-5-14
Connolly	Fairfax County Board Supervisor	0130	0289-L -2	8.1 Capital Funding Strategy	J-8-4
Connolly	Fairfax County Board Supervisor	0130	0130-T -2	8.1 Capital Funding Strategy	J-8-4
Connolly		0355	0355-L -1	4.7 Noise	J-4-71
Cooper	Prentiss Properties	0139	0280-T -4	2.2 Draft EIS Alternatives	J-2-47
Cooper	Prentiss Properties	0139	0139-T -4	2.2 Draft EIS Alternatives	J-2-47
Cooper	Prentiss Properties	0139	0139-T -8	2.2 Draft EIS Alternatives	J-2-149
Cooper	Prentiss Properties	0139	0139-T -9	2.2 Draft EIS Alternatives	J-2-110
Cooper	Prentiss Properties	0139	0280-T -2	3.4 Visual and Aesthetic Conditions	J-3-36
Cooper	Prentiss Properties	0139	0139-T -2	3.4 Visual and Aesthetic Conditions	J-3-36
Cooper	Prentiss Properties	0139	0139-T -1	8.1 Capital Funding Strategy	J-8-21
Cooper	Prentiss Properties	0139	0139-T -3	8.1 Capital Funding Strategy	J-8-20
Cooper	Prentiss Properties	0139	0280-T -1	8.1 Capital Funding Strategy	J-8-21
Cooper	Prentiss Properties	0139	0280-T -3	8.1 Capital Funding Strategy	J-8-20
Cooper	Prentiss Properties	0139	0139-T -7	8.1 Capital Funding Strategy	J-8-32
Cooper	Prentiss Properties	0139	0139-T -5	8.1 Capital Funding Strategy	J-8-35
Cooper	Prentiss Properties	0139	0139-T -6	8.1 Capital Funding Strategy	J-8-35
Coplon		0352	0352-L -1	4.7 Noise	J-4-71
Corish		0422	0422-E -2	3.4 Visual and Aesthetic Conditions	J-3-34
Corish		0422	0422-E -3	3.7 Safety and Security	J-3-57
Corish		0422	0422-E -1	4.7 Noise Service and Inspection Yard Noise	J-4-39
Corrigan	Reston Association	0170	0170-T -8	2.1 Alternatives Previously Considered	J-2-28 &157
Corrigan	Reston Association	0170	0170-T -7	2.2 Draft EIS Alternatives	J-2-172
Corrigan	Reston Association	0170	0170-T -1	2.2 Draft EIS Alternatives	J-2-75
Corrigan	Reston Association	0170	0170-T -6	2.2 Draft EIS Alternatives	J-2-131
Corrigan	Reston Association	0170	0170-T -15	2.2 Draft EIS Alternatives	J-2-93
Corrigan	Reston Association	0170	0170-T -14	3.4 Visual and Aesthetic Conditions	J-3-42
Corrigan	Reston Association	0170	0170-T -13	5.3 Development Effects/Potential	J-5-42
Corrigan	Reston Association	0170	0170-T -4	5.3 Development Effects/Potential	J-5-44
Corrigan	Reston Association	0170	0170-T -5	5.3 Development Effects/Potential	J-5-34
Corrigan	Reston Association	0170	0170-T -12	6.3 Effects on Other Transportation Facilities and Services	J-6-70
Corrigan	Reston Association	0170	0170-T -9	8.1 Capital Funding Strategy	J-8-17
Corrigan	Reston Association	0170	0170-T -3	8.1 Capital Funding Strategy	J-8-17
Corrigan	Reston Association	0170	0170-T -10	8.1 Capital Funding Strategy	J-8-17
Corrigan	Reston Association	0170	0170-T -18	9.1 Secondary Development Effects	J-9-20
Corrigan	Reston Association	0170	0170-T -17	9.1 Secondary Development Effects	J-9-19
Corrigan	Reston Association	0170	0170-T -16	9.1 Secondary Development Effects	J-9-20
Corrigan	Reston Association	0170	0170-T -2	11.2 Agency Coordination	J-11-17
Corrigan	Reston Association	0170	0170-T -11	General Plans	J-GP-7
Corry		0226	0226-E -2	2.2 Draft EIS Alternatives	J-2-72
Corry		0226	0226-E -3	2.2 Draft EIS Alternatives	J-2-73
Corry		0226	0226-E -1	2.2 Draft EIS Alternatives	J-2-72

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Costello		0166	0166-T -6	2.2 Draft EIS Alternatives	J-2-43 & J-3-4
Costello		0166	0166-T -4	6.2 Effects of Roadways	J-6-37
Costello		0166	0166-T -3	8.1 Capital Funding Strategy	J-8-22
Costello		0166	0166-T -7	8.1 Capital Funding Strategy	J-8-45
Costello		0166	0166-T -2	8.1 Capital Funding Strategy	J-8-39
Costello		0166	0166-T -5	8.1 Capital Funding Strategy	J-8-45
Costello		0166	0166-T -1	10.1 Evaluation Relative to Project Goals and Objectives	J-10-4
Courtillet		0346	0346-L -1	4.7 Noise	J-4-71
Creason		0386	0386-E -9	2.2 Draft EIS Alternatives	J-2-153
Creason		0386	0386-E -8	3.4 Visual and Aesthetic Conditions	J-3-41
Creason		0386	0386-E -4	3.4 Visual and Aesthetic Conditions	J-3-34
Creason		0386	0386-E -10	3.7 Safety and Security	J-3-57
Creason		0386	0386-E -5	3.7 Safety and Security	J-3-57
Creason		0386	0386-E -1	4.7 Noise	J-4-39
Creason		0386	0386-E -2	4.7 Noise	J-4-49
Creason		0386	0386-E -3	4.7 Noise	J-4-66
Creason		0386	0386-E -6	4.7 Noise	J-4-68
Creason		0386	0386-E -7	4.7 Noise	J-4-56
Creason		0386	0386-E -11	6.2 Effects of Roadways	J-6-34
Creason		0386	0386-E -12	6.2 Effects of Roadways	J-6-35
Crissey		0328	0328-L -1	4.7 Noise	J-4-71
Cunha	Lillian Court at Tysons II	0395	0395-L -1	2.2 Draft EIS Alternatives	J-2-70
Cunha	Lillian Court at Tysons II	0395	0395-L -2	2.2 Draft EIS Alternatives	J-2-158
Cunha	Lillian Court at Tysons II	0395	0395-L -3	2.2 Draft EIS Alternatives	J-2-133
D(illegible)		0318	0318-L -1	4.7 Noise	J-4-71
Dagitz		0009	0009-E -2	2.2 Draft EIS Alternatives	J-2-84
Dagitz		0009	0009-E -1	2.2 Draft EIS Alternatives	J-2-67
Daniels		0294	1-01	1.0 Purpose and Need	J-1-13
Daniels		0294	1-02	1.0 Purpose and Need	J-1-13
Daniels		0294	2-01	2.2 Draft EIS Alternatives	J-2-51
Daniels		0294	0294-E -1	2.2 Draft EIS Alternatives	J-2-46
Daniels		0294	0294-E -3	2.2 Draft EIS Alternatives	J-2-46
Daniels		0294	0294-E -2	2.2 Draft EIS Alternatives	J-2-46
Daniels		0294	0294-E -4	2.2 Draft EIS Alternatives	J-2-109
Daniels	The Clover Companies	0413	0472-L -1	2.2 Draft EIS Alternatives	J-2-79
Daniels	The Clover Companies	0413	0472-L -1	2.2 Draft EIS Alternatives	J-2-86
Daniels	The Clover Companies	0413	0413-L -1	2.2 Draft EIS Alternatives	J-2-80
Daniels	The Clover Companies	0413	0413-L -2	2.2 Draft EIS Alternatives	J-2-158
Daniels	The Clover Companies	0413	0413-L -4	2.2 Draft EIS Alternatives	J-2-160
Daniels	The Clover Companies	0413	0413-L -3	2.2 Draft EIS Alternatives	J-2-133
Daniels		0294	0294-E -5	8.1 Capital Funding Strategy	J-8-36
Daniels		0294	8-1	8.1 Capital Funding Strategy	J-8-46
Davey	West Falls Church Village Homeowners Association	0435	0435-E -5	4.7 Noise	J-4-57
Davey	West Falls Church Village Homeowners Association	0435	0435-E -1	4.7 Noise	J-4-56
Davey	West Falls Church Village Homeowners Association	0435	0435-E -3	4.7 Noise	J-4-58
Davey	West Falls Church Village Homeowners Association	0435	0435-E -4	4.7 Noise	J-4-56
Davey	West Falls Church Village Homeowners Association	0435	0435-E -2	4.7 Noise	J-4-73
Davey	West Falls Church Village Homeowners Association	0435	0435-E -6	11.1 Public Involvement	J-11-4
Davis		0503	2-01	2.2 Draft EIS Alternatives	J-2-85
de la Fe		0208	0208-M -7	1.0 Purpose and Need	J-1-9
de la Fe		0208	0208-M -1	2.2 Draft EIS Alternatives	J-2-69
de la Fe		0208	0208-M -2	2.2 Draft EIS Alternatives	J-2-98
de la Fe		0208	0208-M -4	3.2 Neighborhood, Community Services and Community Cohesion	J-3-19
de la Fe		0208	0208-M -5	6.3 Effects on Other Transportation Facilities and Services	J-6-64
de la Fe		0208	0208-M -6	8.1 Capital Funding Strategy	J-A-3
de la Fe		0208	0208-M -3	13.1 Schedule/Process for Implementation	J-13-3
Deam		0194	0216-M -2	2.2 Draft EIS Alternatives	J-2-81
Deam		0194	0194-T -2	2.2 Draft EIS Alternatives	J-2-78
Deam		0194	0194-T -5	2.2 Draft EIS Alternatives	J-2-79
Deam		0194	0194-T -4	2.2 Draft EIS Alternatives	J-2-97
Deam		0194	0194-T -3	2.2 Draft EIS Alternatives	J-2-134
Deam		0194	0216-M -3	2.2 Draft EIS Alternatives	J-2-134
Deam		0194	0194-T -6	8.1 Capital Funding Strategy	J-8-38
Deam		0194	0194-T -1	11.1 Public Involvement	J-11-7
Deam		0194	0216-M -1	11.1 Public Involvement	J-11-7

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Deam		0194	0216-M -4	13.1 Schedule/Process for Implementation	J-13-2
DelPorto		0101	0101-E -1	2.2 Draft EIS Alternatives	J-2-84
Deuel	Herndon Dulles Chamber of Commerce	0027	0027-L -3	1.0 Purpose and Need	J-1-8
Deuel	Herndon Dulles Chamber of Commerce	0027	0027-L -4	1.0 Purpose and Need	J-1-9
Deuel	Herndon Dulles Chamber of Commerce	0027	0027-L -1	2.2 Draft EIS Alternatives	J-2-84
Deuel	Herndon Dulles Chamber of Commerce	0027	0027-L -2	2.2 Draft EIS Alternatives	J-2-107
Deveic		0340	0340-L -1	4.7 Noise	J-4-71
Diamond		0102	0102-E -1	2.2 Draft EIS Alternatives	J-2-84
Diedrich	Sierra Club, Virginia Chapter	0158	0475-L -9	1.0 Purpose and Need	J-1-12
Diedrich	Sierra Club, Virginia Chapter	0158	0223-M -1	2.2 Draft EIS Alternatives	J-2-77
Diedrich	Sierra Club, Virginia Chapter	0158	0158-T -1	2.2 Draft EIS Alternatives	J-2-74
Diedrich	Sierra Club, Virginia Chapter	0158	0475-L -7	2.2 Draft EIS Alternatives	J-2-131
Diedrich	Sierra Club, Virginia Chapter	0158	0475-L -6	2.2 Draft EIS Alternatives	J-2-131
Diedrich	Sierra Club, Virginia Chapter	0158	0223-M -4	5.3 Development Effects/Potential	J-5-43
Diedrich	Sierra Club, Virginia Chapter	0158	0158-T -5	5.3 Development Effects/Potential	J-5-42
Diedrich	Sierra Club, Virginia Chapter	0158	0475-L -4	5.3 Development Effects/Potential	J-5-44
Diedrich	Sierra Club, Virginia Chapter	0158	0475-L -8	5.3 Development Effects/Potential	J-5-31
Diedrich	Sierra Club, Virginia Chapter	0158	0475-L -2	5.3 Development Effects/Potential	J-5-37
Diedrich	Sierra Club, Virginia Chapter	0158	0475-L -3	5.3 Development Effects/Potential	J-5-28
Diedrich	Sierra Club, Virginia Chapter	0158	0475-L -5	6.1 Transit Effects	J-6-5
Diedrich	Sierra Club, Virginia Chapter	0158	0158-T -6	6.1 Transit Effects	J-6-5
Diedrich	Sierra Club, Virginia Chapter	0158	0223-M -5	6.1 Transit Effects	J-6-5
Diedrich	Sierra Club, Virginia Chapter	0158	0158-T -2	6.2 Effects of Roadways	J-6-39
Diedrich	Sierra Club, Virginia Chapter	0158	0475-L -1	6.2 Effects of Roadways	J-6-39
Diedrich	Sierra Club, Virginia Chapter	0158	0158-T -3	9.1 Secondary Development Effects	J-9-19
Diedrich	Sierra Club, Virginia Chapter	0158	0223-M -3	9.1 Secondary Development Effects	J-9-19
Diedrich	Sierra Club, Virginia Chapter	0158	0223-M -2	9.1 Secondary Development Effects	J-9-19
Diedrich	Sierra Club, Virginia Chapter	0158	0158-T -4	11.1 Public Involvement	J-11-4
Diedrich	Sierra Club, Virginia Chapter	0158	0223-M -6	11.1 Public Involvement	J-11-6
Dieter	Loudoun Chapter of ARK	0259	0259-T -2	2.2 Draft EIS Alternatives	J-2-126
Dieter	Loudoun Chapter of ARK	0259	0259-T -3	6.3 Effects on Other Transportation Facilities and Services	J-6-61
Dieter	Loudoun Chapter of ARK	0259	0259-T -5	11.1 Public Involvement	J-11-6
Dieter	Loudoun Chapter of ARK	0259	0259-T -1	11.1 Public Involvement	J-11-5
Dieter	Loudoun Chapter of ARK	0259	0259-T -4	13.1 Schedule/Process for Implementation	J-13-5
Dineen		0263	0263-T -3	2.2 Draft EIS Alternatives	J-2-77
Dineen		0263	0263-T -1	2.2 Draft EIS Alternatives	J-2-77
Dineen		0263	0263-T -2	5.1 Economic Impacts	J-5-2
Doetzer	Natural Resources Conservation Service	0001	0001-A -1	4.1 Geologic Resources	J-4-1
Douglas		0499	03-01	3.4 Visual and Aesthetic Conditions	J-3-41
Douglas		0499	4-01	4.7 Noise	J-4-77
Douglas		0499	4-02	4.7 Noise	J-4-78
Douglas		0499	4-03	4.7 Noise	J-4-78
Douglas		0499	4-04	4.7 Noise	J-4-79
Dowd	National Capital Planning Commission	0492	01	2.0 Altenatives Considered	J-2-31
Dowd	National Capital Planning Commission	0492	02	2.0 Altenatives Considered	J-2-1
Dowd	National Capital Planning Commission	0492	03	2.0 Altenatives Considered	J-2-1
Dowd	National Capital Planning Commission	0492	04	3.1 Land Use and Socio-Economics	J-3-1
Dublin		0272	0272-I -1	1.0 Purpose and Need	J-1-11
Dusenbury	Lemon Road Civic Association	0087	0227-E -3	4.7 Noise	J-4-45
Dusenbury	Lemon Road Civic Association	0087	0227-E -8	4.7 Noise	J-4-45
Dusenbury	Lemon Road Civic Association	0087	0087-L -9	4.7 Noise	J-4-47
Dusenbury	Lemon Road Civic Association	0087	0087-L -12	4.7 Noise	J-4-45
Dusenbury	Lemon Road Civic Association	0087	0227-E -7	4.7 Noise	J-4-47
Dusenbury	Lemon Road Civic Association	0087	0227-E -10	4.7 Noise	J-4-45
Dusenbury	Lemon Road Civic Association	0087	0087-L -5	4.7 Noise	J-4-45
Dusenbury	Lemon Road Civic Association	0087	0087-L -4	4.7 Noise	J-4-41
Dusenbury	Lemon Road Civic Association	0087	0227-E -2	4.7 Noise	J-4-41
Dusenbury	Lemon Road Civic Association	0087	0087-L -8	4.7 Noise	J-4-46
Dusenbury	Lemon Road Civic Association	0087	0087-L -10	4.7 Noise	J-4-45
Dusenbury	Lemon Road Civic Association	0087	0227-E -4	4.7 Noise	J-4-46
Dusenbury	Lemon Road Civic Association	0087	0227-E -6	4.7 Noise	J-4-46
Dusenbury	Lemon Road Civic Association	0087	0087-L -7	4.7 Noise	J-4-46
Dusenbury	Lemon Road Civic Association	0087	0227-E -5	4.7 Noise	J-4-46
Dusenbury	Lemon Road Civic Association	0087	0087-L -6	4.7 Noise	J-4-46
Dusenbury	Lemon Road Civic Association	0087	0227-E -11	4.7 Noise	J-4-56

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Dusenbury	Lemon Road Civic Association	0087	0087-L -1	4.7 Noise	J-4-55
Dusenbury	Lemon Road Civic Association	0087	0227-E -1	4.7 Noise	J-4-55
Dusenbury	Lemon Road Civic Association	0087	0087-L -3	4.7 Noise	J-4-54
Dusenbury	Lemon Road Civic Association	0087	0087-L -2	11.1 Public Involvement	J-11-3
Dusenbury	Lemon Road Civic Association	0087	0227-E -9	11.1 Public Involvement	J-11-9
Dusenbury	Lemon Road Civic Association	0087	0087-L -11	11.1 Public Involvement	J-11-9
Dyke	NVR	0396	0396-L -2	1.0 Purpose and Need	J-1-8
Dyke	NVR	0396	0396-L -1	2.2 Draft EIS Alternatives	J-2-70
Dyke	NVR	0396	0396-L -6	2.2 Draft EIS Alternatives	J-2-135
Dyke	NVR	0396	0396-L -7	4.6 Air Quality	J-4-29
Dyke	NVR	0396	0396-L -5	8.1 Capital Funding Strategy	J-8-31
Dyke	NVR	0396	0396-L -4	8.1 Capital Funding Strategy	J-8-36
Dyke	NVR	0396	0396-L -3	13.1 Schedule/Process for Implementation	J-13-3
Eder		0510	2-01	2.2 Draft EIS Alternatives	J-2-147
Eder		0510	2-02	2.2 Draft EIS Alternatives	J-2-147
Eder		0510	2-03	2.2 Draft EIS Alternatives	J-2-100
Eder		0510	03-04	3.1 Land Use and Socio-Economics	J-3-3
Eder		0510	03-01	3.2 Neighborhood, Community Impacts	J-3-22
Eder		0510	03-02	3.5 Cultural Resources	J-3-48
Eder		0510	03-03	3.5 Cultural Resources	J-3-48
Eder		0510	4-02	4.2 Water Resources	J-4-8
Eder		0510	4-03	4.2 Water Resources	J-4-8
Eder		0510	4-06	4.2 Water Resources	J-4-8
Eder		0510	4-04	4.3 Aquatic Biota and Habitat	J-4-16
Eder		0510	4-05	4.6 Air Quality	J-4-29
Eder		0510	4-01	4.7 Noise	J-4-80
Eder		0510	8-2	8.1 Capital Funding Strategy	J-8-36
Eder		0510	8-1	8.2 Operating Funding Strategy	J-8-59
Eder		0510	9-1	9.1 Secondary Development Effects	J-9-18
Eder		0510	9-2	9.1 Secondary Development Effects	J-9-23
Eder		0510	9-3	9.1 Secondary Development Effects	J-9-22
Eder		0510	9-8	9.1 Secondary Development Effects	J-9-18
Eder		0510	9-7	9.1 Secondary Development Effects	J-9-18
Eder		0510	9-6	9.1 Secondary Development Effects	J-9-18
Eder		0510	9-5	9.1 Secondary Development Effects	J-9-18
Eder		0510	9-4	9.1 Secondary Development Effects	J-9-22
Eder		0510	11-1	11.1 Public Involvement	J-11-8
Eder		0510	12-01	12.1 Concerns over Study Process	J-12-3
Edwards		0088	0088-L -3	2.1 Alternatives Previously Considered	J-2-27 & 156
Edwards		0088	0088-L -2	2.2 Draft EIS Alternatives	J-2-171
Edwards		0088	0211-M -2	2.2 Draft EIS Alternatives	J-2-42
Edwards		0088	0211-M -3	2.2 Draft EIS Alternatives	J-2-63
Edwards		0088	0211-M -1	2.2 Draft EIS Alternatives	J-2-81
Edwards		0088	0211-M -20	2.2 Draft EIS Alternatives	J-2-72
Edwards		0088	0211-M -6	2.2 Draft EIS Alternatives	J-2-73
Edwards		0088	0172-T -2	2.2 Draft EIS Alternatives	J-2-80
Edwards		0088	0088-L -1	2.2 Draft EIS Alternatives	J-2-149
Edwards		0088	0211-M -4	2.2 Draft EIS Alternatives	J-2-105
Edwards		0088	0211-M -5	2.2 Draft EIS Alternatives	J-2-108
Edwards		0088	0211-M -14	2.2 Draft EIS Alternatives	J-2-93 & 116
Edwards		0088	0172-T -5	2.2 Draft EIS Alternatives	J-2-131
Edwards		0088	0211-M -10	2.2 Draft EIS Alternatives	J-2-132
Edwards		0088	0211-M -18	2.2 Draft EIS Alternatives	J-2-126
Edwards		0088	0211-M -15	2.2 Draft EIS Alternatives	J-2-123
Edwards		0088	0172-T -7	2.2 Draft EIS Alternatives	J-2-93
Edwards		0088	0211-M -13	2.4 Suggestions for Other Alternatives	J-2-252
Edwards		0088	0172-T -10	3.1 Land Use and Socio-Economics	J-3-2
Edwards		0088	0211-M -9	5.3 Development Effects/Potential	J-5-42
Edwards		0088	0172-T -3	5.3 Development Effects/Potential	J-5-30
Edwards		0088	0211-M -7	5.3 Development Effects/Potential	J-5-30
Edwards		0088	0211-M -8	5.3 Development Effects/Potential	J-5-20
Edwards		0088	0172-T -4	5.3 Development Effects/Potential	J-5-20
Edwards		0088	0172-T -8	6.3 Effects on Other Transportation Facilities and Services	J-6-60
Edwards		0088	0211-M -17	6.3 Effects on Other Transportation Facilities and Services	J-6-59
Edwards		0088	0172-T -6	6.3 Effects on Other Transportation Facilities and Services	J-6-64

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Edwards		0088	0211-M -11	6.3 Effects on Other Transportation Facilities and Services	J-6-64
Edwards		0088	0211-M -19	9.1 Secondary Development Effects	J-9-4
Edwards		0088	0172-T -11	11.1 Public Involvement	J-11-7
Edwards		0088	0172-T -1	11.1 Public Involvement	J-11-7
Edwards		0088	0211-M -16	11.2 Agency Coordination	J-11-17
Edwards		0088	0172-T -9	11.2 Agency Coordination	J-11-17
Edwards		0088	0211-M -12	11.2 Agency Coordination	J-11-16
Ellis	Virginia Department of Environmental Quality	0407	0407-A -18	2.0 Alternatives Considered	J-2-4
Ellis	Virginia Department of Environmental Quality	0407	0407-A -1	2.2 Draft EIS Alternatives	J-2-31
Ellis	Virginia Department of Environmental Quality	0407	0407-A -40	3.5 Cultural Resources	J-3-45
Ellis	Virginia Department of Environmental Quality	0407	0407-A -7	3.5 Cultural Resources	J-3-45
Ellis	Virginia Department of Environmental Quality	0407	0407-A -29	3.6 Parklands and Recreation Areas	J-3-51
Ellis	Virginia Department of Environmental Quality	0407	0407-A -11	4.2 Water Resources	J-4-2
Ellis	Virginia Department of Environmental Quality	0407	0407-A -21	4.2 Water Resources	J-4-3
Ellis	Virginia Department of Environmental Quality	0407	0407-A -22	4.2 Water Resources	J-4-3
Ellis	Virginia Department of Environmental Quality	0407	0407-A -23	4.2 Water Resources	J-4-3
Ellis	Virginia Department of Environmental Quality	0407	0407-A -24	4.2 Water Resources	J-4-3
Ellis	Virginia Department of Environmental Quality	0407	0407-A -9	4.2 Water Resources	J-4-4
Ellis	Virginia Department of Environmental Quality	0407	0407-A -8	4.2 Water Resources	J-4-2
Ellis	Virginia Department of Environmental Quality	0407	0407-A -13	4.2 Water Resources	J-4-3
Ellis	Virginia Department of Environmental Quality	0407	0407-A -34	4.2 Water Resources	J-4-4
Ellis	Virginia Department of Environmental Quality	0407	0407-A -35	4.2 Water Resources	J-4-3
Ellis	Virginia Department of Environmental Quality	0407	0407-A -36	4.2 Water Resources	J-4-4
Ellis	Virginia Department of Environmental Quality	0407	0407-A -10	4.2 Water Resources	J-4-2
Ellis	Virginia Department of Environmental Quality	0407	0407-A -39	4.2 Water Resources	J-4-5
Ellis	Virginia Department of Environmental Quality	0407	0407-A -12	4.4 Terrestrial Biota and Habitat	J-4-16
Ellis	Virginia Department of Environmental Quality	0407	0407-A -2	4.5 Rare, Threatened, and Endangered Species	J-4-17
Ellis	Virginia Department of Environmental Quality	0407	0407-A -25	4.5 Rare, Threatened, and Endangered Species	J-4-17
Ellis	Virginia Department of Environmental Quality	0407	0407-A -26	4.5 Rare, Threatened, and Endangered Species	J-4-18
Ellis	Virginia Department of Environmental Quality	0407	0407-A -3	4.5 Rare, Threatened, and Endangered Species	J-4-18
Ellis	Virginia Department of Environmental Quality	0407	0407-A -27	4.5 Rare, Threatened, and Endangered Species	J-4-18
Ellis	Virginia Department of Environmental Quality	0407	0407-A -28	4.5 Rare, Threatened, and Endangered Species	J-4-18
Ellis	Virginia Department of Environmental Quality	0407	0407-A -6	4.6 Air Quality	J-4-19
Ellis	Virginia Department of Environmental Quality	0407	0407-A -33	4.9 Hazardous and Contaminated Materials	J-4-95
Ellis	Virginia Department of Environmental Quality	0407	0407-A -17	4.9 Hazardous and Contaminated Materials	J-4-96
Ellis	Virginia Department of Environmental Quality	0407	0407-A -19	4.9 Hazardous and Contaminated Materials	J-4-94
Ellis	Virginia Department of Environmental Quality	0407	0407-A -31	4.9 Hazardous and Contaminated Materials	J-4-95
Ellis	Virginia Department of Environmental Quality	0407	0407-A -4	4.9 Hazardous and Contaminated Materials	J-4-96
Ellis	Virginia Department of Environmental Quality	0407	0407-A -30	4.9 Hazardous and Contaminated Materials	J-4-95
Ellis	Virginia Department of Environmental Quality	0407	0407-A -32	4.9 Hazardous and Contaminated Materials	J-4-95
Ellis	Virginia Department of Environmental Quality	0407	0407-A -38	4.9 Hazardous and Contaminated Materials	J-4-94
Ellis	Virginia Department of Environmental Quality	0407	0407-A -5	4.9 Hazardous and Contaminated Materials	J-4-96
Ellis	Virginia Department of Environmental Quality	0407	0407-A -20	4.9 Hazardous and Contaminated Materials	J-4-95
Ellis	Virginia Department of Environmental Quality	0407	0407-A -37	8.1 Capital Funding Strategy	J-8-3
Ellis	Virginia Department of Environmental Quality	0407	0407-A -16	9.3 Mitigation	J-9-26
Ellis	Virginia Department of Environmental Quality	0407	0407-A -15	9.3 Mitigation	J-9-26
Ellis	Virginia Department of Environmental Quality	0407	0407-A -14	9.3 Mitigation	J-9-25
Equal Metro Access for All of Tysons Corner	Equal Metro Access for All of Tysons Corner	0455	0455-L -1	2.2 Draft EIS Alternatives	J-2-157
Equal Metro Access for All of Tysons Corner	Equal Metro Access for All of Tysons Corner	0455	0455-L -4	3.4 Visual and Aesthetic Conditions	J-3-36
Equal Metro Access for All of Tysons Corner	Equal Metro Access for All of Tysons Corner	0455	0455-L -3	10.1 Evaluation Relative to Project Goals and Objectives	J-10-27
Equal Metro Access for All of Tysons Corner	Equal Metro Access for All of Tysons Corner	0455	0455-L -2	10.1 Evaluation Relative to Project Goals and Objectives	J-10-27
Erfani		0325	0325-L -1	4.7 Noise	J-4-71
Erickson		0380	0380-L -1	4.7 Noise	J-4-71
Etris	City of Falls Church Public Utilities Manager	0497	3-01	3.2 Neighborhood, Community Impacts	J-3-20
Eubank		0362	0362-L -1	4.7 Noise	J-4-71
Evans	TishmanSpeyer Properties	0237	0237-L -1	2.2 Draft EIS Alternatives	J-2-81
Evans		0412	0412-L -9	2.2 Draft EIS Alternatives	J-2-153
Evans		0412	0412-L -8	3.4 Visual and Aesthetic Conditions	J-3-41
Evans		0412	0412-L -4	3.4 Visual and Aesthetic Conditions	J-3-34
Evans		0412	0412-L -5	3.7 Safety and Security	J-3-57
Evans		0412	0412-L -10	3.7 Safety and Security	J-3-57
Evans		0412	0412-L -2	4.7 Noise	J-4-49

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Evans		0412	0412-L -3	4.7 Noise	J-4-66
Evans		0412	0412-L -6	4.7 Noise	J-4-68
Evans		0412	0412-L -7	4.7 Noise	J-4-56
Evans		0412	0412-L -1	4.7 Noise	J-4-39
Evans		0412	0412-L -11	6.2 Effects of Roadways	J-6-34
Evans		0412	0412-L -12	6.2 Effects of Roadways	J-6-35
Fairfield	Ruth C. Launders Marital Trust	0175	0175-T -3	2.2 Draft EIS Alternatives	J-2-62
Fairfield	Ruth C. Launders Marital Trust	0175	0175-T -6	2.2 Draft EIS Alternatives	J-2-62
Fairfield	Ruth C. Launders Marital Trust	0175	0202-L -4	2.2 Draft EIS Alternatives	J-2-84
Fairfield	Ruth C. Launders Marital Trust	0175	0202-L -1	2.2 Draft EIS Alternatives	J-2-73
Fairfield	Ruth C. Launders Marital Trust	0175	0175-T -2	2.2 Draft EIS Alternatives	J-2-76
Fairfield	Ruth C. Launders Marital Trust	0175	0175-T -7	2.2 Draft EIS Alternatives	J-2-84
Fairfield	Ruth C. Launders Marital Trust	0175	0202-L -2	2.2 Draft EIS Alternatives	J-2-105
Fairfield	Ruth C. Launders Marital Trust	0175	0175-T -4	2.2 Draft EIS Alternatives	J-2-105
Fairfield	Ruth C. Launders Marital Trust	0175	0175-T -5	2.2 Draft EIS Alternatives	J-2-108
Fairfield	Ruth C. Launders Marital Trust	0175	0202-L -3	2.2 Draft EIS Alternatives	J-2-108
Fairfield	Ruth C. Launders Marital Trust	0175	0175-T -1	5.3 Development Effects/Potential	J-5-30
Fiala		0424	0424-E -3	3.2 Neighborhood, Community Services and Community Cohesion	J-3-10
Fiala		0424	0424-E -2	3.2 Neighborhood, Community Services and Community Cohesion	J-3-9
Fiala		0424	0424-E -1	4.7 Noise Service and Inspection Yard Noise	J-4-39
Fiala		0424	0424-E -5	6.2 Effects of Roadways	J-6-30
Fiala		0424	0424-E -4	6.2 Effects of Roadways	J-6-33
Fisher		0301	0301-CC-1	2.2 Draft EIS Alternatives	J-2-78
Foerster	Wilmorite Property Management	0406	0406-L -1	2.2 Draft EIS Alternatives	J-2-71
Foerster	Wilmorite Property Management	0406	0406-L -5	2.2 Draft EIS Alternatives	J-2-140
Foerster	Wilmorite Property Management	0406	0406-L -6	2.2 Draft EIS Alternatives	J-2-140
Foerster	Wilmorite Property Management	0406	0406-L -4	2.2 Draft EIS Alternatives	J-2-140
Foerster	Wilmorite Property Management	0406	0406-L -3	2.2 Draft EIS Alternatives	J-2-139
Foerster	Wilmorite Property Management	0406	0406-L -10	2.2 Draft EIS Alternatives	J-2-140
Foerster	Wilmorite Property Management	0406	0406-L -7	2.2 Draft EIS Alternatives	J-2-141
Foerster	Wilmorite Property Management	0406	0406-L -8	2.2 Draft EIS Alternatives	J-2-141
Foerster	Wilmorite Property Management	0406	0406-L -9	2.2 Draft EIS Alternatives	J-2-141
Foerster	Wilmorite Property Management	0406	0406-L -11	2.2 Draft EIS Alternatives	J-2-141
Foerster	Wilmorite Property Management	0406	0406-L -2	6.3 Effects on Other Transportation Facilities and Services	J-6-66
Foster	Long and Foster Real Estate	0436	0436-E -1	2.2 Draft EIS Alternatives	J-2-66
Foust	McLean Citizen's Association	0392	0392-L -12	2.1 Alternatives Previously Considered	J-2-24 & 26
Foust	McLean Citizen's Association	0392	2-01	2.2 Draft EIS Alternatives	J-2-133
Foust	McLean Citizen's Association	0392	0392-L -7	2.2 Draft EIS Alternatives	J-2-42
Foust	McLean Citizen's Association	0392	0392-L -1	2.2 Draft EIS Alternatives	J-2-162
Foust	McLean Citizen's Association	0392	0392-L -13	2.2 Draft EIS Alternatives	J-2-27 & 156
Foust	McLean Citizen's Association	0392	0392-L -9	2.2 Draft EIS Alternatives	J-2-133
Foust	McLean Citizen's Association	0392	0392-L -6	2.2 Draft EIS Alternatives	J-2-133
Foust	McLean Citizen's Association	0392	0392-L -8	2.2 Draft EIS Alternatives	J-2-133
Foust	McLean Citizen's Association	0392	0392-L -11	2.2 Draft EIS Alternatives	J-2-135
Foust	McLean Citizen's Association	0392	0392-L -15	2.2 Draft EIS Alternatives	J-2-134
Foust	McLean Citizen's Association	0392	03-01	3.2 Neighborhood, Community Impacts	J-3-22
Foust	McLean Citizen's Association	0392	0392-L -21	3.2 Neighborhood, Community Services and Community Cohesion	J-3-23
Foust	McLean Citizen's Association	0392	0392-L -16	3.2 Neighborhood, Community Services and Community Cohesion	J-3-19
Foust	McLean Citizen's Association	0392	0392-L -20	4.7 Noise	J-4-38
Foust	McLean Citizen's Association	0392	0392-L -18	4.7 Noise	J-4-51
Foust	McLean Citizen's Association	0392	0392-L -2	4.7 Noise	J-4-52
Foust	McLean Citizen's Association	0392	0392-L -19	4.7 Noise	J-4-64
Foust	McLean Citizen's Association	0392	4-01	4.7 Noise	J-4-34
Foust	McLean Citizen's Association	0392	4-01	4.7 Noise	J-4-80
Foust	McLean Citizen's Association	0392	0392-L -4	5.3 Development Effects/Potential	J-5-38
Foust	McLean Citizen's Association	0392	0392-L -14	6.3 Effects on Other Transportation Facilities and Services	J-6-65
Foust	McLean Citizen's Association	0392	0392-L -3	6.3 Effects on Other Transportation Facilities and Services	J-6-66
Foust	McLean Citizen's Association	0392	0392-L -10	6.3 Effects on Other Transportation Facilities and Services	J-6-65
Foust	McLean Citizen's Association	0392	0392-L -17	9.1 Secondary Development Effects	J-9-19
Foust	McLean Citizen's Association	0392	0392-L -5	9.1 Secondary Development Effects	J-9-17
Fowler		0010	0010-E -1	2.2 Draft EIS Alternatives	J-2-106
Francese	Centreville Citizens for Rail	0197	0197-M -1	2.2 Draft EIS Alternatives	J-2-77
Francese	Centreville Citizens for Rail	0197	0197-M -2	2.2 Draft EIS Alternatives	J-2-95
Francese	Centreville Citizens for Rail	0197	0197-M -3	2.4 Suggestions for Other Alternatives	J-2-251
Freedman		0365	0365-L -1	4.7 Noise	J-4-71

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Freudenberger		0077	0077-CC-1	1.0 Purpose and Need	J-1-10
Friedlander		0372	0372-L -1	4.7 Noise	J-4-71
Funderburg		0019	0019-E -2	1.0 Purpose and Need	J-1-5
Funderburg		0019	0019-E -1	2.2 Draft EIS Alternatives	J-2-84
Gamache		0059	0059-CC-1	2.2 Draft EIS Alternatives	J-2-167
Gamache		0059	0361-L -1	4.7 Noise	J-4-71
Gardner	City of Falls Church	0122	0122-A -3	2.2 Draft EIS Alternatives	J-2-39
Gardner	City of Falls Church	0122	0164-T -4	2.2 Draft EIS Alternatives	J-2-39
Gardner	City of Falls Church	0122	0122-A -9	2.2 Draft EIS Alternatives	J-2-39
Gardner	City of Falls Church	0122	0122-A -19	2.2 Draft EIS Alternatives	J-2-39
Gardner	City of Falls Church	0122	0122-A -18	2.2 Draft EIS Alternatives	J-2-39
Gardner	City of Falls Church	0122	0122-A -20	2.2 Draft EIS Alternatives	J-2-39
Gardner	City of Falls Church	0122	0122-A -22	2.2 Draft EIS Alternatives	J-2-7
Gardner	City of Falls Church	0122	0122-A -28	3.2 Neighborhood, Community Services and Community Cohesion	J-3-11
Gardner	City of Falls Church	0122	0122-A -27	3.2 Neighborhood, Community Services and Community Cohesion	J-3-11
Gardner	City of Falls Church	0122	0164-T -10	3.7 Safety and Security	J-3-55
Gardner	City of Falls Church	0122	0122-A -4	3.7 Safety and Security	J-3-55
Gardner	City of Falls Church	0122	0122-A -5	4.2 Water Resources	J-4-5
Gardner	City of Falls Church	0122	0122-A -26	4.2 Water Resources	J-4-6
Gardner	City of Falls Church	0122	0122-A -25	4.2 Water Resources	J-4-6
Gardner	City of Falls Church	0122	0122-A -24	4.2 Water Resources	J-4-6
Gardner	City of Falls Church	0122	0164-T -6	4.2 Water Resources	J-4-6
Gardner	City of Falls Church	0122	0122-A -8	6.2 Effects of Roadways	J-6-29
Gardner	City of Falls Church	0122	0164-T -8	6.2 Effects of Roadways	J-6-29
Gardner	City of Falls Church	0122	0164-T -5	6.2 Effects of Roadways	J-6-25
Gardner	City of Falls Church	0122	0122-A -16	6.2 Effects of Roadways	J-6-23
Gardner	City of Falls Church	0122	0122-A -17	6.2 Effects of Roadways	J-6-24
Gardner	City of Falls Church	0122	0122-A -21	6.2 Effects of Roadways	J-6-24
Gardner	City of Falls Church	0122	0122-A -23	6.2 Effects of Roadways	J-6-25
Gardner	City of Falls Church	0122	0122-A -15	6.2 Effects of Roadways	J-6-23
Gardner	City of Falls Church	0122	0122-A -14	6.2 Effects of Roadways	J-6-29
Gardner	City of Falls Church	0122	0122-A -13	6.2 Effects of Roadways	J-6-28
Gardner	City of Falls Church	0122	0122-A -31	6.2 Effects of Roadways	J-6-27
Gardner	City of Falls Church	0122	0164-T -11	9.1 Secondary Development Effects	J-9-3
Gardner	City of Falls Church	0122	0122-A -30	9.1 Secondary Development Effects	J-9-3
Gardner	City of Falls Church	0122	0164-T -2	11.2 Agency Coordination	J-11-15
Gardner	City of Falls Church	0122	0164-T -12	11.2 Agency Coordination	J-11-15
Gardner	City of Falls Church	0122	0164-T -1	11.2 Agency Coordination	J-11-15
Gardner	City of Falls Church	0122	0164-T -9	11.2 Agency Coordination	J-11-15
Gardner	City of Falls Church	0122	0122-A -1	12.1 Concerns over Study Process	J-12-2
Gardner	City of Falls Church	0122	0122-A -2	12.1 Concerns over Study Process	J-12-2
Gardner	City of Falls Church	0122	0122-A -6	12.1 Concerns over Study Process	J-12-2
Gardner	City of Falls Church	0122	0122-A -7	12.1 Concerns over Study Process	J-12-2
Gardner	City of Falls Church	0122	0164-T -3	12.1 Concerns over Study Process	J-12-2
Gardner	City of Falls Church	0122	0164-T -7	12.1 Concerns over Study Process	J-12-2
Gardner	City of Falls Church	0122	0122-A -29	12.1 Concerns over Study Process	J-12-3
Gardner	City of Falls Church	0122	0122-A -11	12.1 Concerns over Study Process	J-12-3
Gardner	City of Falls Church	0122	0122-A -10	12.1 Concerns over Study Process	J-12-3
Gardner	City of Falls Church	0122	0122-A -12	12.1 Concerns over Study Process	J-12-3
Gavan	Department of Conservation and Recreation	0002	0002-A -2	4.1 Geologic Resources	J-4-1
Gavan	Department of Conservation and Recreation	0002	0002-A -1	4.1 Geologic Resources	J-4-1
Gebraili		0369	0369-L -1	4.7 Noise	J-4-71
Ghannam		0431	0431-E -9	2.2 Draft EIS Alternatives	J-2-153
Ghannam		0521	2-01	2.2 Draft EIS Alternatives	J-2-128
Ghannam		0431	0431-E -8	3.4 Visual and Aesthetic Conditions	J-3-41
Ghannam		0431	0431-E -4	3.4 Visual and Aesthetic Conditions	J-3-34
Ghannam		0431	0431-E -10	3.7 Safety and Security	J-3-57
Ghannam		0431	0431-E -5	3.7 Safety and Security	J-3-57
Ghannam		0431	0431-E -2	4.7 Noise	J-4-49
Ghannam		0431	0431-E -3	4.7 Noise	J-4-66
Ghannam		0431	0431-E -7	4.7 Noise	J-4-56
Ghannam		0431	0431-E -6	4.7 Noise	J-4-68
Ghannam		0431	0431-E -1	4.7 Noise	J-4-39
Ghannam		0431	0431-E -12	6.2 Effects of Roadways	J-6-35
Ghannam		0431	0431-E -11	6.2 Effects of Roadways	J-6-34

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Gibson, D.		0031	0031-CC-1	4.7 Noise	J-4-39
Gibson, K.		0065	0065-CC-2	4.7 Noise	J-4-39
Gibson, K.		0065	0065-CC-1	4.7 Noise	J-4-39
Gilbert		0504	2-01	2.2 Draft EIS Alternatives	J-2-85
Goldman		0403	0403-L -8	2.2 Draft EIS Alternatives	J-2-153
Goldman		0403	0403-L -7	3.4 Visual and Aesthetic Conditions	J-3-41
Goldman		0403	0403-L -3	3.4 Visual and Aesthetic Conditions	J-3-34
Goldman		0403	0403-L -9	3.7 Safety and Security	J-3-57
Goldman		0403	0403-L -4	3.7 Safety and Security	J-3-57
Goldman		0403	0404- L- 3	4.7 Noise	J-4-65
Goldman		0403	0404- L-4	4.7 Noise	J-4-65
Goldman		0403	0403-L -2	4.7 Noise	J-4-67
Goldman		0403	0403-L -5	4.7 Noise	J-4-68
Goldman		0403	0403-L -6	4.7 Noise	J-4-56
Goldman		0403	0404- L- 1	4.7 Noise	J-4-38
Goldman		0403	0403-L -1	4.7 Noise	J-4-39
Goldman		0403	0403-L -10	6.2 Effects of Roadways	J-6-34
Goldman		0403	0404- L- 2	6.2 Effects of Roadways	J-6-35
Goldman		0403	0403-L -11	6.2 Effects of Roadways	J-6-35
Goodnight		0312	0312-L -1	4.7 Noise	J-4-71
Gordon	Toll Road Investors Partnership II - Dulles Greenway	0257	0257-T -8	2.2 Draft EIS Alternatives	J-2-175
Gordon	Toll Road Investors Partnership II - Dulles Greenway	0257	0268-M -5	2.2 Draft EIS Alternatives	J-2-175
Gordon	Toll Road Investors Partnership II - Dulles Greenway	0257	0257-T -7	2.2 Draft EIS Alternatives	J-2-80
Gordon	Toll Road Investors Partnership II - Dulles Greenway	0257	0268-M -4	2.2 Draft EIS Alternatives	J-2-82
Gordon	Toll Road Investors Partnership II - Dulles Greenway	0257	0268-M -1	2.2 Draft EIS Alternatives	J-2-89
Gordon	Toll Road Investors Partnership II - Dulles Greenway	0257	0268-M -2	2.2 Draft EIS Alternatives	J-2-89
Gordon	Toll Road Investors Partnership II - Dulles Greenway	0257	0257-T -2	2.2 Draft EIS Alternatives	J-2-89
Gordon	Toll Road Investors Partnership II - Dulles Greenway	0257	0257-T -5	2.2 Draft EIS Alternatives	J-2-89
Gordon	Toll Road Investors Partnership II - Dulles Greenway	0257	0257-T -1	2.2 Draft EIS Alternatives	J-2-89
Gordon	Toll Road Investors Partnership II - Dulles Greenway	0257	0257-T -9	5.1 Economic Impacts	J-5-1
Gordon	Toll Road Investors Partnership II - Dulles Greenway	0257	0257-T -6	11.1 Public Involvement	J-11-5
Gordon	Toll Road Investors Partnership II - Dulles Greenway	0257	0268-M -3	11.1 Public Involvement	J-11-4
Gordon	Toll Road Investors Partnership II - Dulles Greenway	0257	0257-T -10	11.1 Public Involvement	J-11-5
Gordon	Toll Road Investors Partnership II - Dulles Greenway	0257	0257-T -4	11.1 Public Involvement	J-11-5
Gordon	Toll Road Investors Partnership II - Dulles Greenway	0257	0257-T -3	11.1 Public Involvement	J-11-5
Gorham		0038	0038-CC-2	2.2 Draft EIS Alternatives	J-2-48
Gorham		0038	0038-CC-4	2.2 Draft EIS Alternatives	J-2-46
Gorham		0038	0038-CC-1	2.2 Draft EIS Alternatives	J-2-48
Gorham		0038	0038-CC-3	2.2 Draft EIS Alternatives	J-2-52
Goss		0512	2-01	2.2 Draft EIS Alternatives	J-2-149
Goss		0512	2-02	2.2 Draft EIS Alternatives	J-2-174
Goss		0051	0051-CC-1	2.2 Draft EIS Alternatives	J-2-165
Goss		0051	0051-CC-2	4.7 Noise	J-4-71
Griffin	Fairfax County Executive	0233	0426-M -37	1.0 Purpose and Need	J-1-8
Griffin	Fairfax County Executive	0233	0426-M -4	2.2 Draft EIS Alternatives	J-2-172
Griffin	Fairfax County Executive	0233	0426-M -27	2.2 Draft EIS Alternatives	J-2-47
Griffin	Fairfax County Executive	0233	0426-M -23	2.2 Draft EIS Alternatives	J-2-46
Griffin	Fairfax County Executive	0233	0426-M -32	2.2 Draft EIS Alternatives	J-2-71
Griffin	Fairfax County Executive	0233	0426-M -2	2.2 Draft EIS Alternatives	J-2-68
Griffin	Fairfax County Executive	0233	0426-M -46	2.2 Draft EIS Alternatives	J-2-69
Griffin	Fairfax County Executive	0233	0426-M -31	2.2 Draft EIS Alternatives	J-2-71
Griffin	Fairfax County Executive	0233	0426-M -45	2.2 Draft EIS Alternatives	J-2-69
Griffin	Fairfax County Executive	0233	0426-M -41	2.2 Draft EIS Alternatives	J-2-67
Griffin	Fairfax County Executive	0233	0426-M -33	2.2 Draft EIS Alternatives	J-2-67
Griffin	Fairfax County Executive	0233	0426-M -24	2.2 Draft EIS Alternatives	J-2-147
Griffin	Fairfax County Executive	0233	0426-M -30	2.2 Draft EIS Alternatives	J-2-110
Griffin	Fairfax County Executive	0233	0426-M -16	2.2 Draft EIS Alternatives	J-2-146
Griffin	Fairfax County Executive	0233	0426-M -39	2.2 Draft EIS Alternatives	J-2-107
Griffin	Fairfax County Executive	0233	0426-M -38	2.2 Draft EIS Alternatives	J-2-106
Griffin	Fairfax County Executive	0233	0426-M -9	2.2 Draft EIS Alternatives	J-2-133
Griffin	Fairfax County Executive	0233	0426-M -34	2.2 Draft EIS Alternatives	J-2-99
Griffin	Fairfax County Executive	0233	0426-M -3	3.1 Land Use and Socio-Economics	J-3-4 & J-11-15
Griffin	Fairfax County Executive	0233	0426-M -10	3.4 Visual and Aesthetic Conditions	J-3-42
Griffin	Fairfax County Executive	0233	0426-M -28	5.1 Economic Impacts	J-5-1
Griffin	Fairfax County Executive	0233	0426-M -18	5.1 Economic Impacts	J-5-3

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Griffin	Fairfax County Executive	0233	0426-M -47	5.3 Development Effects/Potential	J-5-44
Griffin	Fairfax County Executive	0233	0426-M -6	5.3 Development Effects/Potential	J-5-44
Griffin	Fairfax County Executive	0233	0426-M -43	5.3 Development Effects/Potential	J-5-33
Griffin	Fairfax County Executive	0233	0426-M -42	5.3 Development Effects/Potential	J-5-34
Griffin	Fairfax County Executive	0233	0426-M -7	5.3 Development Effects/Potential	J-5-34
Griffin	Fairfax County Executive	0233	0426-M -40	5.3 Development Effects/Potential	J-5-40
Griffin	Fairfax County Executive	0233	0426-M -21	6.0 Transportation Effects	J-A-2
Griffin	Fairfax County Executive	0233	0426-M -8	6.2 Effects on Roadways	J-6-37
Griffin	Fairfax County Executive	0233	0426-M -29	6.3 Effects on Other Transportation Facilities and Services	J-6-62
Griffin	Fairfax County Executive	0233	0426-M -17	6.3 Effects on Other Transportation Facilities and Services	J-6-66
Griffin	Fairfax County Executive	0233	0426-M -25	6.3 Effects on Other Transportation Facilities and Services	J-6-65
Griffin	Fairfax County Executive	0233	0426-M -15	8.1 Capital Funding Strategy	J-8-5
Griffin	Fairfax County Executive	0233	0426-M -19	8.1 Capital Funding Strategy	J-8-5
Griffin	Fairfax County Executive	0233	0426-M -44	8.1 Capital Funding Strategy	J-8-5
Griffin	Fairfax County Executive	0233	0426-M -11	8.1 Capital Funding Strategy	J-8-5
Griffin	Fairfax County Executive	0233	0426-M -5	8.1 Capital Funding Strategy	J-8-6
Griffin	Fairfax County Executive	0233	0426-M -13	8.1 Capital Funding Strategy	J-8-6
Griffin	Fairfax County Executive	0233	0426-M -26	8.1 Capital Funding Strategy	J-8-6
Griffin	Fairfax County Executive	0233	0426-M -14	8.1 Capital Funding Strategy	J-8-9
Griffin	Fairfax County Executive	0233	0233-L -1	8.1 Capital Funding Strategy	J-8-8
Griffin	Fairfax County Executive	0233	0426-M -1	8.1 Capital Funding Strategy	J-8-8
Griffin	Fairfax County Executive	0233	0426-M -22	8.1 Capital Funding Strategy	J-8-8
Griffin	Fairfax County Executive	0233	0426-M -35	8.1 Capital Funding Strategy	J-8-8
Griffin	Fairfax County Executive	0233	0426-M -12	8.1 Capital Funding Strategy	J-8-8
Griffin	Fairfax County Executive	0233	0426-M -36	13.1 Schedule/Process for Implementation	J-13-1
Grimsley	Merchant's Tire and Auto Center	0498	3-01	3.3 Property Acquisition and Displacement	J-3-30
Grimsley	Merchant's Tire and Auto Center	0498	3-02	3.3 Property Acquisition and Displacement	J-3-30
Griswold		0034	0109-E -2	2.2 Draft EIS Alternatives	J-2-63
Griswold		0034	0034-CC-1	2.2 Draft EIS Alternatives	J-2-84
Griswold		0034	0109-E -3	2.2 Draft EIS Alternatives	J-2-159
Griswold		0034	0109-E -1	2.2 Draft EIS Alternatives	J-2-158
Griswold		0034	0034-CC-2	5.3 Development Effects/Potential	J-5-40
Gustin		0124	0124-E -3	2.2 Draft EIS Alternatives	J-2-160
Gustin		0124	0124-E -2	2.2 Draft EIS Alternatives	J-2-167
Gustin		0124	0124-E -1	2.2 Draft EIS Alternatives	J-2-166
Hackney		0290	0290-L -1	2.2 Draft EIS Alternatives	J-2-78
Hackney		0290	0290-L -6	2.2 Draft EIS Alternatives	J-2-125
Hackney		0290	0290-L -4	2.2 Draft EIS Alternatives	J-2-89
Hackney		0290	0290-L -2	6.1 Transit Effects	J-6-12
Hackney		0290	0290-L -5	6.1 Transit Effects	J-6-12
Hackney		0290	0290-L -3	6.1 Transit Effects	J-6-12
Hadlock		0401	0401- L-1	2.2 Draft EIS Alternatives	J-2-48
Hadlock		0401	0401- L-2	2.2 Draft EIS Alternatives	J-2-160
Hadlock		0401	0401- L-4	2.2 Draft EIS Alternatives	J-2-93
Hadlock		0401	0401- L-6	5.3 Development Effects/Potential	J-5-29
Hadlock		0401	0401- L-5	6.3 Effects on Other Transportation Facilities and Services	J-6-65
Hadlock		0401	0401- L-3	8.1 Capital Funding Strategy	J-8-32
Hadlock		0401	0401- L-7	13.1 Schedule/Process for Implementation	J-13-3
Halway		0359	0359-L -1	4.7 Noise	J-4-71
Hamberg		0423	0423-E -1	2.2 Draft EIS Alternatives	J-2-133
Hamberg		0423	4-01	4.7 Noise	J-4-79
Hamberger		0513	2-01	2.2 Draft EIS Alternatives	J-2-168
Hanley	Fairfax County Board Chairman	0121	0121-A -2	4.7 Noise	J-4-36
Hanley	Fairfax County Board Chairman	0121	0121-A -3	4.7 Noise	J-4-36
Hanley	Fairfax County Board Chairman	0121	0121-A -1	4.7 Noise Service and Inspection Yard Noise	J-4-35
Hannas		0116	0116-E -1	2.2 Draft EIS Alternatives	J-2-68
Hannas		0116	0116-E -2	2.2 Draft EIS Alternatives	J-2-160
Harris		0030	0030-CC-3	2.2 Draft EIS Alternatives	J-2-46
Harris		0030	0030-CC-1	2.2 Draft EIS Alternatives	J-2-160
Harris		0030	0030-CC-2	2.2 Draft EIS Alternatives	J-2-166
Harris		0030	0030-CC-4	2.2 Draft EIS Alternatives	J-2-137
Harris		0258	0258-T -1	1.0 Purpose and Need	J-1-5
Harris		0258	0258-T -2	2.2 Draft EIS Alternatives	J-2-102
Harris		0258	0258-T -9	4.6 Air Quality	J-4-27
Harris		0258	0258-T -6	4.6 Air Quality	J-4-25

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Harris		0258	0258-T -8	4.6 Air Quality	J-4-26
Harris		0258	0258-T -7	4.6 Air Quality	J-4-26
Harris		0258	0258-T -4	4.6 Air Quality	J-4-24
Harris		0258	0258-T -5	4.6 Air Quality	J-4-25
Harris		0258	0258-T -3	8.1 Capital Funding Strategy	J-8-26
Harris		0505	2-01	2.2 Draft EIS Alternatives	J-2-85
Harvey		0044	0044-CC-1	11.1 Public Involvement	J-11-8
Hashemine		0339	0339-L -1	4.7 Noise	J-4-71
Hawkins		0235	0235-E -3	5.3 Development Effects/Potential	J-5-39
Hawkins		0235	0235-E -7	6.2 Effects of Roadways	J-6-33
Hawkins		0235	0235-E -6	8.1 Capital Funding Strategy	J-8-28
Hawkins		0235	0235-E -8	9.1 Secondary Development Effects	J-9-11
Hawkins		0235	0235-E -1	12.1 Concerns over Study Process	J-12-9
Heimsath		0107	0107-E -2	11.1 Public Involvement	J-11-3
Heimsath		0107	0107-E -1	2.2 Draft EIS Alternatives	J-2-84
Henderson	Alder Branch Management/Lincoln at Tysons Corner	0084	0458-E -2	2.2 Draft EIS Alternatives	J-2-158
Henderson	Alder Branch Management/Lincoln at Tysons Corner	0084	0458-E -1	2.2 Draft EIS Alternatives	J-2-158
Henderson	Alder Branch Management/Lincoln at Tysons Corner	0084	0084-L -1	2.2 Draft EIS Alternatives	J-2-158
Henderson	Alder Branch Management/Lincoln at Tysons Corner	0084	0084-L -2	2.2 Draft EIS Alternatives	J-2-158
Henderson	Alder Branch Management/Lincoln at Tysons Corner	0084	0084-L -5	2.2 Draft EIS Alternatives	J-2-158
Henderson	Alder Branch Management/Lincoln at Tysons Corner	0084	0084-L -6	2.2 Draft EIS Alternatives	J-2-163
Henderson	Alder Branch Management/Lincoln at Tysons Corner	0084	0458-E -7	3.2 Neighborhood, Community Services and Community Cohesion	J-3-18 & 23
Henderson	Alder Branch Management/Lincoln at Tysons Corner	0084	0084-L -8	3.2 Neighborhood, Community Services and Community Cohesion	J-3-18 & 23
Henderson	Alder Branch Management/Lincoln at Tysons Corner	0084	0458-E -4	3.4 Visual and Aesthetic Conditions	J-3-36
Henderson	Alder Branch Management/Lincoln at Tysons Corner	0084	0084-L -4	10.1 Evaluation Relative to Project Goals and Objectives	J-10-28
Henderson	Alder Branch Management/Lincoln at Tysons Corner	0084	0084-L -3	10.1 Evaluation Relative to Project Goals and Objectives	J-10-25
Henderson	Alder Branch Management/Lincoln at Tysons Corner	0084	0458-E -3	10.1 Evaluation Relative to Project Goals and Objectives	J-10-25
Henderson	Alder Branch Management/Lincoln at Tysons Corner	0084	0458-E -5	10.1 Evaluation Relative to Project Goals and Objectives	J-10-20
Henderson	Alder Branch Management/Lincoln at Tysons Corner	0084	0458-E -6	10.1 Evaluation Relative to Project Goals and Objectives	J-10-20
Henderson	Alder Branch Management/Lincoln at Tysons Corner	0084	0084-L -7	10.1 Evaluation Relative to Project Goals and Objectives	J-10-20
Hennick		0411	0411-L -1	2.2 Draft EIS Alternatives	J-2-166
Hennick		0411	0411-L -2	2.2 Draft EIS Alternatives	J-2-166
Hennick		0411	0411-L -3	2.2 Draft EIS Alternatives	J-2-148
Henretty		0090	0090-CC-1	2.2 Draft EIS Alternatives	J-2-116
Henretty		0090	0090-CC-2	8.1 Capital Funding Strategy	J-8-34
Herrity		0136	0168-T -1	1.0 Purpose and Need	J-1-11
Herrity		0136	0168-T -4	2.1 Alternatives Previously Considered	J-2-18
Herrity		0136	0136-T -5	5.3 Development Effects/Potential	J-5-11
Herrity		0136	0136-T -1	8.1 Capital Funding Strategy	J-8-18
Herrity		0136	0136-T -2	8.1 Capital Funding Strategy	J-8-19
Herrity		0136	0136-T -4	8.1 Capital Funding Strategy	J-8-19
Herrity		0136	0168-T -2	8.1 Capital Funding Strategy	J-8-19
Herrity		0136	0168-T -3	9.1 Secondary Development Effects	J-9-11
Herrity		0136	0136-T -3	9.1 Secondary Development Effects	J-9-12
Hickerson		0021	0021-L -2	2.2 Draft EIS Alternatives	J-2-167
Hickerson		0021	0021-L -3	3.2 Neighborhood/ Community Impacts	J-3-22
Hickerson		0021	0021-L -1	8.1 Capital Funding Strategy	J-8-23
Hill & Stowers	RTAC	0478	0484-E -1	1.0 Purpose and Need	J-1-6
Hill & Stowers	RTAC	0478	0484-E -19	2.2 Draft EIS Alternatives	J-2-170
Hill & Stowers	RTAC	0478	0484-E -4	2.2 Draft EIS Alternatives	J-2-64
Hill & Stowers	RTAC	0478	0484-E -6	2.2 Draft EIS Alternatives	J-2-63
Hill & Stowers	RTAC	0478	0484-E -7	2.2 Draft EIS Alternatives	J-2-63
Hill & Stowers	RTAC	0478	0484-E -9	2.2 Draft EIS Alternatives	J-2-64
Hill & Stowers	RTAC	0478	0484-E -3	2.2 Draft EIS Alternatives	J-2-69
Hill & Stowers	RTAC	0478	0484-E -2	2.2 Draft EIS Alternatives	J-2-68
Hill & Stowers	RTAC	0478	0484-E -5	2.2 Draft EIS Alternatives	J-2-108
Hill & Stowers	RTAC	0478	0484-E -18	2.2 Draft EIS Alternatives	J-2-111
Hill & Stowers	RTAC	0478	0484-E -15	2.2 Draft EIS Alternatives	J-2-133
Hill & Stowers	RTAC	0478	0484-E -22	2.2 Draft EIS Alternatives	J-2-127
Hill & Stowers	RTAC	0478	0484-E -21	2.2 Draft EIS Alternatives	J-2-126
Hill & Stowers	RTAC	0478	0484-E -14	2.2 Draft EIS Alternatives	J-2-97
Hill & Stowers	RTAC	0478	0484- E-27	2.2 Draft EIS Alternatives	J-2-97
Hill & Stowers	RTAC	0478	0484-E -16	5.3 Development Effects/Potential	J-5-45
Hill & Stowers	RTAC	0478	0484-E -23	5.3 Development Effects/Potential	J-5-33
Hill & Stowers	RTAC	0478	0484-E -24	5.3 Development Effects/Potential	J-5-33

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Hill & Stowers	RTAC	0478	0484-E -17	6.3 Effects on Other Transportation Facilities and Services	J-6-69
Hill & Stowers	RTAC	0478	0484-E -26	8.1 Capital Funding Strategy	J-8-28
Hill & Stowers	RTAC	0478	0484-E -20	8.1 Capital Funding Strategy	J-8-39
Hill & Stowers	RTAC	0478	0484-E -10	8.1 Capital Funding Strategy	J-8-35
Hill & Stowers	RTAC	0478	0484-E -11	8.1 Capital Funding Strategy	J-8-35
Hill & Stowers	RTAC	0478	0484-E -12	8.1 Capital Funding Strategy	J-8-33
Hill & Stowers	RTAC	0478	0484-E -8	8.2 Operating Funding Strategy	J-8-62
Hill & Stowers	RTAC	0478	0484-E -25	11.1 Public Involvement	J-11-4
Hill & Stowers	RTAC	0478	0484-E -13	11.2 Agency Coordination	J-11-16
Hilton		0209	0209-M -1	5.3 Development Effects/Potential	J-5-43
Hilton		0209	0209-M -4	5.3 Development Effects/Potential	J-5-43
Hilton		0209	0209-M -6	5.3 Development Effects/Potential	J-5-43
Hilton		0209	0209-M -3	5.3 Development Effects/Potential	J-5-32
Hilton		0209	0209-M -2	5.3 Development Effects/Potential	J-5-35
Hilton		0209	0209-M -5	5.3 Development Effects/Potential	J-5-40
Hilton		0209	0209-M -7	5.3 Development Effects/Potential	J-5-21
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0476-L -6	2.1 Alternatives Previously Considered	J-2-18
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0169-T -1	2.2 Draft EIS Alternatives	J-2-47
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0241-T -1	2.2 Draft EIS Alternatives	J-2-47
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0241-T -5	2.2 Draft EIS Alternatives	J-2-47
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0241-T -6	2.2 Draft EIS Alternatives	J-2-47
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0241-T -9	2.2 Draft EIS Alternatives	J-2-49
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0169-T -4	2.2 Draft EIS Alternatives	J-2-47
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0476-L -7	2.2 Draft EIS Alternatives	J-2-48
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0138-T -2	2.2 Draft EIS Alternatives	J-2-48
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0138-T -1	2.2 Draft EIS Alternatives	J-2-46
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0169-T -3	2.2 Draft EIS Alternatives	J-2-52
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0169-T -5	2.2 Draft EIS Alternatives	J-2-52
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0138-T -5	2.2 Draft EIS Alternatives	J-2-83
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0169-T -6	2.4 Suggestions for Other Alternatives	J-2-250
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0138-T -6	4.6 Air Quality	J-4-20
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0138-T -4	8.1 Capital Funding Strategy	J-8-19
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0241-T -8	8.1 Capital Funding Strategy	J-8-13
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0241-T -10	8.1 Capital Funding Strategy	J-8-13
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0476-L -3	8.1 Capital Funding Strategy	J-8-24
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0138-T -3	8.1 Capital Funding Strategy	J-8-29
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0476-L -1	10.1 Evaluation Relative to Project Goals and Objectives	J-10-5
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0241-T -4	10.1 Evaluation Relative to Project Goals and Objectives	J-10-22
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0169-T -2	10.1 Evaluation Relative to Project Goals and Objectives	J-10-22
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0241-T -2	10.1 Evaluation Relative to Project Goals and Objectives	J-10-23
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0241-T -7	10.1 Evaluation Relative to Project Goals and Objectives	J-10-13
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0476-L -2	11.1 Public Involvement	J-11-9
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0476-L -4	12.1 Concerns over Study Process	J-12-6
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0476-L -5	12.1 Concerns over Study Process	J-12-6

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0138	0241-T -3	13.1 Schedule/Process for Implementation	J-13-4
Holden	Committee for Dulles	0204	0204-M -2	2.2 Draft EIS Alternatives	J-2-43
Holden	Committee for Dulles	0204	0247-T -1	2.2 Draft EIS Alternatives	J-2-43
Holden	Committee for Dulles	0204	0247-T -2	2.2 Draft EIS Alternatives	J-2-64
Holden	Committee for Dulles	0204	0204-M -3	2.2 Draft EIS Alternatives	J-2-64
Holden	Committee for Dulles	0204	0204-M -15	2.2 Draft EIS Alternatives	J-2-73
Holden	Committee for Dulles	0204	0204-M -6	2.2 Draft EIS Alternatives	J-2-81
Holden	Committee for Dulles	0204	0204-M -1	2.2 Draft EIS Alternatives	J-2-73
Holden	Committee for Dulles	0204	0247-T -4	2.2 Draft EIS Alternatives	J-2-78
Holden	Committee for Dulles	0204	0204-M -4	2.2 Draft EIS Alternatives	J-2-105
Holden	Committee for Dulles	0204	0247-T -3	2.2 Draft EIS Alternatives	J-2-108
Holden	Committee for Dulles	0204	0204-M -5	2.2 Draft EIS Alternatives	J-2-108
Holden	Committee for Dulles	0204	0247-T -6	2.2 Draft EIS Alternatives	J-2-131
Holden	Committee for Dulles	0204	0247-T -9	2.2 Draft EIS Alternatives	J-2-115
Holden	Committee for Dulles	0204	0204-M -11	2.2 Draft EIS Alternatives	J-2-94 & 117
Holden	Committee for Dulles	0204	0204-M -12	2.2 Draft EIS Alternatives	J-2-123
Holden	Committee for Dulles	0204	0247-T -5	5.3 Development Effects/Potential	J-5-30
Holden	Committee for Dulles	0204	0204-M -7	5.3 Development Effects/Potential	J-5-35
Holden	Committee for Dulles	0204	0204-M -10	6.3 Effects on Other Transportation Facilities and Services	J-6-60
Holden	Committee for Dulles	0204	0247-T -7	6.3 Effects on Other Transportation Facilities and Services	J-6-60
Holden	Committee for Dulles	0204	0247-T -8	6.3 Effects on Other Transportation Facilities and Services	J-6-60
Holden	Committee for Dulles	0204	0204-M -9	6.3 Effects on Other Transportation Facilities and Services	J-6-64
Holden	Committee for Dulles	0204	0204-M -14	11.2 Agency Coordination	J-11-17
Holden	Committee for Dulles	0204	0204-M -13	11.2 Agency Coordination	J-11-17
Holmes		0078	0078-CC-2	2.2 Draft EIS Alternatives	J-2-67
Holmes		0078	0078-CC-3	2.2 Draft EIS Alternatives	J-2-108
Holmes		0078	0078-CC-1	2.2 Draft EIS Alternatives	J-2-132
Holz		0356	0356-L -1	4.7 Noise	J-4-71
Hornback		0296	0296-E -1	3.3 Property Acquisition and Displacement	J-A-4
Hornback		0296	0296-E -2	3.3 Property Acquisition and Displacement	J-A-4
Horwatt	Horwatt and Associates PC	0477	0477-L -14	2.2 Draft EIS Alternatives	J-2-162
Horwatt	Horwatt and Associates PC	0477	0477-L -13	2.2 Draft EIS Alternatives	J-2-165
Horwatt	Horwatt and Associates PC	0477	0477-L -12	2.2 Draft EIS Alternatives	J-2-165
Horwatt	Horwatt and Associates PC	0477	0477-L -1	2.2 Draft EIS Alternatives	J-2-165
Horwatt	Horwatt and Associates PC	0477	0477-L -15	2.2 Draft EIS Alternatives	J-2-168
Horwatt	Horwatt and Associates PC	0477	0477-L -16	2.2 Draft EIS Alternatives	J-2-168
Horwatt	Horwatt and Associates PC	0477	0477-L -17	2.2 Draft EIS Alternatives	J-2-165
Horwatt	Horwatt and Associates PC	0477	0477-L -18	2.2 Draft EIS Alternatives	J-2-165
Horwatt	Horwatt and Associates PC	0477	0477-L -9	3.4 Visual and Aesthetic Conditions	J-3-38
Horwatt	Horwatt and Associates PC	0477	0477-L -7	3.4 Visual and Aesthetic Conditions	J-3-38
Horwatt	Horwatt and Associates PC	0477	0477-L -5	3.4 Visual and Aesthetic Conditions	J-3-38
Horwatt	Horwatt and Associates PC	0477	0477-L -10	5.1 Economic Impacts	J-5-5
Horwatt	Horwatt and Associates PC	0477	0477-L -11	5.1 Economic Impacts	J-5-5
Horwatt	Horwatt and Associates PC	0477	0477-L -8	General Plans	J-GP-8
Horwatt	Horwatt and Associates PC	0477	0477-L -2	General Plans	J-GP-8
Horwatt	Horwatt and Associates PC	0477	0477-L -19	General Plans	J-GP-8
Horwatt	Horwatt and Associates PC	0477	0477-L -6	General Plans	J-GP-8
Horwatt	Horwatt and Associates PC	0477	0477-L -4	General Plans	J-GP-8
Horwatt	Horwatt and Associates PC	0477	0477-L -3	11.1 Public Involvement	J-11-3
Houser	Gannett Co., Inc.	0274	0274-L -2	2.2 Draft EIS Alternatives	J-2-151
Houser	Gannett Co., Inc.	0274	0274-L -1	2.2 Draft EIS Alternatives	J-2-124
Howard		0375	0375-L -1	4.7 Noise	J-4-71
Howard	Wellborn Management Co. Inc.	0449	0449-E -5	9.1 Secondary Development Effects	J-9-8
Howard	Wellborn Management Co. Inc.	0449	0449-E -7	9.1 Secondary Development Effects	J-9-9
Howard	Wellborn Management Co. Inc.	0449	0449-E -6	9.1 Secondary Development Effects	J-9-8
Howard	Wellborn Management Co. Inc.	0449	0449-E -1	9.1 Secondary Development Effects	J-9-6
Howard	Wellborn Management Co. Inc.	0449	0449-E -2	9.1 Secondary Development Effects	J-9-7
Howard	Wellborn Management Co. Inc.	0449	0449-E -3	9.1 Secondary Development Effects	J-9-7
Howard	Wellborn Management Co. Inc.	0449	0449-E -4	9.1 Secondary Development Effects	J-9-8
Howell	Commonwealth of Virginia Senator	0298	0298-L -9	2.2 Draft EIS Alternatives	J-2-4
Howell	Commonwealth of Virginia Senator	0298	0298-L -1	2.2 Draft EIS Alternatives	J-2-3
Howell	Commonwealth of Virginia Senator	0298	0298-L -7	2.2 Draft EIS Alternatives	J-2-5
Howell	Commonwealth of Virginia Senator	0298	0298-L -6	2.2 Draft EIS Alternatives	J-2-4
Howell	Commonwealth of Virginia Senator	0298	0298-L -5	3.2 Neighborhood, Community Impacts	J-3-11

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Howell	Commonwealth of Virginia Senator	0298	0298-L -4	4.7 Noise	J-4-33
Howell	Commonwealth of Virginia Senator	0298	0298-L -8	5.3 Development Effects/Potential	J-5-11
Howell	Commonwealth of Virginia Senator	0298	0298-L -2	8.1 Capital Funding Strategy	J-8-2
Howell	Commonwealth of Virginia Senator	0298	0298-L -3	8.1 Capital Funding Strategy	J-8-2
Huddle		0230	0230-L -1	2.2 Draft EIS Alternatives	J-2-103
Hudgins	Fairfax County Board Supervisor	0437	0437-E -2	1.0 Purpose and Need	J-1-3
Hudgins	Fairfax County Board Supervisor	0437	0437-E -1	1.0 Purpose and Need	J-1-4
Hudgins	Fairfax County Board Supervisor	0437	0437-E -4	2.2 Draft EIS Alternatives	J-2-36
Hudgins	Fairfax County Board Supervisor	0437	0437-E -9	2.2 Draft EIS Alternatives	J-2-39
Hudgins	Fairfax County Board Supervisor	0437	0437-E -10	3.4 Visual and Aesthetic Conditions	J-3-35
Hudgins	Fairfax County Board Supervisor	0437	0437-E -11	3.7 Safety and Security Safety and Security	J-3-55
Hudgins	Fairfax County Board Supervisor	0437	0437-E -3	4.6 Air Quality	J-4-19
Hudgins	Fairfax County Board Supervisor	0437	0437-E -7	4.7 Noise	J-4-36
Hudgins	Fairfax County Board Supervisor	0437	0437-E -12	5.3 Development Effects/Potential	J-5-15
Hudgins	Fairfax County Board Supervisor	0437	0437-E -8	8.1 Capital Funding Strategy	J-8-7
Hudgins	Fairfax County Board Supervisor	0437	0437-E -6	13.1 Schedule/Process for Implementation	J-13-1
Hudgins	Fairfax County Board Supervisor	0437	0437-E -5	13.1 Schedule/Process for Implementation	J-13-1
Humowiecki		0079	0079-CC-1	2.2 Draft EIS Alternatives	J-2-136
Humowiecki		0079	0079-CC-2	4.2 Water Resources	J-4-7
Humowiecki		0079	0079-CC-3	8.1 Capital Funding Strategy	J-8-11
Hunt		0150	0150-T -2	2.2 Draft EIS Alternatives	J-2-26 & 155
Hunt		0150	0150-T -9	2.2 Draft EIS Alternatives	J-2-26 & 156
Hunt		0150	0150-T -6	4.6 Air Quality	J-4-24
Hunt		0150	0150-T -12	4.6 Air Quality	J-4-23
Hunt		0150	0150-T -7	4.9 Hazardous and Contaminated Materials	J-4-96
Hunt		0150	0150-T -4	5.3 Development Effects/Potential	J-5-27
Hunt		0150	0150-T -3	6.1 Transit Effects	J-6-5
Hunt		0150	0150-T -11	6.1 Transit Effects	J-6-5
Hunt		0150	0150-T -10	9.1 Secondary Development Effects	J-9-14
Hunt		0150	0150-T -5	10.1 Evaluation Relative to Project Goals and Objectives	J-10-29
Hunt		0150	0150-T -8	11.1 Public Involvement	J-11-8
Hunt		0150	0150-T -1	11.1 Public Involvement	J-11-8
Husch		0123	0123-L -1	1.0 Purpose and Need	J-1-5
Husch		0123	2-01	2.2 Draft EIS Alternatives	J-2-190
Husch		0123	2-03	2.2 Draft EIS Alternatives	J-2-159
Husch		0123	0123-L -3	2.4 Other Suggested Improvements	J-2-252
Husch		0123	0123-L -2	2.4 Other Suggested Improvements	J-2-251
Husch		0123	8-1	8.1 Capital Funding Strategy	J-8-46
Husch		0123	0123-L -4	13.1 Schedule/Process for Implementation	J-13-4
Hylton		0454	0454-E -3	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-17
Hylton		0454	0454-E -4	6.2 Effects of Roadways	J-6-38
Hylton		0454	0454-E -2	9.1 Secondary Development Effects	J-9-13
Hylton		0454	0454-E -5	10.0 Project Evaluation	J-10-27
Hylton		0454	0454-E -1	12.1 Concerns over Study Process	J-12-9
Iglhaut	Northern Virginia Regional Park Authority	0456	0456-L -2	3.6 Parklands and Recreation Areas	J-3-51
Iglhaut	Northern Virginia Regional Park Authority	0456	0456-L -1	3.7 Safety and Security	J-3-55
Iglhaut	Northern Virginia Regional Park Authority	0456	0456-L -3	7.0 Section 4(f) Evaluation	J-7-1
illegible		0331	0331-L -1	4.7 Noise	J-4-71
Ingebritsen	LINK	0005	0005-L -1	2.2 Draft EIS Alternatives	J-2-80
Ingebritsen	LINK	0005	0005-L -3	6.3 Effects on Other Transportation Facilities and Services	J-6-63
Ingebritsen	LINK	0005	0005-L -2	6.3 Effects on Other Transportation Facilities and Services	J-6-62
Inglhaut		0456	03-01	3.6 Parklands and Recreation Areas	J-3-51
Iwanski		0514	2-01	2.2 Draft EIS Alternatives	J-2-168
Iwanski		0514	2-02	2.2 Draft EIS Alternatives	J-2-163
Jacoby	Fountains at McLean	0481	0481-E -1	2.2 Draft EIS Alternatives	J-2-159
Jafree		0113	0113-E -1	13.1 Schedule/Process for Implementation	J-13-5
Janney	Cinnamon Creek Homeowners Association	0060	2-01	2.2 Draft EIS Alternatives	J-2-129
Janney	Cinnamon Creek Homeowners Association	0060	2-02	2.2 Draft EIS Alternatives	J-2-129
Janney	Cinnamon Creek Homeowners Association	0060	2-03	2.2 Draft EIS Alternatives	J-2-129
Janney	Cinnamon Creek Homeowners Association	0060	0060-CC-1	8.1 Capital Funding Strategy	J-8-43
Johanneck		0015	0015-E -1	2.2 Draft EIS Alternatives	J-2-157
Johanneck		0015	0231-L -2	2.2 Draft EIS Alternatives	J-2-159
Johanneck		0015	0231-L -1	2.2 Draft EIS Alternatives	J-2-159

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Johnson		0076	0076-CC-2	2.2 Draft EIS Alternatives	J-2-46
Johnson		0076	0076-CC-1	2.2 Draft EIS Alternatives	J-2-162
Johnson		0076	0076-CC-3	2.2 Draft EIS Alternatives	J-2-82
Johnson		0076	0076-CC-4	2.2 Draft EIS Alternatives	J-2-132
Jones		0056	0056-CC-1	2.2 Draft EIS Alternatives	J-2-151
Jones		0399	0399-L -9	2.2 Draft EIS Alternatives	J-2-153
Jones		0399	0399-L -8	3.4 Visual and Aesthetic Conditions	J-3-41
Jones		0399	0399-L -4	3.4 Visual and Aesthetic Conditions	J-3-34
Jones		0399	0399-L -10	3.7 Safety and Security	J-3-57
Jones		0399	0399-L -5	3.7 Safety and Security	J-3-57
Jones		0399	0399-L -2	4.7 Noise	J-4-49
Jones		0399	0399-L -7	4.7 Noise	J-4-56
Jones		0399	0399-L -6	4.7 Noise	J-4-68
Jones		0399	0399-L -3	4.7 Noise	J-4-66
Jones		0399	0399-L -1	4.7 Noise	J-4-39
Jones		0399	0399-L -11	6.2 Effects of Roadways	J-6-34
Jones		0399	0399-L -12	6.2 Effects of Roadways	J-6-35
Jones	Virginia Department of Conservation and Recreation	0519	4-01	4.5 Rare, Threatened, and Endangered Species	J-4-16
Jones, Sandra		0520	2-01	2.2 Draft EIS Alternatives	J-2-128
Jordan		0229	0229-E -1	2.2 Draft EIS Alternatives	J-2-74
Jordan		0229	0229-E -2	2.4 Other Suggested Improvements	J-2-252
Jugee		0371	0371-L -1	4.7 Noise	J-4-71
Kadane		0291	0291-L -1	2.2 Draft EIS Alternatives	J-2-78
Kadane		0291	0291-L -2	8.1 Capital Funding Strategy	J-8-34
Kalish		0183	0183-T -1	2.2 Draft EIS Alternatives	J-2-169
Kalish		0183	0183-T -5	2.2 Draft EIS Alternatives	J-2-51
Kalish		0183	0183-T -6	2.2 Draft EIS Alternatives	J-2-46
Kalish		0183	0183-T -8	2.2 Draft EIS Alternatives	J-2-47
Kalish		0183	0183-T -4	8.1 Capital Funding Strategy	J-8-33
Kalish		0183	0183-T -3	8.1 Capital Funding Strategy	J-8-29
Kalish		0183	0183-T -7	10.1 Evaluation Relative to Project Goals and Objectives	J-10-28
Kalish		0183	0183-T -2	13.1 Schedule/Process for Implementation	J-13-2
Kamkar-Parsi		0033	0033-CC-1	2.2 Draft EIS Alternatives	J-2-167
Kamkar-Parsi		0033	0033-CC-2	2.2 Draft EIS Alternatives	J-2-167
Kamkar-Parsi, M		0055	0055-CC-1	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-20
Kane		0171	0171-T -2	2.2 Draft EIS Alternatives	J-2-96
Kane		0171	0171-T -3	5.3 Development Effects/Potential	J-5-42
Kane		0171	0171-T -1	5.3 Development Effects/Potential	J-5-39
Kane		0171	0171-T -4	5.3 Development Effects/Potential	J-5-22
Kang		0470	0470-L -9	2.2 Draft EIS Alternatives	J-2-153
Kang		0470	0470-L -4	3.4 Visual and Aesthetic Conditions	J-3-34
Kang		0470	0470-L -8	3.4 Visual and Aesthetic Conditions	J-3-41
Kang		0470	0470-L -10	3.7 Safety and Security Safety and Security	J-3-57
Kang		0470	0470-L -5	3.7 Safety and Security Safety and Security	J-3-57
Kang		0470	0470-L -1	4.7 Noise	J-4-39
Kang		0470	0470-L -2	4.7 Noise	J-4-49
Kang		0470	0470-L -7	4.7 Noise	J-4-56
Kang		0470	0470-L -3	4.7 Noise	J-4-66
Kang		0470	0470-L -6	4.7 Noise	J-4-68
Kang		0470	0470-L -12	6.2 Effects of Roadways	J-6-35
Kang		0470	0470-L -11	6.2 Effects of Roadways	J-6-34
Kederzierski	Virginia Department of Environmental Quality	0518	4-01	4.2 Water Resources	J-4-5
Kederzierski	Virginia Department of Environmental Quality	0518	4-02	4.2 Water Resources	J-4-5
Kelly		0425	0425-E -1	5.1 Economic Conditions	J-5-3
Kelly		0425	0425-E -3	5.1 Economic Impacts	J-5-2
Kelly		0425	0425-E -2	6.2 Effects of Roadways	J-6-36
Kendig		0348	0348-L -1	4.7 Noise	J-4-71
Kenny		0427	0427-E -2	5.1 Economic Impacts	J-5-4
Kenny		0427	0427-E -12	6.2 Effects of Roadways	J-6-46
Kenny		0427	0427-E -10	6.2 Effects of Roadways	J-6-46
Kenny		0427	0427-E -3	6.3 Effects on Other Transportation Facilities and Services	J-6-69
Kenny		0427	0427-E -4	6.3 Effects on Other Transportation Facilities and Services	J-6-60
Kenny		0427	0427-E -9	8.1 Capital Funding Strategy	J-8-35
Kenny		0427	0427-E -8	8.1 Capital Funding Strategy	J-8-34
Kenny		0427	0427-E -7	8.1 Capital Funding Strategy	J-8-29

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Kenny		0427	0427-E -11	8.1 Capital Funding Strategy	J-8-40
Kenny		0427	0427-E -6	8.1 Capital Funding Strategy	J-8-33
Kenny		0427	0427-E -1	10.1 Evaluation Relative to Project Goals and Objectives	J-10-19
Kenny		0427	0427-E -5	12.1 Concerns over Study Process	J-12-8
Kim		0465	0465-L -9	2.2 Draft EIS Alternatives	J-2-153
Kim		0465	0465-L -8	3.4 Visual and Aesthetic Conditions	J-3-41
Kim		0465	0465-L -4	3.4 Visual and Aesthetic Conditions	J-3-34
Kim		0465	0465-L -10	3.7 Safety and Security	J-3-57
Kim		0465	0465-L -5	3.7 Safety and Security	J-3-57
Kim		0465	0465-L -2	4.7 Noise	J-4-49
Kim		0465	0465-L -3	4.7 Noise	J-4-66
Kim		0465	0465-L -6	4.7 Noise	J-4-68
Kim		0465	0465-L -7	4.7 Noise	J-4-56
Kim		0465	0465-L -1	4.7 Noise Service and Inspection Yard Noise	J-4-39
Kim		0465	0465-L -12	6.2 Effects of Roadways	J-6-35
Kim		0465	0465-L -11	6.2 Effects of Roadways	J-6-34
Kindle		0046	0046-CC-1	2.2 Draft EIS Alternatives	J-2-84
Kindle		0046	0046-CC-4	2.2 Draft EIS Alternatives	J-2-107
Kindle		0046	0046-CC-2	2.2 Draft EIS Alternatives	J-2-151
Kindle		0046	0046-CC-3	2.2 Draft EIS Alternatives	J-2-92
Kindle		0046	01	4.7 Noise	J-4-34
Kindle		0047	0047-CC-1	2.2 Draft EIS Alternatives	J-2-106
Kindle		0047	0047-CC-3	2.2 Draft EIS Alternatives	J-2-112
Kindle		0047	0047-CC-2	3.7 Safety and Security	J-3-56
Kindle		0047	0047-CC-4	3.7 Safety and Security	J-3-59
Klein		0097	0097-E -1	2.2 Draft EIS Alternatives	J-2-84
Kreeger		0315	0315-L -1	4.7 Noise	J-4-71
Krishnan		0469	0469-L -8	2.2 Draft EIS Alternatives	J-2-153
Krishnan		0469	0469-L -4	3.4 Visual and Aesthetic Conditions	J-3-34
Krishnan		0469	0469-L -7	3.4 Visual and Aesthetic Conditions	J-3-41
Krishnan		0469	0469-L -9	3.7 Safety and Security	J-3-57
Krishnan		0469	0469-L -2	4.7 Noise	J-4-49
Krishnan		0469	0469-L -3	4.7 Noise	J-4-66
Krishnan		0469	0469-L -5	4.7 Noise	J-4-68
Krishnan		0469	0469-L -6	4.7 Noise	J-4-56
Krishnan		0469	0469-L -1	4.7 Noise	J-4-39
Kunz		0110	0110-E -3	2.1 Alternatives Previously Considered	J-2-22
Kunz		0110	0110-E -1	2.1 Alternatives Previously Considered	J-2-21
Kunz		0110	0129-4	2.2 Draft EIS Alternatives	J-2-199
Kunz		0110	0110-E -5	2.2 Draft EIS Alternatives	J-2-79
Kunz		0110	0110-E -4	2.2 Draft EIS Alternatives	J-2-68
Kunz		0110	0110-E -2	2.2 Draft EIS Alternatives	J-2-83
L(illegible)		0319	0319-L -1	4.7 Noise	J-4-71
Laikin		0011	0011-E -2	1.0 Purpose and Need	J-1-8
Laikin		0011	0011-2	2.1 Alternative Previous	J-2-29
Laikin		0011	0011-E -1	2.2 Draft EIS Alternatives	J-2-170
Lanham	Fairfax County Park Authority	0306	0306-A -2	3.5 Cultural Resources	J-3-48
Lanham	Fairfax County Park Authority	0306	0306-A -8	3.5 Cultural Resources	J-3-47
Lanham	Fairfax County Park Authority	0306	0306-A -6	3.5 Cultural Resources	J-3-47
Lanham	Fairfax County Park Authority	0306	0306-A -5	3.5 Cultural Resources	J-3-47
Lanham	Fairfax County Park Authority	0306	0306-A -4	3.6 Parklands and Recreation Areas	J-3-52
Lanham	Fairfax County Park Authority	0306	0306-A -3	3.6 Parklands and Recreation Areas	J-3-52
Lanham	Fairfax County Park Authority	0306	0306-A -1	3.6 Parklands and Recreation Areas	J-3-51
Lanham	Fairfax County Park Authority	0306	0306-A -7	13.1 Schedule/Process for Implementation	J-13-2
Lapinski		0069	0069-CC-1	2.1 Alternatives Previously Considered	J-2-12
Larijanii		0496	3-01	3.2 Neighborhood, Community Impacts	J-3-22
Larijanii		0496	3-02	3.2 Neighborhood, Community Impacts	J-3-23
Larsen	Dulles Area Transportation Association	0244	0244-T -2	2.2 Draft EIS Alternatives	J-2-74
Larsen	Dulles Area Transportation Association	0244	0244-T -1	2.2 Draft EIS Alternatives	J-2-74
Larsen	Dulles Area Transportation Association	0244	0244-T -7	2.2 Draft EIS Alternatives	J-2-92
Larsen	Dulles Area Transportation Association	0244	0244-T -5	2.4 Suggestions for Other Alternatives	J-2-253
Larsen	Dulles Area Transportation Association	0244	0244-T -3	4.6 Air Quality	J-4-20
Larsen	Dulles Area Transportation Association	0244	0244-T -4	5.3 Development Effects/Potential	J-5-29
Larsen	Dulles Area Transportation Association	0244	0244-T -6	6.3 Effects on Other Transportation Facilities and Services	J-6-60

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Leisz		0120	0120-L -2	2.2 Draft EIS Alternatives	J-2-159
Leisz		0120	0120-L -1	2.2 Draft EIS Alternatives	J-2-159
Leisz		0120	0120-L -3	3.4 Visual and Aesthetic Conditions	J-3-36
Leland		0515	2-01	2.2 Draft EIS Alternatives	J-2-168
Leland		0515	2-02	2.2 Draft EIS Alternatives	J-2-174
Leland		0515	2-03	2.2 Draft EIS Alternatives	J-2-64
Leland		0515	2-04	2.2 Draft EIS Alternatives	J-2-163
Lenard		0378	0378-L -1	4.7 Noise	J-4-71
Leslie	West Wind Crossing Community	0260	0260-T -1	2.2 Draft EIS Alternatives	J-2-77
Leslie	West Wind Crossing Community	0260	0260-T -3	2.2 Draft EIS Alternatives	J-2-101
Leslie	West Wind Crossing Community	0260	0260-T -2	2.2 Draft EIS Alternatives	J-2-101
Leslie	West Wind Crossing Community	0260	0260-T -4	2.2 Draft EIS Alternatives	J-2-101
Leslie	West Wind Crossing Community	0260	0260-T -5	2.2 Draft EIS Alternatives	J-2-102
Leslie	West Wind Crossing Community	0260	0260-T -6	2.2 Draft EIS Alternatives	J-2-102
Levy		0487	2-01	2.1 Alternatives Previously Considered	J-2-24
Levy		0487	2-02	2.1 Alternatives Previously Considered	J-2-24
Levy		0487	2-03	2.1 Alternatives Previously Considered	J-2-24
Levy		0487	4-01	4.4 Terrestrial Biota and Habitat	J-4-16
Levy		0487	4-02	4.6 Air Quality	J-4-29
Levy		0487	9-1	9.3 Mitigation	J-9-26
Liff		0429	0429-E -1	2.2 Draft EIS Alternatives	J-2-166
Liff		0429	0429-E -2	2.2 Draft EIS Alternatives	J-2-168
Liff		0429	0429-E -6	4.2 Water Resources	J-4-7
Liff		0429	0429-E -4	4.7 Noise	J-4-50
Liff		0429	0429-E -5	4.7 Noise	J-4-50
Liff		0429	0429-E -3	6.2 Effects of Roadways	J-6-36
Liff		0429	0429-E -7	6.2 Effects of Roadways	J-6-36
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	2-01	2.2 Draft EIS Alternatives	J-2-88
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	2-02	2.2 Draft EIS Alternatives	J-2-88
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	2-03	2.2 Draft EIS Alternatives	J-2-88
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	2-04	2.2 Draft EIS Alternatives	J-2-88
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	2-05	2.2 Draft EIS Alternatives	J-2-113
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	2-06	2.2 Draft EIS Alternatives	J-2-88
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0135-T -7	2.2 Draft EIS Alternatives	J-2-62
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0135-T -2	2.2 Draft EIS Alternatives	J-2-75
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0135-T -1	2.2 Draft EIS Alternatives	J-2-81
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0391-L -2	2.2 Draft EIS Alternatives	J-2-81
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0135-T -3	2.2 Draft EIS Alternatives	J-2-92
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0391-L -13	2.2 Draft EIS Alternatives	J-2-87
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0391-L -4	2.2 Draft EIS Alternatives	J-2-86
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0391-L -12	2.2 Draft EIS Alternatives	J-2-87
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0391-L -21	2.2 Draft EIS Alternatives	J-2-87
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0391-L -22	2.2 Draft EIS Alternatives	J-2-87
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0391-L -3	2.2 Draft EIS Alternatives	J-2-87
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0391-L -5	2.2 Draft EIS Alternatives	J-2-87
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0391-L -7	2.2 Draft EIS Alternatives	J-2-88
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0391-L -11	2.2 Draft EIS Alternatives	J-2-86
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0391-L -15	2.2 Draft EIS Alternatives	J-2-137
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0391-L -19	2.2 Draft EIS Alternatives	J-2-88
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0391-L -1	2.2 Draft EIS Alternatives	J-2-88
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0391-L -9	2.2 Draft EIS Alternatives	J-2-88
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0391-L -10	2.2 Draft EIS Alternatives	J-2-88
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0135-T -5	3.1 Land Use and Socio-Economics	J-3-3
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0135-T -6	5.1 Economic Conditions	J-5-5
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0391-L -14	5.3 Development Effects/Potential	J-5-20
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0391-L -17	5.3 Development Effects/Potential	J-5-20
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0391-L -6	5.3 Development Effects/Potential	J-5-18
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0391-L -16	6.2 Effects of Roadways	J-6-32
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0391-L -23	6.2 Effects of Roadways	J-6-32
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0135-T -4	8.1 Capital Funding Strategy	J-8-41
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0391-L -20	8.1 Capital Funding Strategy	J-8-41
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0391-L -8	8.1 Capital Funding Strategy	J-8-41
Looney	TMS Limited Partnership, Cooley Godward LLP	0135	0391-L -18	11.1 Public Involvement	J-11-2

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Lutz		0500	03-01	3.4 Visual and Aesthetic Conditions	J-3-39
Lutz		0500	03-02	3.4 Visual and Aesthetic Conditions	J-3-41
Lutz		0500	4-01	4.7 Noise	J-4-77
Lutz		0500	4-02	4.7 Noise	J-4-78
Lutz		0500	4-03	4.7 Noise	J-4-79
Lutz		0500	4-04	4.7 Noise	J-4-78
MacLane	AGIR Limited	0418	0418-L -1	2.2 Draft EIS Alternatives	J-2-68
MacLane	AGIR Limited	0418	0418-L -2	2.2 Draft EIS Alternatives	J-2-126
MacLane	AGIR Limited	0418	0418-L -3	4.7 Noise	J-4-72
Maier		0068	0068-CC-1	2.2 Draft EIS Alternatives	J-2-84
Maier		0068	0068-CC-2	2.2 Draft EIS Alternatives	J-2-159
Malak	Kings Park Civic Association	0134	0134-T -5	2.2 Draft EIS Alternatives	J-2-60 & 152
Malak	Kings Park Civic Association	0134	0134-T -4	2.2 Draft EIS Alternatives	J-2-159
Malak	Kings Park Civic Association	0134	0134-T -3	2.2 Draft EIS Alternatives	J-2-150
Malak	Kings Park Civic Association	0134	0134-T -1	2.2 Draft EIS Alternatives	J-2-103
Malak	Kings Park Civic Association	0134	0134-T -10	2.2 Draft EIS Alternatives	J-2-150
Malak	Kings Park Civic Association	0134	0134-T -2	2.2 Draft EIS Alternatives	J-2-104
Malak	Kings Park Civic Association	0134	0134-T -8	2.4 Other Suggested Improvements	J-2-250
Malak	Kings Park Civic Association	0134	0134-T -6	6.3 Effects on Other Transportation Facilities and Services	J-6-62
Malak	Kings Park Civic Association	0134	0134-T -7	10.1 Evaluation Relative to Project Goals and Objectives	J-10-29
Malak	Kings Park Civic Association	0134	0134-T -9	10.1 Evaluation Relative to Project Goals and Objectives	J-10-29
Malamud		0506	2-01	2.2 Draft EIS Alternatives	J-2-85
Malamud		0506	2-02	2.2 Draft EIS Alternatives	J-2-154
Mampe		0061	0061-CC-2	2.2 Draft EIS Alternatives	J-2-171
Mampe		0061	0061-CC-1	2.2 Draft EIS Alternatives	J-2-153
Mampe		0061	0061-CC-3	2.2 Draft EIS Alternatives	J-2-153
Mampe		0061	0117-19	2.4 Other Suggested Improvements	J-2-257
Mampe		0061	0117-20	2.4 Other Suggested Improvements	J-2-260
Marfred		0471	0471-L -8	2.2 Draft EIS Alternatives	J-2-153
Marfred		0471	0471-L -4	3.4 Visual and Aesthetic Conditions	J-3-34
Marfred		0471	0471-L -7	3.4 Visual and Aesthetic Conditions	J-3-41
Marfred		0471	0471-L -9	3.7 Safety and Security	J-3-57
Marfred		0471	0471-L -2	4.7 Noise	J-4-49
Marfred		0471	0471-L -6	4.7 Noise	J-4-56
Marfred		0471	0471-L -5	4.7 Noise	J-4-68
Marfred		0471	0471-L -3	4.7 Noise	J-4-66
Marfred		0471	0471-L -1	4.7 Noise	J-4-39
Marks		0062	0062-CC-2	2.2 Draft EIS Alternatives	J-2-63
Marks		0062	0062-CC-1	2.2 Draft EIS Alternatives	J-2-82
Marks		0062	0070-2	2.4 Other Suggested Improvements	J-2-257
Marsteller	Leesburg Pike, LLC	0493	01	2.2 Draft EIS Alternatives	J-2-129
Marsteller	Leesburg Pike, LLC	0493	2-01	2.2 Draft EIS Alternatives	J-2-129
Mathieu	Union Local 689 Amalgamated Transit	0278	0278-T -3	2.2 Draft EIS Alternatives	J-2-78
Mathieu	Union Local 689 Amalgamated Transit	0278	0278-T -1	2.2 Draft EIS Alternatives	J-2-77
Mathieu	Union Local 689 Amalgamated Transit	0278	0278-T -2	5.1 Economic Impacts	J-5-6
May		0117/0398	0146-3	2.2 Draft EIS Alternatives	J-2-191
May		0117/0398	0117-E -2	2.2 Draft EIS Alternatives	J-2-154
May		0117/0398	0117-E -6	2.2 Draft EIS Alternatives	J-2-149
May		0117/0398	0398-L -9	2.2 Draft EIS Alternatives	J-2-153
May		0117/0398	0398-L -4	3.4 Visual and Aesthetic Conditions	J-3-34
May		0117/0398	0398-L -8	3.4 Visual and Aesthetic Conditions	J-3-41
May		0117/0398	03-01	3.4 Visual and Aesthetic Conditions	J-3-35
May		0117/0398	0398-L -5	3.7 Safety and Security	J-3-57
May		0117/0398	03-02	3.7 Safety and Security	J-3-57
May		0117/0398	0398-L -10	3.7 Safety and Security	J-3-57
May		0117/0398	0398-L -2	4.7 Noise	J-4-49
May		0117/0398	0398-L -13	4.7 Noise	J-4-50
May		0117/0398	0398-L -3	4.7 Noise	J-4-66
May		0117/0398	0398-L -6	4.7 Noise	J-4-68
May		0117/0398	0398-L -7	4.7 Noise	J-4-56
May		0117/0398	0117-E -7	4.7 Noise	J-4-69
May		0117/0398	0117-E -3	4.7 Noise	J-4-70
May		0117/0398	0117-E -5	4.7 Noise	J-4-69
May		0117/0398	0117-E -1	4.7 Noise	J-4-69
May		0117/0398	4-01	4.7 Noise	J-4-80

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
May		0117/0398	4-02	4.7 Noise	J-4-75
May		0117/0398	4-03	4.7 Noise	J-4-75
May		0117/0398	0398-L -1	4.7 Noise	J-4-39
May		0117/0398	0398-L -11	6.2 Effects of Roadways	J-6-34
May		0117/0398	0398-L -12	6.2 Effects of Roadways	J-6-35
May		0117/0398	0117-E -4	10.1 Evaluation Relative to Project Goals and Objectives	J-10-3
May		0117/0398	0277-T -1	10.1 Evaluation Relative to Project Goals and Objectives	J-10-4
Mays		0474	0474-L -9	2.2 Draft EIS Alternatives	J-2-153
Mays		0474	0474-L -4	3.4 Visual and Aesthetic Conditions	J-3-34
Mays		0474	0474-L -8	3.4 Visual and Aesthetic Conditions	J-3-41
Mays		0474	0474-L -10	3.7 Safety and Security	J-3-57
Mays		0474	0474-L -5	3.7 Safety and Security	J-3-57
Mays		0474	0474-L -2	4.7 Noise	J-4-49
Mays		0474	0474-L -7	4.7 Noise	J-4-56
Mays		0474	0474-L -3	4.7 Noise	J-4-66
Mays		0474	0474-L -6	4.7 Noise	J-4-68
Mays		0474	0474-L -1	4.7 Noise	J-4-39
Mays		0474	0474-L -11	6.2 Effects of Roadways	J-6-34
Mays		0474	0474-L -12	6.2 Effects of Roadways	J-6-35
McAllister		0045	0046-2	6.2 Effects of Roadways	J-6-52
McAllister		0045	0045-CC-1	6.3 Transportation Facilities and Effects	J-6-63
McCollough		0520	4-01	4.7 Noise	J-4-75
McCollough		0520	4-02	4.7 Noise	J-4-77
McCormick		0105	0105-E -1	2.2 Draft EIS Alternatives	J-2-84
McCracken		0155	0155-T -2	2.2 Draft EIS Alternatives	J-2-47
McCracken		0155	0155-T -4	6.2 Effects of Roadways	J-6-37
McCracken		0155	0155-T -1	8.1 Capital Funding Strategy	J-8-32
McCracken		0155	0155-T -5	8.1 Capital Funding Strategy	J-8-32
McCracken		0155	0155-T -3	9.1 Secondary Development Effects	J-9-14
McDermott	Hunton & Williams	0461	0461-E -7	2.2 Draft EIS Alternatives	J-2-162
McDermott	Hunton & Williams	0461	0461-E -1	2.2 Draft EIS Alternatives	J-2-164
McDermott	Hunton & Williams	0461	0461-E -8	2.2 Draft EIS Alternatives	J-2-166
McDermott	Hunton & Williams	0461	0461-E -6	2.2 Draft EIS Alternatives	J-2-164
McDermott	Hunton & Williams	0461	0461-E -5	2.2 Draft EIS Alternatives	J-2-164
McDermott	Hunton & Williams	0461	0461-E -9	2.2 Draft EIS Alternatives	J-2-165
McDermott	Hunton & Williams	0461	0461-E -4	3.4 Visual and Aesthetic Conditions	J-3-38
McDermott	Hunton & Williams	0461	0461-E -3	3.4 Visual and Aesthetic Conditions	J-3-38
McDermott	Hunton & Williams	0461	0461-E -2	11.1 Public Involvement	J-11-3
McDevitt	Inlet Cluster Association	0288	0288-T -1	6.2 Effects of Roadways	J-6-32
McGimsey		0232	0232-L -1	1.0 Purpose and Need	J-1-9
McGimsey		0232	0232-L -2	3.7 Safety and Security	J-3-57
McGimsey		0232	0232-L -4	3.7 Safety and Security	J-3-56
McGimsey		0232	0232-L -3	5.3 Development Effects/Potential	J-5-30
McGrath		0295	0295-E -1	8.1 Capital Funding Strategy	J-8-32
McGuire, C.		0189	0448-E -9	1.0 Purpose and Need	J-1-12
McGuire, C.		0189	0448-E -3	2.1 Alternatives Previously Considered	J-2-17
McGuire, C.		0189	0448-E -8	2.1 Alternatives Previously Considered	J-2-15
McGuire, C.		0189	0201-L -7	2.1 Alternatives Previously Considered	J-2-17
McGuire, C.		0189	0201-L -6	2.1 Alternatives Previously Considered	J-2-17
McGuire, C.		0189	0201-L -5	2.1 Alternatives Previously Considered	J-2-15
McGuire, C.		0189	0201-L -4	2.2 Draft EIS Alternatives	J-2-109
McGuire, C.		0189	0189-T -1	8.1 Capital Funding Strategy	J-8-16
McGuire, C.		0189	0189-T -2	8.1 Capital Funding Strategy	J-8-20
McGuire, C.		0189	0201-L -1	8.1 Capital Funding Strategy	J-8-16
McGuire, C.		0189	0201-L -2	8.1 Capital Funding Strategy	J-8-20
McGuire, C.		0189	0448-E -6	8.1 Capital Funding Strategy	J-8-26
McGuire, C.		0189	0448-E -7	8.1 Capital Funding Strategy	J-8-26
McGuire, C.		0189	0448-E -4	9.1 Secondary Development Effects	J-9-17
McGuire, C.		0189	0189-T -3	9.1 Secondary Development Effects	J-9-15
McGuire, C.		0189	0201-L -3	9.1 Secondary Development Effects	J-9-15
McGuire, C.		0189	0448-E -5	9.1 Secondary Development Effects	J-9-10
McGuire, C.		0189	0448-E -1	12.1 Concerns over Study Process	J-12-8
McGuire, C.		0189	0448-E -10	12.1 Concerns over Study Process	J-12-8
McGuire, M.		0299	0299-E -2	2.2 Draft EIS Alternatives	J-2-111
McGuire, M.		0299	0299-E -4	2.4 Suggestions for Other Alternatives	J-2-252

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
McGuire, M.		0299	0448-E -2	5.3 Development Effects/Potential	J-5-37
McGuire, M.		0299	0299-E -3	8.1 Capital Funding Strategy	J-8-34
McGuire, M.		0299	0299-E -1	10.1 Evaluation Relative to Project Goals and Objectives	J-10-23
Melton		0389	0389-E -1	3.4 Visual and Aesthetic Conditions	J-3-37
Melton		0389	0389-E -2	4.7 Noise	J-4-55
Melton		0389	0389-E -4	4.7 Noise	J-4-74
Melton		0389	0389-E -3	4.7 Noise	J-4-41
Menda	Freddie Mac/TYTRAN	0152	0152-T -1	2.2 Draft EIS Alternatives	J-2-75
Menda	Freddie Mac/TYTRAN	0152	0152-T -2	2.2 Draft EIS Alternatives	J-2-79
Menda	Freddie Mac/TYTRAN	0152	0152-T -3	2.2 Draft EIS Alternatives	J-2-163
Michael		0385	0385-L -1	2.2 Draft EIS Alternatives	J-2-103
Millnick		0006	0006-L -1	2.2 Draft EIS Alternatives	J-2-167
Millnick		0006	0236-L -1	2.2 Draft EIS Alternatives	J-2-167
Millnick		0006	0006-L -2	8.1 Capital Funding Strategy	J-8-10
Millnick		0006	0236-L -2	8.1 Capital Funding Strategy	J-8-12
Millnick		0006	0236-L -3	8.1 Capital Funding Strategy	J-8-35
Millnick		0006	0236-L -4	11.1 Public Involvement	J-11-10
Mills		0377	0377-L -1	4.7 Noise	J-4-71
Minchew	Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.	0014	0014-L -4	2.2 Draft EIS Alternatives	J-2-63
Minchew	Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.	0014	0014-L -3	2.2 Draft EIS Alternatives	J-2-67
Minchew	Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.	0014	0014-L -7	2.2 Draft EIS Alternatives	J-2-68
Minchew	Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.	0014	0014-L -5	2.2 Draft EIS Alternatives	J-2-111
Minchew	Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.	0014	0014-L -6	2.2 Draft EIS Alternatives	J-2-111
Minchew	Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.	0014	0014-L -11	2.2 Draft EIS Alternatives	J-2-131
Minchew	Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.	0014	0014-L -12	2.2 Draft EIS Alternatives	J-2-114
Minchew	Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.	0014	0014-L -13	2.2 Draft EIS Alternatives	J-2-114
Minchew	Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.	0014	0014-L -14	2.2 Draft EIS Alternatives	J-2-114
Minchew	Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.	0014	0014-L -8	2.2 Draft EIS Alternatives	J-2-114
Minchew	Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.	0014	0014-L -10	3.1 Land Use and Socio-Economics	J-3-2
Minchew	Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.	0014	0014-L -9	5.3 Development Effects/Potential	J-5-29
Minchew	Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.	0014	0014-L -15	5.3 Development Effects/Potential	J-5-23
Minchew	Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.	0014	0014-L -2	5.3 Development Effects/Potential	J-5-23
Minchew	Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.	0014	0014-L -1	5.3 Development Effects/Potential	J-5-22
Mismas		0037	0037-CC-1	2.2 Draft EIS Alternatives	J-2-167
Mismas		0037	0309-L -1	4.7 Noise	J-4-71
Moles		0419	0419-T -1	2.4 Suggestions for Other Alternatives	J-2-251
Moon		0322	0322-L -1	4.7 Noise	J-4-71
Morehead		0049	0049-CC-3	2.4 Suggestions for Other Alternatives	J-2-252
Morehead		0049	0049-CC-2	8.1 Capital Funding Strategy	J-8-10
Morehead		0049	0049-CC-1	8.1 Capital Funding Strategy	J-8-11
Morris		0103	0103-E -3	1.0 Purpose and Need	J-1-8
Morris		0103	0103-E -1	2.2 Draft EIS Alternatives	J-2-84
Morris		0103	0103-E -2	5.3 Development Effects/Potential	J-5-29
Morstein		0074	0074-CC-1	2.2 Draft EIS Alternatives	J-2-171
Morstein		0071	0214-M -2	2.2 Draft EIS Alternatives	J-2-62
Morstein		0071	0215-T -3	2.2 Draft EIS Alternatives	J-2-63
Morstein		0071	0214-M -1	2.2 Draft EIS Alternatives	J-2-72
Morstein		0071	0214-M -3	2.2 Draft EIS Alternatives	J-2-162
Morstein		0071	0215-T -1	2.2 Draft EIS Alternatives	J-2-85
Morstein		0071	0215-T -2	2.2 Draft EIS Alternatives	J-2-82
Morstein		0071	0215-T -4	2.2 Draft EIS Alternatives	J-2-80
Morstein		0071	0215-T -7	2.2 Draft EIS Alternatives	J-2-149
Morstein		0074	0074-CC-2	2.2 Draft EIS Alternatives	J-2-149
Morstein		0071	0215-T -6	2.2 Draft EIS Alternatives	J-2-148
Morstein		0071	0215-T -5	2.2 Draft EIS Alternatives	J-2-154
Morstein		0071	0214-M -4	2.2 Draft EIS Alternatives	J-2-94 & 116
Morstein		0071	0214-M -5	2.2 Draft EIS Alternatives	J-2-94
Morstein		0071	0214-M -6	2.2 Draft EIS Alternatives	J-2-125
Morstein		0071	0071-CC-2	2.2 Draft EIS Alternatives	J-2-112
Morstein		0071	0214-M -7	3.4 Visual and Aesthetic Conditions	J-3-42
Morstein		0071	0071-CC-1	5.3 Development Effects/Potential	J-5-19
Moshaveghzadeh		0350	0350-L -1	4.7 Noise	J-4-71
Muchnick	Virginia Bicycling Federation	0066	0254-T -4	2.1 Alternatives Previously Considered	J-2-22
Muchnick	Virginia Bicycling Federation	0066	0066-CC-3	2.2 Draft EIS Alternatives	J-2-127
Muchnick	Virginia Bicycling Federation	0066	0066-CC-2	2.2 Draft EIS Alternatives	J-2-132

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Muchnick	Virginia Bicycling Federation	0066	0254-T -5	2.2 Draft EIS Alternatives	J-2-132
Muchnick	Virginia Bicycling Federation	0066	0254-T -7	2.2 Draft EIS Alternatives	J-2-132
Muchnick	Virginia Bicycling Federation	0066	0254-T -6	2.2 Draft EIS Alternatives	J-2-132
Muchnick	Virginia Bicycling Federation	0066	0254-T -8	2.2 Draft EIS Alternatives	J-2-127
Muchnick	Virginia Bicycling Federation	0066	0066-CC-5	5.3 Development Effects/Potential	J-5-42
Muchnick	Virginia Bicycling Federation	0066	0254-T -1	5.3 Development Effects/Potential	J-5-30
Muchnick	Virginia Bicycling Federation	0066	0066-CC-1	5.3 Development Effects/Potential	J-5-29
Muchnick	Virginia Bicycling Federation	0066	0254-T -2	5.3 Development Effects/Potential	J-5-28
Muchnick	Virginia Bicycling Federation	0066	0066-CC-4	6.3 Effects on Other Transportation Facilities and Services	J-6-71
Muchnick	Virginia Bicycling Federation	0066	0254-T -3	7.0 Section 4(f) Evaluation	J-7-1
Mueller		0106	0106-E-1	2.2 Draft EIS Alternatives	J-2-84
Nagley		0442	0442-L -8	2.2 Draft EIS Alternatives	J-2-153
Nagley		0442	0442-L -4	3.4 Visual and Aesthetic Conditions	J-3-34
Nagley		0442	0442-L -7	3.4 Visual and Aesthetic Conditions	J-3-41
Nagley		0442	0442-L -9	3.7 Safety and Security	J-3-57
Nagley		0442	0442-L -2	4.7 Noise	J-4-49
Nagley		0442	0442-L -6	4.7 Noise	J-4-56
Nagley		0442	0442-L -5	4.7 Noise	J-4-68
Nagley		0442	0442-L -3	4.7 Noise	J-4-66
Nagley		0442	0442-L -1	4.7 Noise	J-4-39
Naiman		0007	0007-E -2	2.2 Draft EIS Alternatives	J-2-131
Naiman		0007	0007-E -3	2.4 Suggestions for Other Alternatives	J-2-251
Naiman		0007	0007-E -1	5.3 Development Effects/Potential	J-5-38
Nazeer		0358	0358-L -1	4.7 Noise	J-4-71
Nehrbakhski		0364	0364-L -1	4.7 Noise	J-4-71
Neu		0052	0052-CC-1	5.3 Development Effects/Potential	J-5-34
Newman	Rotonda Condominiums	0302	0302-L -1	4.7 Noise	J-4-71
Nguyen		0416	0416-L -9	2.2 Draft EIS Alternatives	J-2-153
Nguyen		0416	0416-L -8	3.4 Visual and Aesthetic Conditions	J-3-41
Nguyen		0416	0416-L -4	3.4 Visual and Aesthetic Conditions	J-3-34
Nguyen		0416	0416-L -10	3.7 Safety and Security	J-3-57
Nguyen		0416	0416-L -5	3.7 Safety and Security	J-3-57
Nguyen		0416	0416-L -1	4.7 Noise	J-4-39
Nguyen		0416	0416-L -2	4.7 Noise	J-4-49
Nguyen		0416	0416-L -6	4.7 Noise	J-4-68
Nguyen		0416	0416-L -7	4.7 Noise	J-4-56
Nguyen		0416	0416-L -3	4.7 Noise	J-4-66
Nguyen		0416	0416-L -12	6.2 Effects of Roadways	J-6-35
Nguyen		0416	0416-L -11	6.2 Effects of Roadways	J-6-34
Nguyen		0501	03-01	3.4 Visual and Aesthetic Conditions	J-3-39
Nguyen		0501	03-02	3.4 Visual and Aesthetic Conditions	J-3-41
Nguyen		0501	4-01	4.7 Noise	J-4-77
Nguyen		0501	4-02	4.7 Noise	J-4-78
Nguyen		0501	4-03	4.7 Noise	J-4-78
Nguyen		0501	4-04	4.7 Noise	J-4-79
Nicolais	Chathams Ford Neighborhood	0174	0300-L -16	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-12
Nicolais	Chathams Ford Neighborhood	0174	0300-L -15	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-12
Nicolais	Chathams Ford Neighborhood	0174	0300-L -17	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-12
Nicolais	Chathams Ford Neighborhood	0174	0300-L -9	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-12
Nicolais	Chathams Ford Neighborhood	0174	0174-T -7	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-12
Nicolais	Chathams Ford Neighborhood	0174	0174-T -1	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-21
Nicolais	Chathams Ford Neighborhood	0174	0300-L -14	4.2 Water Resources	J-4-12
Nicolais	Chathams Ford Neighborhood	0174	0300-L -13	4.2 Water Resources	J-4-12
Nicolais	Chathams Ford Neighborhood	0174	0300-L -8	4.2 Water Resources	J-4-12
Nicolais	Chathams Ford Neighborhood	0174	0300-L -4	4.7 Noise	J-4-48
Nicolais	Chathams Ford Neighborhood	0174	0300-L -1	4.7 Noise	J-4-41
Nicolais	Chathams Ford Neighborhood	0174	0174-T -2	4.7 Noise	J-4-55
Nicolais	Chathams Ford Neighborhood	0174	0300-L -7	4.7 Noise	J-4-61
Nicolais	Chathams Ford Neighborhood	0174	0174-T -5	4.7 Noise	J-4-61
Nicolais	Chathams Ford Neighborhood	0174	0174-T -4	4.7 Noise	J-4-61
Nicolais	Chathams Ford Neighborhood	0174	0300-L -2	4.7 Noise	J-4-55
Nicolais	Chathams Ford Neighborhood	0174	0300-L -5	4.7 Noise	J-4-60
Nicolais	Chathams Ford Neighborhood	0174	0300-L -3	4.7 Noise	J-4-58
Nicolais	Chathams Ford Neighborhood	0174	0300-L -11	4.7 Noise	J-4-58
Nicolais	Chathams Ford Neighborhood	0174	0300-L -10	4.7 Noise	J-4-71

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Nicolais	Chathams Ford Neighborhood	0174	0300-L -6	4.7 Noise	J-4-71
Nicolais	Chathams Ford Neighborhood	0174	0174-T -3	4.7 Noise	J-4-70
Nicolais	Chathams Ford Neighborhood	0174	0300-L -12	4.7 Noise	J-4-11
Nicolais	Chathams Ford Neighborhood	0174	0174-T -6	4.7 Noise	J-4-11
Nicoson	Dulles Corridor Rail Association	0141	0141-T -1	1.0 Purpose and Need	J-1-6
Nicoson	Dulles Corridor Rail Association	0141	0141-T -2	1.0 Purpose and Need	J-1-5
Nicoson	Dulles Corridor Rail Association	0141	2-01	2.2 Draft EIS Alternatives	J-2-91
Nicoson	Dulles Corridor Rail Association	0141	2-02	2.2 Draft EIS Alternatives	J-2-117
Nicoson	Dulles Corridor Rail Association	0141	2-03	2.2 Draft EIS Alternatives	J-2-96
Nicoson	Dulles Corridor Rail Association	0141	2-04	2.2 Draft EIS Alternatives	J-2-102 & 190
Nicoson	Dulles Corridor Rail Association	0141	0243-T -1	2.2 Draft EIS Alternatives	J-2-63
Nicoson	Dulles Corridor Rail Association	0141	0443-E -1	2.2 Draft EIS Alternatives	J-2-71
Nicoson	Dulles Corridor Rail Association	0141	0443-E -17	2.2 Draft EIS Alternatives	J-2-72
Nicoson	Dulles Corridor Rail Association	0141	0443-E -4	2.2 Draft EIS Alternatives	J-2-162
Nicoson	Dulles Corridor Rail Association	0141	0167-T -2	2.2 Draft EIS Alternatives	J-2-74
Nicoson	Dulles Corridor Rail Association	0141	0443-E -10	2.2 Draft EIS Alternatives	J-2-118
Nicoson	Dulles Corridor Rail Association	0141	0443-E -11	2.2 Draft EIS Alternatives	J-2-122
Nicoson	Dulles Corridor Rail Association	0141	0243-T -3	2.2 Draft EIS Alternatives	J-2-118
Nicoson	Dulles Corridor Rail Association	0141	0443-E-10	2.2 Draft EIS Alternatives	J-2-118
Nicoson	Dulles Corridor Rail Association	0141	0243-T -4	2.2 Draft EIS Alternatives	J-2-122
Nicoson	Dulles Corridor Rail Association	0141	0443-E -12	2.2 Draft EIS Alternatives	J-2-117
Nicoson	Dulles Corridor Rail Association	0141	0243-T -7	2.2 Draft EIS Alternatives	J-2-117
Nicoson	Dulles Corridor Rail Association	0141	0443-E -9	2.2 Draft EIS Alternatives	J-2-101
Nicoson	Dulles Corridor Rail Association	0141	0243-T -2	2.2 Draft EIS Alternatives	J-2-101
Nicoson	Dulles Corridor Rail Association	0141	0141-T -5	5.1 Economic Conditions	J-5-5
Nicoson	Dulles Corridor Rail Association	0141	0443-E -3	5.3 Development Effect/Potential	J-5-23
Nicoson	Dulles Corridor Rail Association	0141	0443-E -2	5.3 Development Effects/Potential	J-5-44
Nicoson	Dulles Corridor Rail Association	0141	0443-E -8	5.3 Development Effects/Potential	J-5-45
Nicoson	Dulles Corridor Rail Association	0141	0443-E -7	5.3 Development Effects/Potential	J-5-45
Nicoson	Dulles Corridor Rail Association	0141	0141-T -3	5.3 Development Effects/Potential	J-5-42
Nicoson	Dulles Corridor Rail Association	0141	0443-E -5	5.3 Development Effects/Potential	J-5-29
Nicoson	Dulles Corridor Rail Association	0141	0167-T -7	5.3 Development Effects/Potential	J-5-31
Nicoson	Dulles Corridor Rail Association	0141	0443-E -6	5.3 Development Effects/Potential	J-5-19
Nicoson	Dulles Corridor Rail Association	0141	0167-T -1	5.3 Development Effects/Potential	J-5-21
Nicoson	Dulles Corridor Rail Association	0141	0243-T -5	6.1 Transit Effects	J-6-11
Nicoson	Dulles Corridor Rail Association	0141	0167-T -6	6.3 Effects on Other Transportation Facilities and Services	J-6-70
Nicoson	Dulles Corridor Rail Association	0141	0243-T -6	6.3 Effects on Other Transportation Facilities and Services	J-6-60
Nicoson	Dulles Corridor Rail Association	0141	0443-E -16	8.2 Operating Funding Strategy	J-8-60
Nicoson	Dulles Corridor Rail Association	0141	0167-T -4	9.1 Secondary Development Effects	J-9-18
Nicoson	Dulles Corridor Rail Association	0141	0443-E -13	9.1 Secondary Development Effects	J-9-21
Nicoson	Dulles Corridor Rail Association	0141	0167-T -3	9.1 Secondary Development Effects	J-9-13
Nicoson	Dulles Corridor Rail Association	0141	0443-E -14	9.1 Secondary Development Effects	J-9-21
Nicoson	Dulles Corridor Rail Association	0141	0141-T -6	9.1 Secondary Development Effects	J-9-4
Nicoson	Dulles Corridor Rail Association	0141	0443-E -15	9.1 Secondary Development Effects	J-9-6
Nicoson	Dulles Corridor Rail Association	0141	0167-T -5	9.1 Secondary Development Effects	J-9-5
Nicoson	Dulles Corridor Rail Association	0141	9-1	9.3 Mitigation	J-9-27
Nicoson	Dulles Corridor Rail Association	0141	0141-T -4	General Plans	J-GP-6
Nino		0025	0025-E -1	2.2 Draft EIS Alternatives	J-2-84
Nobarian		0507	2-02	2.2 Draft EIS Alternatives	J-2-85
Nobarion		0507	2-01	2.2 Draft EIS Alternatives	J-2-168
Nouri		0028	0028-L -1	2.2 Draft EIS Alternatives	J-2-166
Nouri		0028	0028-L -2	2.2 Draft EIS Alternatives	J-2-164
Nowak		0307	0307-E -1	2.2 Draft EIS Alternatives	J-2-177
Nowak		0307	0307-E -2	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-16
Nowak		0307	0307-E -4	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-16
Nowak		0307	0307-E -3	5.1 Economic Impacts	J-5-3
Nusbaum		0100	0100-E -1	2.2 Draft EIS Alternatives	J-2-84
O'Connor	Union Local 2 OPEI Chief Shop Steward	0187	0282-T -4	5.1 Economic Impacts	J-5-7
O'Connor	Union Local 2 OPEI Chief Shop Steward	0187	0282-T -3	5.1 Economic Impacts	J-5-7
O'Connor	Union Local 2 OPEI Chief Shop Steward	0187	0282-T -2	5.1 Economic Impacts	J-5-7
O'Connor	Union Local 2 OPEI Chief Shop Steward	0187	0282-T -1	5.1 Economic Impacts	J-5-7
O'Connor	Union Local 2 OPEI Chief Shop Steward	0187	0187-T -3	5.1 Economic Impacts	J-5-7
O'Connor	Union Local 2 OPEI Chief Shop Steward	0187	0187-T -2	5.1 Economic Impacts	J-5-6
O'Connor	Union Local 2 OPEI Chief Shop Steward	0187	0187-T -1	5.1 Economic Impacts	J-5-6
Olechna, E.		0091	0091-CC-1	2.2 Draft EIS Alternatives	J-2-85

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Olechna, L.		0093	0093-CC-1	2.2 Draft EIS Alternatives	J-2-158
Ormsby		0086	0086-CC-3	2.1 Alternatives Previously Considered	J-2-23 & 25
Ormsby		0086	0086-CC-1	2.2 Draft EIS Alternatives	J-2-82
Ormsby		0086	0086-CC-2	2.2 Draft EIS Alternatives	J-2-27
Ostheim		0379	0379-L -1	4.7 Noise	J-4-71
Packard	Fairfax County Federation of Citizens Association	0402	0402-L -1	1.0 Purpose and Need	J-1-8
Packard	Fairfax County Federation of Citizens Association	0402	0402-L -8	2.1 Alternatives Previously Considered	J-2-12
Packard	Fairfax County Federation of Citizens Association	0402	0402-L -6	2.1 Alternatives Previously Considered	J-2-23 & 25
Packard	Fairfax County Federation of Citizens Association	0402	0402-L -9	2.1 Alternatives Previously Considered	J-2-21
Packard	Fairfax County Federation of Citizens Association	0402	0402-L -7	2.2 Draft EIS Alternatives	J-2-64
Packard	Fairfax County Federation of Citizens Association	0402	0402-L -11	2.2 Draft EIS Alternatives	J-2-133
Packard	Fairfax County Federation of Citizens Association	0402	0402-L -14	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-23
Packard	Fairfax County Federation of Citizens Association	0402	0402-L -13	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-19
Packard	Fairfax County Federation of Citizens Association	0402	0402-L -12	4.7 Noise	J-4-56
Packard	Fairfax County Federation of Citizens Association	0402	0402-L -10	8.1 Capital Funding Strategy	J-8-29
Packard	Fairfax County Federation of Citizens Association	0402	0402-L -2	8.1 Capital Funding Strategy	J-8-28
Packard	Fairfax County Federation of Citizens Association	0402	0402-L -4	8.1 Capital Funding Strategy	J-8-33
Packard	Fairfax County Federation of Citizens Association	0402	0402-L -3	8.1 Capital Funding Strategy	J-8-36
Packard	Fairfax County Federation of Citizens Association	0402	0402-L -5	8.1 Capital Funding Strategy	J-8-36
Paduda		0336	0336-L -1	4.7 Noise	J-4-71
Pagano		0234	0234-L -1	2.2 Draft EIS Alternatives	J-2-83
Pagano		0234	0234-L -2	2.2 Draft EIS Alternatives	J-2-66
Page	Federal Aviation Administration, Washington Airports District Office	0485	2-01	2.0 Altenatives Considered	J-2-30
Page	Federal Aviation Administration, Washington Airports District Office	0485	2-02	2.0 Altenatives Considered	J-2-30
Page	Federal Aviation Administration, Washington Airports District Office	0485	0485- A- 3	2.0 Alternatives Considered	J-2-29
Page	Federal Aviation Administration, Washington Airports District Office	0485	0485- A- 1	2.0 Alternatives Considered	J-2-29
Page	Federal Aviation Administration, Washington Airports District Office	0485	0485- A-2	2.0 Alternatives Considered	J-2-30 & J-11-14
Page	Federal Aviation Administration, Washington Airports District Office	0485	03-01	3.3 Property Acquisition and Displacement	J-3-29
Page	Federal Aviation Administration, Washington Airports District Office	0485	03-02	3.7 Safety and Security	J-3-53
Page	Federal Aviation Administration, Washington Airports District Office	0485	4-01	4.3 Aquatic Biota and Habitat	J-4-15
Page	Federal Aviation Administration, Washington Airports District Office	0485	11-1	11.2 Agency Coordination	J-11-14
Paine		0354	0354-L -1	4.7 Noise	J-4-71
Panetta		0016	0016-E -1	2.2 Draft EIS Alternatives	J-2-84
Parnes		0043	0276-T -2	2.2 Draft EIS Alternatives	J-2-81
Parnes		0043	0276-T -1	2.2 Draft EIS Alternatives	J-2-159
Parnes		0043	0043-CC-1	2.2 Draft EIS Alternatives	J-2-158
Parnes		0043	0043-CC-2	2.2 Draft EIS Alternatives	J-2-81
Parnes		0043	0043-CC-4	2.2 Draft EIS Alternatives	J-2-92
Parnes		0043	0043-CC-3	2.2 Draft EIS Alternatives	J-2-137
Parnes		0043	0276-T -3	2.2 Draft EIS Alternatives	J-2-137
Parnes		0043	0276-T -4	2.2 Draft EIS Alternatives	J-2-93
Parnes		0043	0043-CC-5	6.3 Effects on Other Transportation Facilities and Services	J-6-71
Parnes		0043	0276-T -5	6.4 Other Transportation Issues	J-A-3
Peacock	Virginia Association of Railway Patrons	0185	0185-T -1	2.2 Draft EIS Alternatives	J-2-76
Peacock	Virginia Association of Railway Patrons	0185	0185-T -2	2.2 Draft EIS Alternatives	J-2-76
Pemberton, H.		0080	0080-CC-1	2.2 Draft EIS Alternatives	J-2-81
Pemberton, N.		0181	0181-T -2	2.2 Draft EIS Alternatives	J-2-64
Pemberton, N.		0181	0181-T -1	2.2 Draft EIS Alternatives	J-2-76
Pemberton, N.		0181	0181-T -6	2.2 Draft EIS Alternatives	J-2-131
Pemberton, N.		0181	0181-T -8	3.1 Land Use and Socio-Economics	J-3-3
Pemberton, N.		0181	0181-T -4	5.3 Development Effects/Potential	J-5-42
Pemberton, N.		0181	0181-T -10	5.3 Development Effects/Potential	J-5-30
Pemberton, N.		0181	0181-T -5	5.3 Development Effects/Potential	J-5-41
Pemberton, N.		0181	0181-T -3	6.1 Transit Effects	J-6-5
Pemberton, N.		0181	0181-T -7	6.3 Effects on Other Transportation Facilities and Services	J-6-64
Pemberton, N.		0181	0181-T -9	13.1 Schedule/Process for Implementation	J-13-6
Pender		0035	0035-CC-1	2.2 Draft EIS Alternatives	J-2-167
Pendleton		0271	0271-L -1	2.4 Suggestions for Other Alternatives	J-2-253

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Peterson	Landowners Economic Alliance for the Dulles Extension Rail	0154	0225-M -7	2.2 Draft EIS Alternatives	J-2-66
Peterson	Landowners Economic Alliance for the Dulles Extension Rail	0154	0225-M -4	2.2 Draft EIS Alternatives	J-2-84
Peterson	Landowners Economic Alliance for the Dulles Extension Rail	0154	0225-M -5	2.2 Draft EIS Alternatives	J-2-84
Peterson	Landowners Economic Alliance for the Dulles Extension Rail	0154	0225-M -6	2.2 Draft EIS Alternatives	J-2-78
Peterson	Landowners Economic Alliance for the Dulles Extension Rail	0154	0225-M -1	2.2 Draft EIS Alternatives	J-2-85
Peterson	Landowners Economic Alliance for the Dulles Extension Rail	0154	0182-T -1	2.2 Draft EIS Alternatives	J-2-85
Peterson	Landowners Economic Alliance for the Dulles Extension Rail	0154	0182-T -3	2.2 Draft EIS Alternatives	J-2-82
Peterson	Landowners Economic Alliance for the Dulles Extension Rail	0154	0154-T -1	2.2 Draft EIS Alternatives	J-2-85
Peterson	Landowners Economic Alliance for the Dulles Extension Rail	0154	0225-M -8	2.2 Draft EIS Alternatives	J-2-82
Peterson	Landowners Economic Alliance for the Dulles Extension Rail	0154	0154-T -5	2.2 Draft EIS Alternatives	J-2-67
Peterson	Landowners Economic Alliance for the Dulles Extension Rail	0154	0182-T -4	8.1 Capital Funding Strategy	J-8-23
Peterson	Landowners Economic Alliance for the Dulles Extension Rail	0154	0182-T -5	8.1 Capital Funding Strategy	J-8-13
Peterson	Landowners Economic Alliance for the Dulles Extension Rail	0154	0225-M -9	8.1 Capital Funding Strategy	J-8-13
Peterson	Landowners Economic Alliance for the Dulles Extension Rail	0154	0225-M -3	8.1 Capital Funding Strategy	J-8-37
Peterson	Landowners Economic Alliance for the Dulles Extension Rail	0154	0182-T -2	8.1 Capital Funding Strategy	J-8-37
Peterson	Landowners Economic Alliance for the Dulles Extension Rail	0154	0225-M -10	8.1 Capital Funding Strategy	J-8-35
Peterson	Landowners Economic Alliance for the Dulles Extension Rail	0154	0225-M -2	8.1 Capital Funding Strategy	J-8-37
Peterson	Landowners Economic Alliance for the Dulles Extension Rail	0154	0154-T -2	8.1 Capital Funding Strategy	J-8-37
Peterson	Landowners Economic Alliance for the Dulles Extension Rail	0154	0154-T -3	8.1 Capital Funding Strategy	J-8-37
Peterson	Landowners Economic Alliance for the Dulles Extension Rail	0154	0154-T -4	13.1 Schedule/Process for Implementation	J-13-3
Peterson		0337	0337-L -1	4.7 Noise	J-4-71
Phelps, C.		0330	0330-L -1	4.7 Noise	J-4-71
Phelps, R.		0357	0357-L -1	4.7 Noise	J-4-71
Pinkard	Greater Washington Board of Trade	0142	0219-M -1	1.0 Purpose and Need	J-1-7
Pinkard	Greater Washington Board of Trade	0142	0142-T -1	1.0 Purpose and Need	J-1-6
Pinkard	Greater Washington Board of Trade	0142	0142-T -2	1.0 Purpose and Need	J-1-7
Pinkard	Greater Washington Board of Trade	0142	0219-M -2	1.0 Purpose and Need	J-1-10
Pinkard	Greater Washington Board of Trade	0142	0142-T -5	1.0 Purpose and Need	J-1-10
Pinkard	Greater Washington Board of Trade	0142	0142-T -6	2.2 Draft EIS Alternatives	J-2-74
Pinkard	Greater Washington Board of Trade	0142	0219-M -3	2.2 Draft EIS Alternatives	J-2-69
Pinkard	Greater Washington Board of Trade	0142	0142-T -3	4.6 Air Quality	J-4-22
Pinkard	Greater Washington Board of Trade	0142	0142-T -4	9.1 Secondary Development Effects	J-9-20
Pinkard	Greater Washington Board of Trade	0142	0142-T -7	9.1 Secondary Development Effects	J-9-20
Pitts	Comstock Homes, Inc.	0096	0096-CC-1	2.2 Draft EIS Alternatives	J-2-106
Pitts	Comstock Homes, Inc.	0096	2-01	2.2 Draft EIS Alternatives	J-2-9
Pitts	Comstock Homes, Inc.	0096	2-02	2.2 Draft EIS Alternatives	J-2-115
Pitts	Comstock Homes, Inc.	0096	2-03	2.2 Draft EIS Alternatives	J-2-115
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0163-T -4	1.0 Purpose and Need	J-1-1
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0131-T -4	1.0 Purpose and Need	J-1-1
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0131-T -6	1.0 Purpose and Need	J-1-1
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0131-T -3	2.0 Alternatives Considered	J-2-2
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0131-T -2	2.0 Alternatives Considered	J-2-4
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0131-T -1	2.0 Alternatives Considered	J-2-3
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0163-T -1	2.0 Alternatives Considered	J-2-3

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0163-T -10	2.0 Alternatives Considered	J-2-3
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0163-T -7	2.0 Alternatives Considered	J-2-2
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0163-T -6	2.0 Alternatives Considered	J-2-2
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0163-T -2	2.0 Alternatives Considered	J-2-3
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0239-T -2	2.0 Alternatives Considered	J-2-2
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0239-T -4	2.0 Alternatives Considered	J-2-3
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0239-T -5	2.0 Alternatives Considered	J-2-3
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0239-T -6	2.0 Alternatives Considered	J-2-3
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0239-T -3	2.0 Alternatives Considered	J-2-3
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0434-E -7	2.0 Alternatives Considered	J-2-4
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0131-T -8	2.0 Alternatives Considered	J-2-32
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0434-E -3	2.0 Alternatives Considered	J-2-5
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0131-T -9	2.0 Alternatives Considered	J-2-5
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0434-E -4	2.0 Alternatives Considered	J-2-32
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0163-T -3	2.2 Draft EIS Alternatives	J-2-86
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0131-T -10	3.1 Land Use and Socio-Economics	J-3-1
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0434-E -1	4.7 Noise	J-4-37
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0434-E -2	5.3 Development Effects/Potential	J-5-13
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0131-T -5	5.3 Development Effects/Potential	J-5-13
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0434-E -5	5.3 Development Effects/Potential	J-5-15
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0163-T -9	5.3 Development Effects/Potential	J-5-13
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0163-T -8	6.1 Transit Effects	J-6-1
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0163-T -5	8.1 Capital Funding Strategy	J-8-1
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0131-T -11	8.1 Capital Funding Strategy	J-8-1
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0434-E -6	8.1 Capital Funding Strategy	J-8-1
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0131-T -7	10.1 Evaluation Relative to Project Goals and Objectives	J-10-22
Plum	Virginia House of Delegates, Dulles Corridor Rail Association	0131	0239-T -1	11.1 Public Involvement	J-11-7
Policaro		0092	0092-CC-1	2.2 Draft EIS Alternatives	J-2-103
Policaro		0092	0092-CC-2	8.1 Capital Funding Strategy	J-8-11
Popa		0053	0053-CC-1	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-20
Poulson	Walker and Company	0252	0252-T -1	2.2 Draft EIS Alternatives	J-2-46
Poulson	Walker and Company	0252	0252-T -7	2.4 Suggestions for Other Alternatives	J-2-247
Poulson	Walker and Company	0252	0252-T -6	2.4 Suggestions for Other Alternatives	J-2-248
Poulson	Walker and Company	0252	0252-T -3	8.1 Capital Funding Strategy	J-8-10
Poulson	Walker and Company	0252	0252-T -4	8.1 Capital Funding Strategy	J-8-18
Poulson	Walker and Company	0252	0252-T -5	8.1 Capital Funding Strategy	J-8-10
Poulson	Walker and Company	0252	0252-T -2	8.1 Capital Funding Strategy	J-8-34
Prakash		0438	0438-E -8	2.2 Draft EIS Alternatives	J-2-153
Prakash		0438	0438-E -4	3.4 Visual and Aesthetic Conditions	J-3-34
Prakash		0438	0438-E -7	3.4 Visual and Aesthetic Conditions	J-3-41
Prakash		0438	0438-E -9	3.7 Safety and Security	J-3-57
Prakash		0438	0438-E -1	4.7 Noise	J-4-39
Prakash		0438	0438-E -2	4.7 Noise	J-4-49
Prakash		0438	0438-E -3	4.7 Noise	J-4-66

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Prakash		0438	0438-E -5	4.7 Noise	J-4-68
Prakash		0438	0438-E -6	4.7 Noise	J-4-56
Prelewicz		0509	2-01	2.2 Draft EIS Alternatives	J-2-85
Prescott		0489	2-01	2.2 Draft EIS Alternatives	J-2-91
Purves	Fairfax County Taxpayers Alliance	0140	0200-E -2	8.1 Capital Funding Strategy	J-8-14
Purves	Fairfax County Taxpayers Alliance	0140	0200-E -3	8.1 Capital Funding Strategy	J-8-14
Purves	Fairfax County Taxpayers Alliance	0140	0200-E -7	8.1 Capital Funding Strategy	J-8-15
Purves	Fairfax County Taxpayers Alliance	0140	0140-T -2	8.1 Capital Funding Strategy	J-8-14
Purves	Fairfax County Taxpayers Alliance	0140	0140-T -3	8.1 Capital Funding Strategy	J-8-14
Purves	Fairfax County Taxpayers Alliance	0140	0200-E -5	8.1 Capital Funding Strategy	J-8-14
Purves	Fairfax County Taxpayers Alliance	0140	0140-T -7	8.1 Capital Funding Strategy	J-8-15
Purves	Fairfax County Taxpayers Alliance	0140	0140-T -4	8.1 Capital Funding Strategy	J-8-32
Purves	Fairfax County Taxpayers Alliance	0140	0200-E -4	8.1 Capital Funding Strategy	J-8-32
Purves	Fairfax County Taxpayers Alliance	0140	0200-E -6	8.1 Capital Funding Strategy	J-8-21 & 36
Purves	Fairfax County Taxpayers Alliance	0140	0140-T -5	8.1 Capital Funding Strategy	J-8-36
Purves	Fairfax County Taxpayers Alliance	0140	0140-T -6	8.1 Capital Funding Strategy	J-8-36
Purves	Fairfax County Taxpayers Alliance	0140	0140-T -1	8.2 Operating Funding Strategy	J-8-60
Purves	Fairfax County Taxpayers Alliance	0140	0200-E -1	8.2 Operating Funding Strategy	J-8-59
Qayum		0104	0104-E -1	2.2 Draft EIS Alternatives	J-2-84
Rassekh		0317	0317-L -1	4.7 Noise	J-4-71
Ray	ENDependence Center of NOVA & the Disability Community	0157	0157-T -1	1.0 Purpose and Need	J-1-6
Ray	ENDependence Center of NOVA & the Disability Community	0157	0157-T -4	11.1 Public Involvement	J-11-5
Ray	ENDependence Center of NOVA & the Disability Community	0157	0157-T -5	11.1 Public Involvement	J-11-6
Ray	ENDependence Center of NOVA & the Disability Community	0157	2-01	2.2 Draft EIS Alternatives	J-2-45
Ray	ENDependence Center of NOVA & the Disability Community	0157	2-02	2.2 Draft EIS Alternatives	J-2-91
Ray	ENDependence Center of NOVA & the Disability Community	0157	2-03	2.2 Draft EIS Alternatives	J-2-91
Ray	ENDependence Center of NOVA & the Disability Community	0157	2-04	2.2 Draft EIS Alternatives	J-2-85
Ray	ENDependence Center of NOVA & the Disability Community	0157	0157-T -3	2.2 Draft EIS Alternatives	J-2-83
Ray	ENDependence Center of NOVA & the Disability Community	0157	0157-T -2	2.2 Draft EIS Alternatives	J-2-74
Rebhun		0160	0160-T -3	2.2 Draft EIS Alternatives	J-2-149
Rebhun		0160	0160-T -2	2.2 Draft EIS Alternatives	J-2-152
Rebhun		0160	0160-T -1	3.4 Visual and Aesthetic Conditions	J-3-40
Reger		0332	2-01	2.2 Draft EIS Alternatives	J-2-168
Reger		0332	0332-L -1	4.7 Noise	J-4-71
Reid	WIS Company, MOVEIT.org	0112	0462-L -29	S.0 Executive Summary	J-S-1
Reid	WIS Company, MOVEIT.org	0112	0245-T -3	2.1 Alternatives Previously Considered	J-2-12
Reid	WIS Company, MOVEIT.org	0112	0269-M -4	2.1 Alternatives Previously Considered	J-2-12
Reid	WIS Company, MOVEIT.org	0112	0382-L -25	2.1 Alternatives Previously Considered	J-2-15
Reid	WIS Company, MOVEIT.org	0112	0462-L -46	2.1 Alternatives Previously Considered	J-2-21
Reid	WIS Company, MOVEIT.org	0112	0462-L -2	2.1 Alternatives Previously Considered	J-2-19
Reid	WIS Company, MOVEIT.org	0112	0382-L -6	2.1 Alternatives Previously Considered	J-2-21
Reid	WIS Company, MOVEIT.org	0112	0382-L -7	2.1 Alternatives Previously Considered	J-2-21
Reid	WIS Company, MOVEIT.org	0112	0382-L -24	2.1 Alternatives Previously Considered	J-2-19
Reid	WIS Company, MOVEIT.org	0112	0462-L -45	2.1 Alternatives Previously Considered	J-2-19
Reid	WIS Company, MOVEIT.org	0112	0462-L -51	2.1 Alternatives Previously Considered	J-2-19
Reid	WIS Company, MOVEIT.org	0112	2-06	2.1 Alternatives Previously Considered	J-2-15
Reid	WIS Company, MOVEIT.org	0112	2-07	2.1 Alternatives Previously Considered	J-2-17
Reid	WIS Company, MOVEIT.org	0112	2-08	2.1 Alternatives Previously Considered	J-2-18
Reid	WIS Company, MOVEIT.org	0112	2-09	2.1 Alternatives Previously Considered	J-2-18
Reid	WIS Company, MOVEIT.org	0112	2-10	2.1 Alternatives Previously Considered	J-2-15
Reid	WIS Company, MOVEIT.org	0112	0245-T -11	2.2 Draft EIS Alternatives	J-2-176
Reid	WIS Company, MOVEIT.org	0112	2-01	2.2 Draft EIS Alternatives	J-2-148
Reid	WIS Company, MOVEIT.org	0112	2-02	2.2 Draft EIS Alternatives	J-2-148
Reid	WIS Company, MOVEIT.org	0112	2-03	2.2 Draft EIS Alternatives	J-2-148
Reid	WIS Company, MOVEIT.org	0112	2-04	2.2 Draft EIS Alternatives	J-2-191
Reid	WIS Company, MOVEIT.org	0112	2-05	2.2 Draft EIS Alternatives	J-2-202
Reid	WIS Company, MOVEIT.org	0112	2-11	2.2 Draft EIS Alternatives	J-2-48
Reid	WIS Company, MOVEIT.org	0112	2-12	2.2 Draft EIS Alternatives	J-2-52 & 55

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Reid	WIS Company, MOVEIT.org	0112	2-13	2.2 Draft EIS Alternatives	J-2-55
Reid	WIS Company, MOVEIT.org	0112	2-14	2.2 Draft EIS Alternatives	J-2-56
Reid	WIS Company, MOVEIT.org	0112	2-15	2.2 Draft EIS Alternatives	J-2-56
Reid	WIS Company, MOVEIT.org	0112	2-16	2.2 Draft EIS Alternatives	J-2-92
Reid	WIS Company, MOVEIT.org	0112	0269-M -1	2.2 Draft EIS Alternatives	J-2-46
Reid	WIS Company, MOVEIT.org	0112	0245-T -1	2.2 Draft EIS Alternatives	J-2-51
Reid	WIS Company, MOVEIT.org	0112	0382-L -9	2.2 Draft EIS Alternatives	J-2-92
Reid	WIS Company, MOVEIT.org	0112	0269-M -9	2.2 Draft EIS Alternatives	J-2-124
Reid	WIS Company, MOVEIT.org	0112	0382-L -8	2.2 Draft EIS Alternatives	J-2-117
Reid	WIS Company, MOVEIT.org	0112	0462-L -49	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-16
Reid	WIS Company, MOVEIT.org	0112	0269-M -8	4.6 Air Quality	J-4-21
Reid	WIS Company, MOVEIT.org	0112	0462-L -41	5.1 Economic Impacts	J-5-4
Reid	WIS Company, MOVEIT.org	0112	0382-L -13	5.1 Economic Impacts	J-5-3
Reid	WIS Company, MOVEIT.org	0112	0245-T -6	5.2 Station Area Development	J-5-32
Reid	WIS Company, MOVEIT.org	0112	0382-L -17	6.1 Transit Effects	J-6-12
Reid	WIS Company, MOVEIT.org	0112	0462-L -44	6.1 Transit Effects	J-6-13
Reid	WIS Company, MOVEIT.org	0112	0382-L -16	6.1 Transit Effects	J-6-13
Reid	WIS Company, MOVEIT.org	0112	0462-L -25	6.1 Transit Effects	J-6-10
Reid	WIS Company, MOVEIT.org	0112	0462-L -26	6.1 Transit Effects	J-6-9
Reid	WIS Company, MOVEIT.org	0112	0462-L -5	6.1 Transit Effects	J-6-8 & 9
Reid	WIS Company, MOVEIT.org	0112	0382-L -3	6.1 Transit Effects	J-6-9
Reid	WIS Company, MOVEIT.org	0112	0382-L -4	6.1 Transit Effects	J-6-11
Reid	WIS Company, MOVEIT.org	0112	0462-L -24	6.1 Transit Effects	J-6-9
Reid	WIS Company, MOVEIT.org	0112	0382-L -5	6.1 Transit Effects	J-6-11
Reid	WIS Company, MOVEIT.org	0112	0245-T -7	6.1 Transit Effects	J-6-9
Reid	WIS Company, MOVEIT.org	0112	0245-T -5	6.1 Transit Effects	J-6-12
Reid	WIS Company, MOVEIT.org	0112	0269-M -5	6.1 Transit Effects	J-6-12
Reid	WIS Company, MOVEIT.org	0112	0269-M -7	6.1 Transit Effects	J-6-9
Reid	WIS Company, MOVEIT.org	0112	0382-L -22	6.2 Effects of Roadways	J-6-34
Reid	WIS Company, MOVEIT.org	0112	0462-L -4	6.2 Effects of Roadways	J-6-39
Reid	WIS Company, MOVEIT.org	0112	0462-L -40	6.2 Effects of Roadways	J-6-39
Reid	WIS Company, MOVEIT.org	0112	0462-L -3	6.2 Effects of Roadways	J-6-45
Reid	WIS Company, MOVEIT.org	0112	0112-E -4	6.2 Effects of Roadways	J-6-40
Reid	WIS Company, MOVEIT.org	0112	0382-L -11	6.2 Effects of Roadways	J-6-40
Reid	WIS Company, MOVEIT.org	0112	0382-L -10	6.2 Effects of Roadways	J-6-40
Reid	WIS Company, MOVEIT.org	0112	0382-L -12	6.2 Effects of Roadways	J-6-41
Reid	WIS Company, MOVEIT.org	0112	0462-L -14	6.2 Effects of Roadways	J-6-41
Reid	WIS Company, MOVEIT.org	0112	0462-L -13	6.2 Effects of Roadways	J-6-40
Reid	WIS Company, MOVEIT.org	0112	0462-L -18	6.2 Effects of Roadways	J-6-42
Reid	WIS Company, MOVEIT.org	0112	0462-L -17	6.2 Effects of Roadways	J-6-41
Reid	WIS Company, MOVEIT.org	0112	0462-L -12	6.2 Effects of Roadways	J-6-40
Reid	WIS Company, MOVEIT.org	0112	0462-L -20	6.2 Effects of Roadways	J-6-43
Reid	WIS Company, MOVEIT.org	0112	0462-L -19	6.2 Effects of Roadways	J-6-43
Reid	WIS Company, MOVEIT.org	0112	0462-L -15	6.2 Effects of Roadways	J-6-42
Reid	WIS Company, MOVEIT.org	0112	0462-L -16	6.2 Effects of Roadways	J-6-42
Reid	WIS Company, MOVEIT.org	0112	0462-L -21	6.2 Effects of Roadways	J-6-44
Reid	WIS Company, MOVEIT.org	0112	0269-M -2	6.3 Effects on Other Transportation Facilities and Services	J-6-61
Reid	WIS Company, MOVEIT.org	0112	0462-L -37	8.1 Capital Funding Strategy	J-8-30
Reid	WIS Company, MOVEIT.org	0112	0462-L -36	8.1 Capital Funding Strategy	J-8-27
Reid	WIS Company, MOVEIT.org	0112	0462-L -33	8.1 Capital Funding Strategy	J-8-29
Reid	WIS Company, MOVEIT.org	0112	0462-L -31	8.1 Capital Funding Strategy	J-8-13
Reid	WIS Company, MOVEIT.org	0112	0462-L -32	8.1 Capital Funding Strategy	J-8-25
Reid	WIS Company, MOVEIT.org	0112	0245-T -10	8.1 Capital Funding Strategy	J-8-21
Reid	WIS Company, MOVEIT.org	0112	0245-T -9	8.1 Capital Funding Strategy	J-8-11
Reid	WIS Company, MOVEIT.org	0112	0245-T -8	8.1 Capital Funding Strategy	J-8-15
Reid	WIS Company, MOVEIT.org	0112	0245-T -2	8.1 Capital Funding Strategy	J-8-21
Reid	WIS Company, MOVEIT.org	0112	0269-M -3	8.1 Capital Funding Strategy	J-8-21
Reid	WIS Company, MOVEIT.org	0112	0462-L -8	8.1 Capital Funding Strategy	J-8-25
Reid	WIS Company, MOVEIT.org	0112	0462-L -9	8.1 Capital Funding Strategy	J-8-29
Reid	WIS Company, MOVEIT.org	0112	0462-L -7	8.1 Capital Funding Strategy	J-8-9
Reid	WIS Company, MOVEIT.org	0112	0462-L -50	8.1 Capital Funding Strategy	J-8-25
Reid	WIS Company, MOVEIT.org	0112	0462-L -35	8.1 Capital Funding Strategy	J-8-33
Reid	WIS Company, MOVEIT.org	0112	0462-L -10	8.1 Capital Funding Strategy	J-8-32
Reid	WIS Company, MOVEIT.org	0112	0245-T -4	8.1 Capital Funding Strategy	J-8-32
Reid	WIS Company, MOVEIT.org	0112	0112-E -5	8.1 Capital Funding Strategy	J-8-32
Reid	WIS Company, MOVEIT.org	0112	0462-L -34	8.1 Capital Funding Strategy	J-8-33

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Reid	WIS Company, MOVEIT.org	0112	0462-L -38	8.1 Capital Funding Strategy	J-8-42
Reid	WIS Company, MOVEIT.org	0112	0462-L -11	8.1 Capital Funding Strategy	J-8-38
Reid	WIS Company, MOVEIT.org	0112	0269-M -6	8.1 Capital Funding Strategy	J-8-42
Reid	WIS Company, MOVEIT.org	0112	0462-L -39	8.1 Capital Funding Strategy	J-8-45
Reid	WIS Company, MOVEIT.org	0112	0382-L -23	8.1 Capital Funding Strategy	J-8-44
Reid	WIS Company, MOVEIT.org	0112	0112-E -2	8.1 Capital Funding Strategy	J-8-44
Reid	WIS Company, MOVEIT.org	0112	0462-L-7	8.1 Capital Funding Strategy	J-8-9
Reid	WIS Company, MOVEIT.org	0112	8-1	8.1 Capital Funding Strategy	J-8-48
Reid	WIS Company, MOVEIT.org	0112	8-2	8.1 Capital Funding Strategy	J-8-30
Reid	WIS Company, MOVEIT.org	0112	0112-E -3	8.2 Operating Funding Strategy	J-8-60
Reid	WIS Company, MOVEIT.org	0112	0462-L -43	8.2 Operating Funding Strategy	J-8-61
Reid	WIS Company, MOVEIT.org	0112	0462-L -42	8.2 Operating Funding Strategy	J-8-60
Reid	WIS Company, MOVEIT.org	0112	0382-L -15	8.2 Operating Funding Strategy	J-8-61
Reid	WIS Company, MOVEIT.org	0112	0382-L -14	8.2 Operating Funding Strategy	J-8-60
Reid	WIS Company, MOVEIT.org	0112	0462-L -22	9.1 Secondary Development Effects	J-9-22
Reid	WIS Company, MOVEIT.org	0112	0382-L -20	10.1 Evaluation Relative to Project Goals and Objectives	J-10-23
Reid	WIS Company, MOVEIT.org	0112	0382-L -21	10.1 Evaluation Relative to Project Goals and Objectives	J-10-24
Reid	WIS Company, MOVEIT.org	0112	0462-L -30	10.1 Evaluation Relative to Project Goals and Objectives	J-10-23
Reid	WIS Company, MOVEIT.org	0112	0462-L -28	10.1 Evaluation Relative to Project Goals and Objectives	J-10-30
Reid	WIS Company, MOVEIT.org	0112	0112-E -1	10.1 Evaluation Relative to Project Goals and Objectives	J-10-25
Reid	WIS Company, MOVEIT.org	0112	0462-L -6	10.1 Evaluation Relative to Project Goals and Objectives	J-10-30
Reid	WIS Company, MOVEIT.org	0112	0462-L -23	10.1 Evaluation Relative to Project Goals and Objectives	J-10-31
Reid	WIS Company, MOVEIT.org	0112	0382-L -18	10.1 Evaluation Relative to Project Goals and Objectives	J-10-26
Reid	WIS Company, MOVEIT.org	0112	0382-L -19	10.1 Evaluation Relative to Project Goals and Objectives	J-10-30
Reid	WIS Company, MOVEIT.org	0112	0462-L -27	10.1 Evaluation Relative to Project Goals and Objectives	J-10-26
Reid	WIS Company, MOVEIT.org	0112	10-1	10.1 Evaluation Relative to Project Goals and Objectives	J-10-31
Reid	WIS Company, MOVEIT.org	0112	0382-L -2	11.1 Public Involvement	J-11-2
Reid	WIS Company, MOVEIT.org	0112	0382-L -1	11.1 Public Involvement	J-11-9
Reid	WIS Company, MOVEIT.org	0112	0462-L -48	11.1 Public Involvement	J-11-9
Reid	WIS Company, MOVEIT.org	0112	0462-L -47	12.1 Concerns over Study Process	J-12-5
Reid	WIS Company, MOVEIT.org	0112	0462-L -1	12.1 Concerns over Study Process	J-12-6
Reid, L.		0457	0457-L-1	2.3 Supplemental Draft EIS Alternatives	J-2-110 & 207
Reimel		0265	0265-T -1	2.2 Draft EIS Alternatives	J-2-74
Reimel		0265	0265-T -2	6.3 Effects on Other Transportation Facilities and Services	J-6-61
Reimel		0265	0265-T -3	8.1 Capital Funding Strategy	J-8-36 & 46
Reinhart		0081	0285-T -1	2.2 Draft EIS Alternatives	J-2-82
Reinhart		0081	0081-CC-1	2.2 Draft EIS Alternatives	J-2-138
Reinhart		0081	0285-T -2	8.1 Capital Funding Strategy	J-8-23 & 46
Replogle	Environmental Defense	0444	0444-E -2	2.2 Draft EIS Alternatives	J-2-48
Replogle	Environmental Defense	0444	0444-E -4	2.3 Supplemental Draft EIS Alternatives	J-2-207
Replogle	Environmental Defense	0444	0444-E -3	6.1 Transit Effects	J-6-6
Replogle	Environmental Defense	0444	0444-E -7	6.3 Effects on Other Transportation Facilities and Services	J-6-69
Replogle	Environmental Defense	0444	0444-E -6	10.1 Evaluation Relative to Project Goals and Objectives	J-10-4
Replogle	Environmental Defense	0444	0444-E -1	10.1 Evaluation Relative to Project Goals and Objectives	J-10-6
Replogle	Environmental Defense	0444	0444-E -5	13.1 Schedule/Process for Implementation	J-13-3
Reynolds	American Lung Association	0198	0198-L -1	2.2 Draft EIS Alternatives	J-2-85
Reynolds	American Lung Association	0198	0198-L -2	4.6 Air Quality	J-4-20
Richards	Virginia Department of Historic Resources	0516	03-01	3.5 Cultural Resources	J-3-46
Roberts		0022	0022-E -1	2.2 Draft EIS Alternatives	J-2-84
Rogan		0323	0323- L-1	4.7 Noise	J-4-71
Romano		0228	0228-E -1	8.1 Capital Funding Strategy	J-8-22
Roop		0417	0417-L -2	4.7 Noise	J-4-40
Roop		0417	0417-L -1	4.7 Noise Service and Inspection Yard Noise	J-4-38
Rosenfeld		0008	0008-E -1	2.2 Draft EIS Alternatives	J-2-66
Rosenthal		0286	0286-T -1	2.2 Draft EIS Alternatives	J-2-110
Rosenthal		0286	0286-T -2	2.2 Draft EIS Alternatives	J-2-110
Rosenthal		0286	0286-T -4	2.2 Draft EIS Alternatives	J-2-104
Rosenthal		0286	0286-T -3	10.1 Evaluation Relative to Project Goals and Objectives	J-10-20
Rubin		0367	0367-L -1	4.7 Noise	J-4-71
Rybak		0089	0089-L -2	4.7 Noise	J-4-40
Rybak		0089	0089-L -3	4.7 Noise	J-4-40
Rybak		0089	4-01	4.7 Noise	J-4-77
Rybak		0089	4-02	4.7 Noise	J-4-76
Rybak		0089	0089-L -1	4.7 Noise	J-4-38

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Sabo		0083	0083-CC-2	2.2 Draft EIS Alternatives	J-2-172
Sabo		0083	0192-T -2	2.2 Draft EIS Alternatives	J-2-79
Sabo		0083	0192-T -4	2.2 Draft EIS Alternatives	J-2-70
Sabo		0083	0192-T -1	2.2 Draft EIS Alternatives	J-2-66
Sabo		0083	0192-T -3	10.1 Evaluation Relative to Project Goals and Objectives	J-10-2
Sabo		0083	0083-CC-1	13.1 Schedule/Process for Implementation	J-13-5
Sadjadi		0349	0349-L -1	4.7 Noise	J-4-71
Samuel	Toll Roads Newsletter	0508	2-01	2.2 Draft EIS Alternatives	J-2-191
samzyx2007@msn.com		0486	2-01	2.1 Alternatives Previously Considered	J-2-15
samzyx2007@msn.com		0486	2-02	2.1 Alternatives Previously Considered	J-2-15
Sanderson		0324	0324-L -1	4.7 Noise	J-4-71
Schefer	Washington Airports Task Force	0133	0405-L -3	2.0 Alternatives Considered	J-1-2 & J-2-8
Schefer	Washington Airports Task Force	0133	0405-L -4	2.0 Alternatives Considered	J-2-6
Schefer	Washington Airports Task Force	0133	0221-M -7	2.0 Alternatives Considered	J-2-33
Schefer	Washington Airports Task Force	0133	0405- L-13	2.0 Alternatives Considered	J-2-34
Schefer	Washington Airports Task Force	0133	0133-T -8	2.0 Alternatives Considered	J-2-34
Schefer	Washington Airports Task Force	0133	0133-T -1	2.0 Alternatives Considered	J-2-34
Schefer	Washington Airports Task Force	0133	0405-L -1	2.0 Alternatives Considered	J-2-9
Schefer	Washington Airports Task Force	0133	0221-M -1	2.0 Alternatives Considered	J-2-34
Schefer	Washington Airports Task Force	0133	0405- L-7	2.0 Alternatives Considered	J-2-35
Schefer	Washington Airports Task Force	0133	0221-M -6	2.0 Alternatives Considered	J-2-35
Schefer	Washington Airports Task Force	0133	0133-T -6	2.0 Alternatives Considered	J-2-35
Schefer	Washington Airports Task Force	0133	0405- L-8	2.0 Alternatives Considered	J-2-33
Schefer	Washington Airports Task Force	0133	0221-M -4	2.0 Alternatives Considered	J-2-8
Schefer	Washington Airports Task Force	0133	0221-M -3	2.0 Alternatives Considered	J-2-6
Schefer	Washington Airports Task Force	0133	0133-T -4	2.0 Alternatives Considered	J-2-6
Schefer	Washington Airports Task Force	0133	0405- L- 6	2.0 Alternatives Considered	J-2-6
Schefer	Washington Airports Task Force	0133	2-01	2.2 Draft EIS Alternatives	J-2-188
Schefer	Washington Airports Task Force	0133	2-02	2.2 Draft EIS Alternatives	J-2-188
Schefer	Washington Airports Task Force	0133	2-03	2.2 Draft EIS Alternatives	J-2-188
Schefer	Washington Airports Task Force	0133	2-04	2.2 Draft EIS Alternatives	J-2-189
Schefer	Washington Airports Task Force	0133	2-05	2.2 Draft EIS Alternatives	J-2-134
Schefer	Washington Airports Task Force	0133	2-06	2.2 Draft EIS Alternatives	J-2-189
Schefer	Washington Airports Task Force	0133	03-01	3.4 Visual and Aesthetic Conditions	J-3-43
Schefer	Washington Airports Task Force	0133	0221-M -5	5.3 Development Effects/Potential	J-5-17
Schefer	Washington Airports Task Force	0133	0133-T -5	5.3 Development Effects/Potential	J-5-17
Schefer	Washington Airports Task Force	0133	0405- L-9	5.3 Development Effects/Potential	J-5-16
Schefer	Washington Airports Task Force	0133	0405-L -5	5.3 Development Effects/Potential	J-5-16
Schefer	Washington Airports Task Force	0133	0405- L-11	5.3 Development Effects/Potential	J-5-16
Schefer	Washington Airports Task Force	0133	0133-T -3	6.1 Transit Effects	J-6-4
Schefer	Washington Airports Task Force	0133	0405- L-16	8.1 Capital Funding Strategy	J-8-4
Schefer	Washington Airports Task Force	0133	0405- L-15	8.1 Capital Funding Strategy	J-8-3
Schefer	Washington Airports Task Force	0133	0133-T -7	8.2 Operating Funding Strategy	J-8-59
Schefer	Washington Airports Task Force	0133	8-1	8.2 Operating Funding Strategy	J-8-60
Schefer	Washington Airports Task Force	0133	0405- L-12	10.1 Evaluation Relative to Project Goals and Objectives	J-10-1
Schefer	Washington Airports Task Force	0133	0405- L-10	10.1 Evaluation Relative to Project Goals and Objectives	J-10-1
Schefer	Washington Airports Task Force	0133	0405-L -2	12.1 Concerns over Study Process	J-12-1
Schefer	Washington Airports Task Force	0133	0405- L-14	13.1 Schedule/Process for Implementation	J-13-1
Schefer	Washington Airports Task Force	0133	0221-M -2	13.1 Schedule/Process for Implementation	J-13-1
Schefer	Washington Airports Task Force	0133	0133-T -2	13.1 Schedule/Process for Implementation	J-13-1
Schindler		0032	0032-CC-1	11.1 Public Involvement	J-11-7
Schmidt		0125	0125-E -1	2.2 Draft EIS Alternatives	J-2-83
Schmidt		0125	0125-E -3	2.2 Draft EIS Alternatives	J-2-67
Schmidt		0125	0125-E -2	5.3 Development Effects/Potential	J-5-37
Schwartz	Coalition for Smarter Growth	0149	0180-T -1	1.0 Purpose and Need	J-1-6
Schwartz	Coalition for Smarter Growth	0149	0149-T -1	1.0 Purpose and Need	J-1-7
Schwartz	Coalition for Smarter Growth	0149	0205-M -4	2.2 Draft EIS Alternatives	J-2-170
Schwartz	Coalition for Smarter Growth	0149	0149-T -2	2.2 Draft EIS Alternatives	J-2-80
Schwartz	Coalition for Smarter Growth	0149	0205-M -1	2.2 Draft EIS Alternatives	J-2-75
Schwartz	Coalition for Smarter Growth	0149	0149-T -5	2.2 Draft EIS Alternatives	J-2-75
Schwartz	Coalition for Smarter Growth	0149	0180-T -4	2.2 Draft EIS Alternatives	J-2-75
Schwartz	Coalition for Smarter Growth	0149	0180-T -11	2.2 Draft EIS Alternatives	J-2-129
Schwartz	Coalition for Smarter Growth	0149	0180-T -7	2.2 Draft EIS Alternatives	J-2-128
Schwartz	Coalition for Smarter Growth	0149	0180-T -13	2.2 Draft EIS Alternatives	J-2-127
Schwartz	Coalition for Smarter Growth	0149	0180-T -12	3.1 Land Use and Socio-Economics	J-3-2

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Schwartz	Coalition for Smarter Growth	0149	0180-T -5	3.1 Land Use and Socio-Economics	J-3-4
Schwartz	Coalition for Smarter Growth	0149	0149-T -4	5.3 Development Effects/Potential	J-5-30
Schwartz	Coalition for Smarter Growth	0149	0180-T -9	5.3 Development Effects/Potential	J-5-30
Schwartz	Coalition for Smarter Growth	0149	0149-T -7	5.3 Development Effects/Potential	J-5-31
Schwartz	Coalition for Smarter Growth	0149	0180-T -3	5.3 Development Effects/Potential	J-5-30
Schwartz	Coalition for Smarter Growth	0149	0180-T -2	5.3 Development Effects/Potential	J-5-31
Schwartz	Coalition for Smarter Growth	0149	0205-M -2	5.3 Development Effects/Potential	J-5-30
Schwartz	Coalition for Smarter Growth	0149	0149-T -6	5.3 Development Effects/Potential	J-5-35
Schwartz	Coalition for Smarter Growth	0149	0180-T -8	5.3 Development Effects/Potential	J-5-35
Schwartz	Coalition for Smarter Growth	0149	0180-T -10	5.3 Development Effects/Potential	J-5-41
Schwartz	Coalition for Smarter Growth	0149	0149-T -8	5.3 Development Effects/Potential	J-5-41
Schwartz	Coalition for Smarter Growth	0149	0149-T -3	5.3 Development Effects/Potential	J-5-19
Schwartz	Coalition for Smarter Growth	0149	0205-M -3	8.1 Capital Funding Strategy	J-8-18
Schwartz	Coalition for Smarter Growth	0149	0149-T -9	8.1 Capital Funding Strategy	J-8-20
Schwartz	Coalition for Smarter Growth	0149	0180-T -6	8.1 Capital Funding Strategy	J-8-20
Schwartz	Coalition for Smarter Growth	0149	0180-T -14	9.1 Secondary Development Effects	J-9-20
Schwartz	Coalition for Smarter Growth	0149	0205-M -5	9.1 Secondary Development Effects	J-9-20
Scott	Virginia House of Delegates	0012	0468-L -3	2.2 Draft EIS Alternatives	J-2-4
Scott	Virginia House of Delegates	0012	0468-L -2	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-10
Scott	Virginia House of Delegates	0012	0468-L -6	4.7 Noise	J-4-32
Scott	Virginia House of Delegates	0012	0468-L -5	4.7 Noise	J-4-32
Scott	Virginia House of Delegates	0012	0468-L -4	4.7 Noise	J-4-33
Scott	Virginia House of Delegates	0012	0468-L -7	4.7 Noise	J-4-37
Scott	Virginia House of Delegates	0012	0012-A -2	4.7 Noise	J-4-34
Scott	Virginia House of Delegates	0012	0468-L -1	8.1 Capital Funding Strategy	J-8-1
Scott	Virginia House of Delegates	0012	0012-A -1	11.2 Agency Coordination	J-11-14
Seiler		0058	0058-CC-2	3.7 Safety and Security	J-3-56
Seiler		0058	0058-CC-1	4.7 Noise	J-4-73
Sherbe		0373	0373-L -1	4.7 Noise	J-4-71
Shirey		0408	0408-E -1	2.3 Supplemental Draft EIS Alternatives	J-2-208 & 251
Shumadine		0017	0017-E -2	2.2 Draft EIS Alternatives	J-2-84
Shumadine		0017	0017-E -1	2.2 Draft EIS Alternatives	J-2-84
Silverman		0370	0370-L -1	4.7 Noise	J-4-71
Simon		0195	0195-T -1	8.1 Capital Funding Strategy	J-8-40
Simone		0064	0064-CC-2	2.2 Draft EIS Alternatives	J-2-149
Simone		0064	0064-CC-1	2.2 Draft EIS Alternatives	J-2-167
Simpson	Union Metro Washington Council AFL-CIO	0186	0186-T -2	2.2 Draft EIS Alternatives	J-2-62
Simpson	Union Metro Washington Council AFL-CIO	0186	0186-T -5	2.2 Draft EIS Alternatives	J-2-76
Simpson	Union Metro Washington Council AFL-CIO	0186	0186-T -1	2.2 Draft EIS Alternatives	J-2-83
Simpson	Union Metro Washington Council AFL-CIO	0186	0186-T -6	2.2 Draft EIS Alternatives	J-2-76
Simpson	Union Metro Washington Council AFL-CIO	0186	0186-T -4	2.2 Draft EIS Alternatives	J-2-103 & 105
Simpson	Union Metro Washington Council AFL-CIO	0186	0186-T -3	2.2 Draft EIS Alternatives	J-2-108
Simpson	Union Metro Washington Council AFL-CIO	0186	0186-T -7	8.1 Capital Funding Strategy	J-8-43
Sivit		0310	0310-L -1	4.7 Noise	J-4-71
Smith		0119	0119-L -1	2.1 Alternatives Previously Considered	J-2-23 & 25
Smith		0119	0119-L -3	8.1 Capital Funding Strategy	J-8-12
Snyder	City of Falls Church	0165	0165-T -9	1.0 Purpose and Need	J-1-3
Snyder	City of Falls Church	0165	0165-T -4	1.0 Purpose and Need	J-1-3
Snyder	City of Falls Church	0165	0165-T -5	1.0 Purpose and Need	J-1-4
Snyder	City of Falls Church	0165	0165-T -7	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-11
Snyder	City of Falls Church	0165	0165-T -6	6.2 Effects of Roadways	J-6-22
Snyder	City of Falls Church	0165	0165-T -1	12.1 Concerns over Study Process	J-12-2
Snyder	City of Falls Church	0165	0165-T -2	12.1 Concerns over Study Process	J-12-3
Snyder	City of Falls Church	0165	0165-T -10	12.1 Concerns over Study Process	J-12-4
Snyder	City of Falls Church	0165	0165-T -3	12.1 Concerns over Study Process	J-12-4
Snyder	City of Falls Church	0165	0165-T -8	12.1 Concerns over Study Process	J-12-4
Sonefeld	Pavillion Condominium Association	0126/0199	0126-E -1	2.2 Draft EIS Alternatives	J-2-67
Sonefeld	Pavillion Condominium Association	0126/0199	0199-M -1	2.2 Draft EIS Alternatives	J-2-74
Sonefeld	Pavillion Condominium Association	0126/0199	0199-M -3	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-21
Sonefeld	Pavillion Condominium Association	0126/0199	0126-E -3	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-21
Sonefeld	Pavillion Condominium Association	0126/0199	0126-E -2	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-21
Sonefeld	Pavillion Condominium Association	0126/0199	0126-E -4	4.7 Noise	J-4-44
Sonefeld	Pavillion Condominium Association	0126/0199	0199-M -4	4.7 Noise	J-4-44
Sonefeld	Pavillion Condominium Association	0126/0199	0126-E -5	6.2 Effects of Roadways	J-6-31
Sonefeld	Pavillion Condominium Association	0126/0199	0126-E -6	6.2 Effects of Roadways	J-6-31

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Sonefeld	Pavillion Condominium Association	0126/0199	0126-E -8	12.1 Concerns over Study Process	J-12-5
Sonefeld	Pavillion Condominium Association	0126/0199	0126-E -7	12.1 Concerns over Study Process	J-12-5
Sonefeld	Pavillion Condominium Association	0126/0199	0199-M -2	12.1 Concerns over Study Process	J-12-5
Sonefeld	Pavillion Condominium Association	0126/0199	0199-M -7	12.1 Concerns over Study Process	J-12-6
Spannaus		0482	0482-E -1	3.6 Parklands and Recreation Areas	J-3-59
Spannaus		0482	0482-E -2	8.1 Capital Funding Strategy	J-8-43
Speacht		0313	0313-L -1	4.7 Noise	J-4-71
St. Andre	Springfield Interchange Project Info Center	0070	0070-CC-1	2.2 Draft EIS Alternatives	J-2-81
St. Andre	Springfield Interchange Project Info Center	0070	0070-CC-2	8.1 Capital Funding Strategy	J-8-40
St. Andre	Springfield Interchange Project Info Center	0070	0070-CC-3	8.1 Capital Funding Strategy	J-8-43
Stallings		0035	0335-L -1	4.7 Noise	J-4-71
Starr		0394	0394-L -1	2.2 Draft EIS Alternatives	J-2-70
Starr		0394	0394-L -4	2.2 Draft EIS Alternatives	J-2-66
Starr		0394	0394-L -2	2.2 Draft EIS Alternatives	J-2-93
Starr		0394	0394-L -3	4.7 Noise	J-4-60
Stephens		0255	2-01	2.2 Draft EIS Alternatives	J-2-57
Stephens		0255	2-02	2.2 Draft EIS Alternatives	J-2-55
Stephens		0255	2-03	2.2 Draft EIS Alternatives	J-2-44
Stephens		0255	2-04	2.2 Draft EIS Alternatives	J-2-92
Stephens		0255	0255-T -4	2.2 Draft EIS Alternatives	J-2-174
Stephens		0255	0255-T -1	2.2 Draft EIS Alternatives	J-2-52
Stephens		0255	0255-T -6	2.2 Draft EIS Alternatives	J-2-92
Stephens		0255	0255-T -5	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-13
Stephens		0255	0255-T -3	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-13
Stephens		0255	0420-T -1	3.7 Safety and Security	J-3-56
Stephens		0255	0255-T -2	3.7 Safety and Security	J-3-56
Stephens		0255	0255-T -7	10.1 Evaluation Relative to Project Goals and Objectives	J-10-14
Stetson		0363	0363-L -1	4.7 Noise	J-4-71
Stevens		0042	0042-CC-1	11.1 Public Involvement	J-11-7
Stevenson		0108	0108-E -1	2.2 Draft EIS Alternatives	J-2-83
Stevenson		0108	0108-E -2	2.2 Draft EIS Alternatives	J-1-13 & J-2-92
Stevenson		0108	0108-E -3	10.1 Evaluation Relative to Project Goals and Objectives	J-10-25
Stowers		0173	0213-M -9	2.2 Draft EIS Alternatives	J-2-126
Stowers		0173	0173-T -5	2.2 Draft EIS Alternatives	J-2-62
Stowers		0173	0213-M -2	2.2 Draft EIS Alternatives	J-2-61
Stowers		0173	0213-M -1	2.2 Draft EIS Alternatives	J-2-73
Stowers		0173	0173-T -1	2.2 Draft EIS Alternatives	J-2-67
Stowers		0173	0173-T -2	2.2 Draft EIS Alternatives	J-2-75
Stowers		0173	0173-T -3	2.2 Draft EIS Alternatives	J-2-76
Stowers		0173	0173-T -4	2.2 Draft EIS Alternatives	J-2-80
Stowers		0173	0213-M -6	2.2 Draft EIS Alternatives	J-2-136
Stowers		0173	0173-T -8	2.2 Draft EIS Alternatives	J-2-136
Stowers		0173	0213-M -4	2.2 Draft EIS Alternatives	J-2-132
Stowers		0173	0173-T -6	2.2 Draft EIS Alternatives	J-2-131
Stowers		0173	0213-M -3	2.2 Draft EIS Alternatives	J-2-97
Stowers		0173	0173-T -10	5.2 Station Area Development	J-5-9
Stowers		0173	0213-M -5	5.3 Development Effects/Potential	J-5-42
Stowers		0173	0173-T -7	5.3 Development Effects/Potential	J-5-42
Stowers		0173	0213-M -10	5.3 Development Effects/Potential	J-5-27
Stowers		0173	0173-T -9	6.3 Effects on Other Transportation Facilities and Services	J-6-63
Stowers		0173	0213-M -11	8.1 Capital Funding Strategy	J-8-14
Stowers		0173	0213-M -8	8.2 Operating Funding Strategy	J-8-60
Stowers		0173	0213-M -7	10.1 Evaluation Relative to Project Goals and Objectives	J-10-29
Stroik		0441	0441-E -1	2.2 Draft EIS Alternatives	J-2-69
Stroik		0441	0441-E -4	2.2 Draft EIS Alternatives	J-2-153
Stroik		0441	0441-E -10	2.2 Draft EIS Alternatives	J-2-125
Stroik		0441	0441-E -12	2.2 Draft EIS Alternatives	J-2-126
Stroik		0441	0441-E -11	2.2 Draft EIS Alternatives	J-2-127
Stroik		0441	0441-E -7	2.2 Draft EIS Alternatives	J-2-127
Stroik		0441	0441-E -6	2.2 Draft EIS Alternatives	J-2-134
Stroik		0441	0441-E -3	3.4 Visual and Aesthetic Conditions	J-3-37
Stroik		0441	0441-E -5	3.4 Visual and Aesthetic Conditions	J-3-37
Stroik		0441	0441-E -2	5.3 Development Effects/Potential	J-5-44
Stroik		0441	0441-E -9	6.3 Effects on Other Transportation Facilities and Services	J-6-69
Stroik		0441	0441-E -8	General Plans	J-GP-6

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Sublette		0415	0415-L -9	2.2 Draft EIS Alternatives	J-2-153
Sublette		0415	0415-L -4	3.4 Visual and Aesthetic Conditions	J-3-34
Sublette		0415	0415-L -8	3.4 Visual and Aesthetic Conditions	J-3-41
Sublette		0415	0415-L -5	3.7 Safety and Security	J-3-57
Sublette		0415	0415-L -10	3.7 Safety and Security	J-3-57
Sublette		0415	0415-L -1	4.7 Noise	J-4-39
Sublette		0415	0415-L -2	4.7 Noise	J-4-49
Sublette		0415	0415-L -3	4.7 Noise	J-4-66
Sublette		0415	0415-L -6	4.7 Noise	J-4-68
Sublette		0415	0415-L -7	4.7 Noise	J-4-56
Sublette		0415	0415-L -11	6.2 Effects on Roadways	J-6-34
Sublette		0415	0415-L -12	6.2 Effects on Roadways	J-6-35
Sutliff	McCandlish and Lillard	0451	0451-L -8	2.2 Draft EIS Alternatives	J-2-117
Sutliff	McCandlish and Lillard	0451	0451-L -2	2.2 Draft EIS Alternatives	J-2-71
Sutliff	McCandlish and Lillard	0451	0451-L -9	2.2 Draft EIS Alternatives	J-2-71
Sutliff	McCandlish and Lillard	0451	0451-L -10	2.2 Draft EIS Alternatives	J-2-117
Sutliff	McCandlish and Lillard	0451	0451-L -4	2.2 Draft EIS Alternatives	J-2-116
Sutliff	McCandlish and Lillard	0451	0451-L -7	2.2 Draft EIS Alternatives	J-2-101
Sutliff	McCandlish and Lillard	0451	0451-L -6	3.1 Land Use and Socio-Economics	J-3-2
Sutliff	McCandlish and Lillard	0451	0451-L -5	5.3 Development Effects/Potential	J-5-22
Sutliff	McCandlish and Lillard	0451	0451-L -3	5.3 Development Effects/Potential	J-5-27
Sutliff	McCandlish and Lillard	0451	0451-L -1	11.1 Public Involvement	J-11-7
Tabrizi		0338	2-01	2.2 Draft EIS Alternatives	J-2-154
Tabrizi		0338	2-02	2.2 Draft EIS Alternatives	J-2-159
Tabrizi		0338	2-03	2.2 Draft EIS Alternatives	J-2-162
Tabriz		0338	0338-L -1	4.7 Noise	J-4-71
Taylor, M.		0347	0347-L -1	4.7 Noise	J-4-71
Taylor, S.		0320	0320-L -1	4.7 Noise	J-4-71
Tennyson		0013	2-01	2.2 Draft EIS Alternatives	J-2-189
Tennyson		0013	2-02	2.2 Draft EIS Alternatives	J-2-189
Tennyson		0013	2-03	2.2 Draft EIS Alternatives	J-2-19 & 189
Tennyson		0013	2-04	2.2 Draft EIS Alternatives	J-2-190
Tennyson		0013	2-05	2.2 Draft EIS Alternatives	J-2-54
Tennyson		0013	2-07	2.2 Draft EIS Alternatives	J-2-90
Tennyson		0013	2-08	2.2 Draft EIS Alternatives	J-2-89
Tennyson		0013	2-09	2.2 Draft EIS Alternatives	J-2-109
Tennyson		0013	2-10	2.2 Draft EIS Alternatives	J-2-55
Tennyson		0013	0013-L -13	2.2 Draft EIS Alternatives	J-2-42
Tennyson		0013	0013-L -5	2.2 Draft EIS Alternatives	J-2-42
Tennyson		0013	0013-L -14	2.2 Draft EIS Alternatives	J-2-43
Tennyson		0013	0013-L -15	2.2 Draft EIS Alternatives	J-2-61
Tennyson		0013	0013-L -16	2.2 Draft EIS Alternatives	J-2-61
Tennyson		0013	0013-L -7	2.2 Draft EIS Alternatives	J-2-65
Tennyson		0013	0013-L -19	2.2 Draft EIS Alternatives	J-2-43
Tennyson		0013	0013-L -8	2.2 Draft EIS Alternatives	J-2-80
Tennyson		0013	0013-L -25	2.2 Draft EIS Alternatives	J-2-66
Tennyson		0013	0013-L -38	2.2 Draft EIS Alternatives	J-2-66
Tennyson		0013	0013-L -24	2.2 Draft EIS Alternatives	J-2-67
Tennyson		0013	0013-L -22	2.2 Draft EIS Alternatives	J-2-105
Tennyson		0013	0013-L -21	2.2 Draft EIS Alternatives	J-2-103 & 105
Tennyson		0013	0013-L -1	2.2 Draft EIS Alternatives	J-2-108
Tennyson		0013	0013-L -20	2.2 Draft EIS Alternatives	J-2-110
Tennyson		0013	0013-L -23	2.2 Draft EIS Alternatives	J-2-112
Tennyson		0013	0013-L -11	3.7 Safety and Security	J-3-56
Tennyson		0013	0013-L -18	3.7 Safety and Security	J-3-56
Tennyson		0013	0013-L -35	4.6 Air Quality	J-4-20
Tennyson		0013	0013-L -10	4.6 Air Quality	J-4-22
Tennyson		0013	0013-L -36	4.6 Air Quality	J-4-23
Tennyson		0013	4-01	4.7 Noise	J-4-83
Tennyson		0013	0013-L -28	5.1 Economic Impacts	J-5-2
Tennyson		0013	0013-L -27	5.1 Economic Impacts	J-5-2
Tennyson		0013	0013-L -17	6.3 Effects on Other Transportation Facilities and Services	J-6-63
Tennyson		0013	0013-L -29	8.1 Capital Funding Strategy	J-8-12
Tennyson		0013	0013-L -2	8.1 Capital Funding Strategy	J-8-40
Tennyson		0013	0013-L -26	8.1 Capital Funding Strategy	J-8-40

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Tennyson		0013	0013-L -34	8.1 Capital Funding Strategy	J-8-39
Tennyson		0013	0013-L -37	8.1 Capital Funding Strategy	J-8-44
Tennyson		0013	0013-L -30	8.2 Operating Funding Strategy	J-8-61
Tennyson		0013	0013-L -3	8.2 Operating Funding Strategy	J-8-61
Tennyson		0013	0013-L -4	8.2 Operating Funding Strategy	J-8-62
Tennyson		0013	8-1	8.2 Operating Funding Strategy	J-8-62
Tennyson		0013	8-2	8.2 Operating Funding Strategy	J-8-61
Tennyson		0013	8-3	8.2 Operating Funding Strategy	J-8-61
Tennyson		0013	0013-L -6	10.1 Evaluation Relative to Project Goals and Objectives	J-10-28
Tennyson		0013	0013-L -9	10.1 Evaluation Relative to Project Goals and Objectives	J-10-22
Tennyson		0013	0013-L -31	10.1 Evaluation Relative to Project Goals and Objectives	J-10-24
Tennyson		0013	0013-L -12	10.1 Evaluation Relative to Project Goals and Objectives	J-10-22
Tennyson		0013	0013-L -33	10.1 Evaluation Relative to Project Goals and Objectives	J-10-25
Tennyson		0013	0013-L -32	10.1 Evaluation Relative to Project Goals and Objectives	J-10-24
Tennyson		0013	10-1	10.1 Evaluation Relative to Project Goals and Objectives	J-10-31
Tenuta		0414	0414-L -2	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-19
Tenuta		0414	0414-L -3	4.7 Noise	J-4-41
Tenuta		0414	0414-L -1	4.7 Noise	J-4-65
Thiumann		0287	0287-T -1	2.2 Draft EIS Alternatives	J-2-68
Thiumann		0287	0287-T -4	4.6 Air Quality	J-4-28
Thiumann		0287	0287-T -3	4.6 Air Quality	J-4-27
Thiumann		0287	0287-T -2	4.6 Air Quality	J-4-27
Thiumann		0287	0287-T -5	4.7 Noise	J-4-59
Thoburn	Hunter Mill East LLC	0464	2-01	2.2 Draft EIS Alternatives	J-2-123
Thoburn	Hunter Mill East LLC	0464	2-02	2.2 Draft EIS Alternatives	J-2-90
Thoburn	Hunter Mill East LLC	0464	0464-L -5	2.2 Draft EIS Alternatives	J-2-123
Thoburn	Hunter Mill East LLC	0464	4-01	4.2 Water Resources	J-4-8
Thoburn	Hunter Mill East LLC	0464	0464-L -6	8.1 Capital Funding Strategy	J-8-45
Thoburn	Hunter Mill East LLC	0464	0464-L -7	11.1 Public Involvement	J-11-7
Thoburn	Hunter Mill East LLC	0464	0464-L -2	General Plans	J-GP-7
Thoburn	Hunter Mill East LLC	0464	0464-L -1	General Plans	J-GP-6
Thoburn	Hunter Mill East LLC	0464	0464-L -3	General Plans	J-GP-7
Thoburn	Hunter Mill East LLC	0464	0464-L -4	General Plans	J-GP-8
Thoesen	Town of Herndon	0409	0409-L -1	2.2 Draft EIS Alternatives	J-2-36
Thoesen	Town of Herndon	0409	0409-L -2	2.2 Draft EIS Alternatives	J-2-38
Thoesen	Town of Herndon	0409	0409-L -4	2.2 Draft EIS Alternatives	J-2-38
Thoesen	Town of Herndon	0409	0409-L -3	2.2 Draft EIS Alternatives	J-2-38
Thoesen	Town of Herndon	0409	0409-L -5	8.1 Capital Funding Strategy	J-8-9
Thomson		0203	0203-L -6	2.2 Draft EIS Alternatives	J-2-50
Thomson		0203	0384-L -1	4.6 Air Quality	J-4-22
Thomson		0203	0384-L -2	4.6 Air Quality	J-4-28
Thomson		0203	0203-L -5	4.6 Air Quality	J-4-23
Thomson		0203	0203-L -4	4.6 Air Quality	J-4-23
Thomson		0203	0203-L -2	4.6 Air Quality	J-4-23
Thomson		0203	0203-L -3	6.2 Effects on Roadways	J-6-38
Thomson		0203	0203-L -8	8.1 Capital Funding Strategy	J-8-17
Thomson		0203	0203-L -1	11.1 Public Involvement	J-11-8
Tillotson		0467	0467-L -8	2.2 Draft EIS Alternatives	J-2-153
Tillotson		0467	0467-L -4	3.4 Visual and Aesthetic Conditions	J-3-34
Tillotson		0467	0467-L -7	3.4 Visual and Aesthetic Conditions	J-3-41
Tillotson		0467	0467-L -9	3.7 Safety and Security	J-3-57
Tillotson		0467	0467-L -1	4.7 Noise	J-4-39
Tillotson		0467	0467-L -2	4.7 Noise	J-4-49
Tillotson		0467	0467-L -6	4.7 Noise	J-4-56
Tillotson		0467	0467-L -5	4.7 Noise	J-4-68
Tillotson		0467	0467-L -3	4.7 Noise	J-4-66
Tillotson		0467	0467-L -10	4.7 Noise	J-4-73
Tolle		0273	0273-L -1	2.2 Draft EIS Alternatives	J-2-82
Tolle		0273	0273-L -3	2.2 Draft EIS Alternatives	J-2-116
Tolle		0273	0273-L -4	2.2 Draft EIS Alternatives	J-2-116
Tolle		0273	0273-L -2	8.1 Capital Funding Strategy	J-8-33
Topper		0388	0388- L- 5	3.5 Cultural Resources	J-3-48
Topper		0388	0388-L -3	3.7 Safety and Security	J-3-58 & J-6-36
Topper		0388	0388- L-4	4.2 Water Resources	J-4-7
Topper		0388	0388- L-1	4.7 Noise	J-4-39

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Topper		0388	4-01	4.7 Noise	J-4-76
Topper		0388	4-02	4.7 Noise	J-4-77
Topper		0388	4-03	4.7 Noise	J-4-75
Topper		0388	6-1	6.1 Transit Effects	J-6-11
Topper		0388	0388- L-2	6.2 Effects on Roadways	J-6-35
Topper		0388	9-1	9.3 Mitigation	J-9-27
Topper		0388	9-2	9.3 Mitigation	J-9-27
Topper		0388	11-3	11.1 Public Involvement	J-11-3
Topper		0388	11-1	11.2 Agency Coordination	J-11-18
Topper		0388	11-2	11.2 Agency Coordination	J-11-18
Trainor		0026	0026-E -1	2.2 Draft EIS Alternatives	J-2-84
Traylor		0494	2-01	2.2 Draft EIS Alternatives	J-2-96
Traylor		0494	2-02	2.2 Draft EIS Alternatives	J-2-96
Traylor		0494	2-03	2.2 Draft EIS Alternatives	J-2-98
Traylor		0494	2-04	2.2 Draft EIS Alternatives	J-2-98
Traylor		0494	2-05	2.2 Draft EIS Alternatives	J-2-128
Traylor		0494	2-06	2.2 Draft EIS Alternatives	J-2-130
Traylor		0494	2-07	2.2 Draft EIS Alternatives	J-2-130
Traylor		0494	2-08	2.2 Draft EIS Alternatives	J-2-130
Traylor		0494	2-09	2.2 Draft EIS Alternatives	J-2-130
Tredway		0360	0360-L -1	4.7 Noise	J-4-71
Turner		0393	0393-L -2	1.0 Purpose and Need	J-1-7
Turner		0393	0393-L -1	2.2 Draft EIS Alternatives	J-2-70
Turner		0393	0393-L -5	2.2 Draft EIS Alternatives	J-2-70
Turner		0393	0393-L -3	2.2 Draft EIS Alternatives	J-2-126
Turner		0393	0393-L -4	4.7 Noise	J-4-73
Twomey	Hunter Mill Defense League Board of Directors	0460	0460-L -2	3.2 Neighborhood/Community Impacts	J-3-17
Twomey	Hunter Mill Defense League Board of Directors	0460	0460-L -10	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-20
Twomey	Hunter Mill Defense League Board of Directors	0460	0460-L -3	3.5 Cultural Resources	J-3-48
Twomey	Hunter Mill Defense League Board of Directors	0460	0460-L -8	4.2 Water Resources	J-4-7
Twomey	Hunter Mill Defense League Board of Directors	0460	0460-L -5	5.1 Economic Impacts	J-5-4
Twomey	Hunter Mill Defense League Board of Directors	0460	0460-L -6	5.1 Economic Impacts	J-5-4
Twomey	Hunter Mill Defense League Board of Directors	0460	0460-L -4	9.1 Secondary Development Effects	J-9-17
Twomey	Hunter Mill Defense League Board of Directors	0460	0460-L -7	9.1 Secondary Development Effects	J-9-17
Twomey	Hunter Mill Defense League Board of Directors	0460	0460-L -1	12.1 Concerns over Study Process	J-12-9
Tyeryar		0466	0466-L -8	2.2 Draft EIS Alternatives	J-2-153
Tyeryar		0466	0466-L -4	3.3 Property Acquisition and Displacement	J-3-34
Tyeryar		0466	0466-L -7	3.4 Visual and Aesthetic Conditions	J-3-41
Tyeryar		0466	0466-L -9	3.7 Safety and Security	J-3-57
Tyeryar		0466	0466-L -2	4.7 Noise	J-4-49
Tyeryar		0466	0466-L -3	4.7 Noise	J-4-66
Tyeryar		0466	0466-L -5	4.7 Noise	J-4-68
Tyeryar		0466	0466-L -6	4.7 Noise	J-4-56
Tyeryar		0466	0466-L -1	4.7 Noise	J-4-39
Tyler	Hallcrest Heights Homeowners Association	0137	0176-L -1	2.2 Draft EIS Alternatives	J-2-107
Tyler	Hallcrest Heights Homeowners Association	0137	0176-L -2	2.2 Draft EIS Alternatives	J-2-26 & 155
Tyler	Hallcrest Heights Homeowners Association	0137	0137-T-1	2.2 Draft EIS Alternatives	J-2-106
Tyler	Hallcrest Heights Homeowners Association	0137	0224-M -1	2.2 Draft EIS Alternatives	J-2-106
Tyler	Hallcrest Heights Homeowners Association	0137	0176-L -9	4.7 Noise	J-4-43
Tyler	Hallcrest Heights Homeowners Association	0137	0176-L -8	4.7 Noise	J-4-48
Tyler	Hallcrest Heights Homeowners Association	0137	0176-L -5	4.7 Noise	J-4-47
Tyler	Hallcrest Heights Homeowners Association	0137	0224-M -9	4.7 Noise	J-4-43
Tyler	Hallcrest Heights Homeowners Association	0137	0176-L -7	4.7 Noise	J-4-44
Tyler	Hallcrest Heights Homeowners Association	0137	0137-T -2	4.7 Noise	J-4-43
Tyler	Hallcrest Heights Homeowners Association	0137	0224-M -4	4.7 Noise	J-4-47
Tyler	Hallcrest Heights Homeowners Association	0137	0224-M -2	4.7 Noise	J-4-42
Tyler	Hallcrest Heights Homeowners Association	0137	0224-M -7	4.7 Noise	J-4-44
Tyler	Hallcrest Heights Homeowners Association	0137	0304-L -2	4.7 Noise	J-4-32
Tyler	Hallcrest Heights Homeowners Association	0137	0137-T -5	4.7 Noise	J-4-42
Tyler	Hallcrest Heights Homeowners Association	0137	0137-T -3	4.7 Noise	J-4-47
Tyler	Hallcrest Heights Homeowners Association	0137	0224-M -8	4.7 Noise	J-4-48
Tyler	Hallcrest Heights Homeowners Association	0137	0176-L -10	4.7 Noise	J-4-53
Tyler	Hallcrest Heights Homeowners Association	0137	0176-L -3	4.7 Noise	J-4-42
Tyler	Hallcrest Heights Homeowners Association	0137	0304-L -1	4.7 Noise	J-4-48
Tyler	Hallcrest Heights Homeowners Association	0137	0224-M -10	4.7 Noise	J-4-62

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Tyler	Hallcrest Heights Homeowners Association	0137	0224-M -11	4.7 Noise	J-4-57
Tyler	Hallcrest Heights Homeowners Association	0137	0224-M -5	4.7 Noise	J-4-58
Tyler	Hallcrest Heights Homeowners Association	0137	0224-M -6	4.7 Noise	J-4-58
Tyler	Hallcrest Heights Homeowners Association	0137	0176-L -14	4.7 Noise	J-4-57
Tyler	Hallcrest Heights Homeowners Association	0137	0176-L -11	4.7 Noise	J-4-62
Tyler	Hallcrest Heights Homeowners Association	0137	0176-L -13	4.7 Noise	J-4-62
Tyler	Hallcrest Heights Homeowners Association	0137	0176-L -12	4.7 Noise	J-4-62
Tyler	Hallcrest Heights Homeowners Association	0137	0137-T -4	4.7 Noise	J-4-59
Tyler	Hallcrest Heights Homeowners Association	0137	0176-L -6	4.7 Noise	J-4-60
Tyler	Hallcrest Heights Homeowners Association	0137	0304-L -3	4.7 Noise	J-4-37 & 74
Tyler	Hallcrest Heights Homeowners Association	0137	0176-L -4	4.7 Noise	J-4-59
Tyler	Hallcrest Heights Homeowners Association	0137	4-02	4.7 Noise	J-4-76
Tyler	Hallcrest Heights Homeowners Association	0137	4-03	4.7 Noise	J-4-78
Tyler	Hallcrest Heights Homeowners Association	0137	4-04	4.7 Noise	J-4-78
Tyler	Hallcrest Heights Homeowners Association	0137	4-05	4.7 Noise	J-4-83
Tyler	Hallcrest Heights Homeowners Association	0137	4-06	4.7 Noise	J-4-83
Tyrrell	Chathams Ford Neighborhood	0383	03-01	3.3 Property Acquisition and Displacement	J-3-30
Tyrrell	Chathams Ford Neighborhood	0383	03-02	3.3 Property Acquisition and Displacement	J-3-30
Tyrrell	Chathams Ford Neighborhood	0383	03-03	3.7 Safety and Security	J-3-59
Tyrrell	Chathams Ford Neighborhood	0383	0383- L-5	4.2 Aquatic Biota and Habitat	J-4-16
Tyrrell	Chathams Ford Neighborhood	0383	0383- L- 3	4.2 Water Resources	J-4-12
Tyrrell	Chathams Ford Neighborhood	0383	0383- L-2	4.2 Water Resources	J-4-12
Tyrrell	Chathams Ford Neighborhood	0383	0383- L-4	4.2 Water Resources	J-4-12
Tyrrell	Chathams Ford Neighborhood	0383	0383- L-6	4.2 Water Resources	J-4-12
Tyrrell	Chathams Ford Neighborhood	0383	0383-L -1	4.2 Water Resources	J-4-12
Tyrrell	Chathams Ford Neighborhood	0383	4-01	4.7 Noise	J-4-76
Tyrrell	Chathams Ford Neighborhood	0383	0383- L- 7	11.1 Public Involvement	J-11-2
TYTRAN		0433	0433-L -1	2.2 Draft EIS Alternatives	J-2-163
Ulrich		0099	0099-E -1	2.2 Draft EIS Alternatives	J-2-84
Vecchiarelli		0024	0024-E -1	2.2 Draft EIS Alternatives	J-2-84
Vincent	Breakthrough Technologies Institute	0445	0445-E -10	6.1 Transit Effects	J-6-7
Vincent	Breakthrough Technologies Institute	0445	0445-E -21	10.1 Evaluation Relative to Project Goals and Objectives	J-10-19
Vincent	Breakthrough Technologies Institute	0445	0445-E -1	10.1 Evaluation Relative to Project Goals and Objectives	J-10-5
Vincent	Breakthrough Technologies Institute	0445	0445-E -11	10.1 Evaluation Relative to Project Goals and Objectives	J-10-21
Vincent	Breakthrough Technologies Institute	0445	0445-E -12	10.1 Evaluation Relative to Project Goals and Objectives	J-10-7
Vincent	Breakthrough Technologies Institute	0445	0445-E -13	10.1 Evaluation Relative to Project Goals and Objectives	J-10-15
Vincent	Breakthrough Technologies Institute	0445	0445-E -14	10.1 Evaluation Relative to Project Goals and Objectives	J-10-7
Vincent	Breakthrough Technologies Institute	0445	0445-E -15	10.1 Evaluation Relative to Project Goals and Objectives	J-10-16
Vincent	Breakthrough Technologies Institute	0445	0445-E -17	10.1 Evaluation Relative to Project Goals and Objectives	J-10-8
Vincent	Breakthrough Technologies Institute	0445	0445-E -19	10.1 Evaluation Relative to Project Goals and Objectives	J-10-17
Vincent	Breakthrough Technologies Institute	0445	0445-E -20	10.1 Evaluation Relative to Project Goals and Objectives	J-10-8
Vincent	Breakthrough Technologies Institute	0445	0445-E -16	10.1 Evaluation Relative to Project Goals and Objectives	J-10-17
Vincent	Breakthrough Technologies Institute	0445	0445-E -3	10.1 Evaluation Relative to Project Goals and Objectives	J-10-6
Vincent	Breakthrough Technologies Institute	0445	0445-E -4	10.1 Evaluation Relative to Project Goals and Objectives	J-10-6
Vincent	Breakthrough Technologies Institute	0445	0445-E -5	10.1 Evaluation Relative to Project Goals and Objectives	J-10-6
Vincent	Breakthrough Technologies Institute	0445	0445-E -6	10.1 Evaluation Relative to Project Goals and Objectives	J-10-7
Vincent	Breakthrough Technologies Institute	0445	0445-E -7	10.1 Evaluation Relative to Project Goals and Objectives	J-10-13
Vincent	Breakthrough Technologies Institute	0445	0445-E -8	10.1 Evaluation Relative to Project Goals and Objectives	J-10-7
Vincent	Breakthrough Technologies Institute	0445	0445-E -9	10.1 Evaluation Relative to Project Goals and Objectives	J-10-7
Vincent	Breakthrough Technologies Institute	0445	0445-E -2	10.1 Evaluation Relative to Project Goals and Objectives	J-10-5
Vincent	Breakthrough Technologies Institute	0445	0445-E -18	10.1 Evaluation Relative to Project Goals and Objectives	J-10-18
Von		0305	0305-L -2	2.2 Draft EIS Alternatives	J-2-153
Von		0305	0305-L -1	4.7 Noise	J-4-71
Walker		0262	0262-T -3	1.0 Purpose and Need	J-1-9
Walker		0262	0262-T -4	5.3 Development Effects/Potential	J-5-28
Walker		0262	0262-T -1	8.1 Capital Funding Strategy	J-8-33
Walker		0262	0262-T -2	8.1 Capital Funding Strategy	J-8-33
Walker	Walker and Company	0162/0184	0162-T -4	1.0 Purpose and Need	J-1-12
Walker	Walker and Company	0162/0184	2-02	2.2 Draft EIS Alternatives	J-2-57
Walker	Walker and Company	0162/0184	2-03	2.2 Draft EIS Alternatives	J-2-57
Walker	Walker and Company	0162/0184	2-04	2.2 Draft EIS Alternatives	J-2-58
Walker	Walker and Company	0162/0184	2-05	2.2 Draft EIS Alternatives	J-2-52
Walker	Walker and Company	0162/0184	2-06	2.2 Draft EIS Alternatives	J-2-27
Walker	Walker and Company	0162/0184	2-07	2.2 Draft EIS Alternatives	J-2-58
Walker	Walker and Company	0162/0184	2-08	2.2 Draft EIS Alternatives	J-2-130

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Walker	Walker and Company	0162/0184	2-09	2.2 Draft EIS Alternatives	J-2-131
Walker	Walker and Company	0162/0184	2-10	2.2 Draft EIS Alternatives	J-2-92
Walker	Walker and Company	0162/0184	0184-T -1	2.2 Draft EIS Alternatives	J-2-47
Walker	Walker and Company	0162/0184	0162-M -1	2.2 Draft EIS Alternatives	J-2-50
Walker	Walker and Company	0162/0184	0162-M -2	2.2 Draft EIS Alternatives	J-2-52
Walker	Walker and Company	0162/0184	0162-M -22	2.2 Draft EIS Alternatives	J-2-92
Walker	Walker and Company	0162/0184	0184-T -2	2.2 Draft EIS Alternatives	J-2-52
Walker	Walker and Company	0162/0184	0184-T -3	2.2 Draft EIS Alternatives	J-2-54
Walker	Walker and Company	0162/0184	0162-T -12	2.2 Draft EIS Alternatives	J-2-44
Walker	Walker and Company	0162/0184	0184-T -9	2.2 Draft EIS Alternatives	J-2-44
Walker	Walker and Company	0162/0184	0162-T -3	2.2 Draft EIS Alternatives	J-2-110
Walker	Walker and Company	0162/0184	0162-T -6	2.2 Draft EIS Alternatives	J-2-145
Walker	Walker and Company	0162/0184	0184-T -4	2.2 Draft EIS Alternatives	J-2-145
Walker	Walker and Company	0162/0184	0162-T -24	2.4 Suggestions for Other Alternatives	J-2-245
Walker	Walker and Company	0162/0184	0162-T-10	2.4 Suggestions for Other Alternatives	J-2-245
Walker	Walker and Company	0162/0184	0162-T-15	2.4 Suggestions for Other Alternatives	J-2-246
Walker	Walker and Company	0162/0184	0162-T-16	2.4 Suggestions for Other Alternatives	J-2-247
Walker	Walker and Company	0162/0184	0162-T-17	2.4 Suggestions for Other Alternatives	J-2-248
Walker	Walker and Company	0162/0184	0184-T -13	2.4 Suggestions for Other Alternatives	J-2-247
Walker	Walker and Company	0162/0184	0184-T -12	2.4 Suggestions for Other Alternatives	J-2-246
Walker	Walker and Company	0162/0184	0184-T -14	2.4 Suggestions for Other Alternatives	J-2-248
Walker	Walker and Company	0162/0184	0162-M -7	5.3 Development Effects/Potential	J-5-28
Walker	Walker and Company	0162/0184	0184-T -5	5.3 Development Effects/Potential	J-5-39
Walker	Walker and Company	0162/0184	0162-M -8	8.1 Capital Funding Strategy	J-8-9
Walker	Walker and Company	0162/0184	0162-M -9	8.1 Capital Funding Strategy	J-8-22
Walker	Walker and Company	0162/0184	0162-M -18	8.1 Capital Funding Strategy	J-8-18
Walker	Walker and Company	0162/0184	0162-M -5	8.1 Capital Funding Strategy	J-8-9
Walker	Walker and Company	0162/0184	0162-M -13	8.1 Capital Funding Strategy	J-8-42
Walker	Walker and Company	0162/0184	0162-M -11	8.1 Capital Funding Strategy	J-8-38
Walker	Walker and Company	0162/0184	0184-T -7	8.1 Capital Funding Strategy	J-8-9
Walker	Walker and Company	0162/0184	0184-T -15	8.1 Capital Funding Strategy	J-8-18
Walker	Walker and Company	0162/0184	0184-T -10	8.1 Capital Funding Strategy	J-8-42
Walker	Walker and Company	0162/0184	0184-T -6	8.1 Capital Funding Strategy	J-8-34
Walker	Walker and Company	0162/0184	0184-T -18	8.3 Other Financial Issues	J-8-42
Walker	Walker and Company	0162/0184	0162-M -19	11.1 Public Involvement	J-11-6
Walker	Walker and Company	0162/0184	0162-M -23	11.1 Public Involvement	J-11-7
Walker	Walker and Company	0162/0184	0162-M -21	11.1 Public Involvement	J-11-7
Walker	Walker and Company	0162/0184	0184-T -16	11.1 Public Involvement	J-11-6
Walker	Walker and Company	0162/0184	0184-T -19	11.1 Public Involvement	J-11-8
Walker	Walker and Company	0162/0184	0162-M -14	11.2 Agency Coordination	J-11-17
Walker	Walker and Company	0162/0184	0184-T -11	11.2 Agency Coordination	J-11-17
Walker	Walker and Company	0162/0184	0162-M -20	13.1 Schedule/Process for Implementation	J-13-5
Walker	Walker and Company	0162/0184	0184-T-17	13.1 Schedule/Process for Implementation	J-13-6
Walker	Walker and Company	0162/0184	0184-T -8	13.1 Schedule/Process for Implementation	J-13-6
Walker	Walker and Company	0162/0184	2-01	2.2 Draft EIS Alternatives	J-2-43 & 219
Wallace		0353	0353-L -1	4.7 Noise	J-4-71
Walsh		0041	0041-CC-2	2.2 Draft EIS Alternatives	J-2-113
Walsh		0041	0041-CC-1	2.2 Draft EIS Alternatives	J-2-137
Walsh	Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.	0400	0400- L-1	2.2 Draft EIS Alternatives	J-2-70
Walsh	Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.	0400	0400- L-3	3.1 Land Use and Socio-Economics	J-3-5 & J-5-10
Walsh	Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.	0400	0400- L-2	5.3 Development Effects/Potential	J-5-9 & 20
Walter	Host Marriot Corporation	0453	0453-L -1	2.2 Draft EIS Alternatives	J-2-155
Walter	Host Marriot Corporation	0453	0453-L -2	2.2 Draft EIS Alternatives	J-2-155
Walter	Host Marriot Corporation	0453	0453-L -3	6.2 Effects on Roadways	J-6-33
Wang		0067	0067-CC-1	2.2 Draft EIS Alternatives	J-2-136
Weimer		0029	0293-L -1	4.7 Noise	J-4-57
Weimer		0029	0040-CC-1	4.7 Noise Service and Inspection Yard Noise	J-4-39
Weimer		0029	0029-CC-1	4.7 Noise Service and Inspection Yard Noise	J-4-40
Welti	Washington Airports Task Force	0132	0132-T -4	1.0 Purpose and Need	J-1-2
Welti	Washington Airports Task Force	0132	0132-T -3	1.0 Purpose and Need	J-1-2
Welti	Washington Airports Task Force	0132	0132-T -5	2.0 Alternatives Considered	J-2-34
Welti	Washington Airports Task Force	0132	0132-T -1	2.0 Alternatives Considered	J-2-34
Welti	Washington Airports Task Force	0132	0222-M -2	2.0 Alternatives Considered	J-2-34
Welti	Washington Airports Task Force	0132	0222-M -1	2.0 Alternatives Considered	J-2-9
Welti	Washington Airports Task Force	0132	0132-T -2	2.0 Alternatives Considered	J-2-9

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
White	Greater Reston Chamber of Commerce	0450	0450-E -3	2.2 Draft EIS Alternatives	J-2-68
White	Greater Reston Chamber of Commerce	0450	0450-E -2	2.2 Draft EIS Alternatives	J-2-69
White	Greater Reston Chamber of Commerce	0450	0450-E -1	2.2 Draft EIS Alternatives	J-2-71
Whitener	Maryland-Virginia Monorail Initiative	0266	0390-M -2	1.0 Purpose and Need	J-1-10
Whitener	Maryland-Virginia Monorail Initiative	0266	0390-M -3	2.1 Alternatives Previously Considered	J-2-13
Whitener	Maryland-Virginia Monorail Initiative	0266	0390-M -1	2.1 Alternatives Previously Considered	J-2-12
Whitener	Maryland-Virginia Monorail Initiative	0266	0266-T -1	2.1 Alternatives Previously Considered	J-2-11
Whitener	Maryland-Virginia Monorail Initiative	0266	0283-T -1	2.1 Alternatives Previously Considered	J-2-11
Whitener	Maryland-Virginia Monorail Initiative	0266	0283-T -3	2.1 Alternatives Previously Considered	J-2-13
Whitener	Maryland-Virginia Monorail Initiative	0266	0266-T -3	2.1 Alternatives Previously Considered	J-2-13
Whitener	Maryland-Virginia Monorail Initiative	0266	0266-T -2	2.1 Alternatives Previously Considered	J-2-11
Whitener	Maryland-Virginia Monorail Initiative	0266	0283-T -2	2.1 Alternatives Previously Considered	J-2-13
Whyte	Ellison Heights-Mount Daniel Civic Association	0145	0145-T -1	2.2 Draft EIS Alternatives	J-2-75
Whyte	Ellison Heights-Mount Daniel Civic Association	0145	0452-E -10	2.2 Draft EIS Alternatives	J-2-93
Whyte	Ellison Heights-Mount Daniel Civic Association	0145	0452-E -6	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-13 & J-4-75
Whyte	Ellison Heights-Mount Daniel Civic Association	0145	0452-E -3	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-14
Whyte	Ellison Heights-Mount Daniel Civic Association	0145	0452-E -1	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-13
Whyte	Ellison Heights-Mount Daniel Civic Association	0145	0452-E -2	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-14
Whyte	Ellison Heights-Mount Daniel Civic Association	0145	0145-T -6	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-14
Whyte	Ellison Heights-Mount Daniel Civic Association	0145	0145-T -5	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-16
Whyte	Ellison Heights-Mount Daniel Civic Association	0145	0145-T -4	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-16
Whyte	Ellison Heights-Mount Daniel Civic Association	0145	0145-T -8	4.7 Noise	J-4-38
Whyte	Ellison Heights-Mount Daniel Civic Association	0145	0452-E -5	4.7 Noise	J-4-38
Whyte	Ellison Heights-Mount Daniel Civic Association	0145	0145-T -3	4.7 Noise	J-4-50
Whyte	Ellison Heights-Mount Daniel Civic Association	0145	0145-T -7	4.7 Noise	J-4-43
Whyte	Ellison Heights-Mount Daniel Civic Association	0145	0452-E -4	4.7 Noise	J-4-44
Whyte	Ellison Heights-Mount Daniel Civic Association	0145	0145-T -9	4.7 Noise	J-4-70
Whyte	Ellison Heights-Mount Daniel Civic Association	0145	0145-T -11	6.2 Effects of Roadways	J-6-35
Whyte	Ellison Heights-Mount Daniel Civic Association	0145	0145-T -10	6.2 Effects of Roadways	J-6-31
Whyte	Ellison Heights-Mount Daniel Civic Association	0145	0452-E -9	9.1 Secondary Development Effects	J-9-15
Whyte	Ellison Heights-Mount Daniel Civic Association	0145	0145-T -12	9.1 Secondary Development Effects	J-9-13
Whyte	Ellison Heights-Mount Daniel Civic Association	0145	0145-T -2	11.1 Public Involvement	J-11-8
Whyte	Ellison Heights-Mount Daniel Civic Association	0145	0145-T -13	12.1 Concerns over Study Process	J-12-4
Whyte	Ellison Heights-Mount Daniel Civic Association	0145	0452-E -11	12.1 Concerns over Study Process	J-12-4
Wilberg, Bob	Prentiss Properties	Wilberg	Wilberg, Bob	3.4 Visual and Aesthetic Conditions	J-3-40
Wilbert		0488	02	2.1 Alternatives Previously Considered	J-2-19
Wilbert		0488	01	2.2 Draft EIS Alternatives	J-2-59
Wilbert		0488	03	2.2 Draft EIS Alternatives	J-2-59
Wilbert		0488	04	2.2 Draft EIS Alternatives	J-2-60
Wilbert		0488	3-01	3.4 Visual and Aesthetic Conditions	J-3-40
Wilding	Metropolitan Washington Airports Authority	0440	0440-A-1	2.2 Draft EIS Alternatives	J-2-35
Wilding	Metropolitan Washington Airports Authority	0440	0440-A-3	2.2 Draft EIS Alternatives	J-2-7
Wilding	Metropolitan Washington Airports Authority	0440	0440-A -12	2.2 Draft EIS Alternatives	J-2-34
Wilding	Metropolitan Washington Airports Authority	0440	0440-A -13	2.2 Draft EIS Alternatives	J-2-6
Wilding	Metropolitan Washington Airports Authority	0440	0440-A -5	3.4 Visual and Aesthetic Conditions	J-3-34
Wilding	Metropolitan Washington Airports Authority	0440	0440-A -7	3.5 Cultural Resources	J-3-46
Wilding	Metropolitan Washington Airports Authority	0440	0440-A -6	3.5 Cultural Resources	J-3-46
Wilding	Metropolitan Washington Airports Authority	0440	0440-A-9	4.2 Water Resources	J-4-5
Wilding	Metropolitan Washington Airports Authority	0440	0440-A-4	6.1 Transit Effects	J-6-5
Wilding	Metropolitan Washington Airports Authority	0440	0440-A -2	6.3 Effects on Other Transportation Facilities and Services	J-6-59
Wilding	Metropolitan Washington Airports Authority	0440	0440-A -16	6.3 Effects on Other Transportation Facilities and Services	J-6-59
Wilding	Metropolitan Washington Airports Authority	0440	0440-A -15	6.3 Effects on Other Transportation Facilities and Services	J-6-58
Wilding	Metropolitan Washington Airports Authority	0440	0440-A -14	6.3 Effects on Other Transportation Facilities and Services	J-6-59
Wilding	Metropolitan Washington Airports Authority	0440	0440-A -11	6.3 Effects on Other Transportation Facilities and Services	J-6-58
Wilding	Metropolitan Washington Airports Authority	0440	0440-A -8	General Plans	J-GP-4
Wilding	Metropolitan Washington Airports Authority	0440	0440-A -17	11.1 Public Involvement	J-11-1
Wilding	Metropolitan Washington Airports Authority	0440	0440-A -10	11.2 Agency Coordination	J-11-15
Wilkes	Virginia Department of Mines, Minerals, and Energy	0517	4-01	4.1 Geologic Resources	J-4-1
Willis		0374	0374-L -1	4.7 Noise	J-4-71
Willson		0048	0048-CC-1	2.2 Draft EIS Alternatives	J-2-63
Willson		0048	0048-CC-2	2.2 Draft EIS Alternatives	J-2-67
Willson	Long and Foster Real Estate	0050	0050-CC-1	2.2 Draft EIS Alternatives	J-2-68

Index J.1-1 Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Wood	Coalition for Smarter Growth	0251	0251-T -6	2.2 Draft EIS Alternatives	J-2-170
Wood	Coalition for Smarter Growth	0251	0251-T -1	2.2 Draft EIS Alternatives	J-2-74
Wood	Coalition for Smarter Growth	0251	0251-T -2	5.3 Development Effects/Potential	J-5-43
Wood	Coalition for Smarter Growth	0251	0251-T -3	5.3 Development Effects/Potential	J-5-31
Wood	Coalition for Smarter Growth	0251	0251-T -4	5.3 Development Effects/Potential	J-5-41
Wood	Coalition for Smarter Growth	0251	0251-T -5	8.1 Capital Funding Strategy	J-8-17
Wood	Coalition for Smarter Growth	0251	0251-T -7	9.1 Secondary Development Effects	J-9-5
Wright, B.		0284	0284-T -1	2.2 Draft EIS Alternatives	J-2-80
Wright, B.		0284	0284-T -2	2.2 Draft EIS Alternatives	J-2-132
Wright, B.		0284	0284-T -3	6.3 Effects on Other Transportation Facilities and Services	J-6-65
Wright, S.	Rotonda Condominium Owners Association	0156	0156-T -2	2.2 Draft EIS Alternatives	J-2-167
Wright, S.	Rotonda Condominium Owners Association	0156	0156-T -4	2.2 Draft EIS Alternatives	J-2-168
Wright, S.	Rotonda Condominium Owners Association	0156	0156-T -3	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-20
Wright, S.	Rotonda Condominium Owners Association	0156	0156-T -1	11.1 Public Involvement	J-11-6
Wyman		0085	0085-L -1	1.0 Purpose and Need	J-1-8
Wyman		0085	0085-L -2	2.2 Draft EIS Alternatives	J-2-153
Wyman		0085	0281-T -1	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-20
Wyman		0085	0281-T -2	3.2 Neighborhoods, Community Services and Community Cohesio	J-3-20
Zugris		0118	0118-E -1	2.2 Draft EIS Alternatives	J-2-67
Zugris		0118	0118-E -2	4.7 Noise	J-4-54
Zugris		0118	0118-E -3	4.7 Noise	J-4-54
	Fairfax County Board Supervisors	0490	11-1	11.2 Agency Coordination	J-11-16
	Reston Association	0210	0210-M -3	1.0 Purpose and Need	J-1-11
	Reston Association	0210	0210-M -4	2.2 Draft EIS Alternatives	J-2-172
	Reston Association	0210	0210-M -1	2.2 Draft EIS Alternatives	J-2-73
	Reston Association	0210	0210-M -7	2.2 Draft EIS Alternatives	J-2-133
	Reston Association	0210	0210-M -9	2.2 Draft EIS Alternatives	J-2-93
	Reston Association	0210	0210-M -8	5.2 Station Area Development	J-5-43
	Reston Association	0210	0210-M -12	5.2 Station Area Development	J-5-34
	Reston Association	0210	0210-M -5	8.1 Capital Funding Strategy	J-8-17
	Reston Association	0210	0210-M -11	9.3 Mitigation	J-9-26
	Reston Association	0210	0210-M -10	9.3 Mitigation	J-9-26
	Reston Association	0210	0210-M -2	11.2 Agency Coordination	J-11-17
	Reston Association	0210	0210-M -6	General Plans	J-GP-7
Anonymous		0054	0054-CC-1	6.2 Effects on Roadways	J-6-30
Anonymous		0073	0073-CC-2	2.2 Draft EIS Alternatives	J-2-65
Anonymous		0073	0073-CC-1	2.2 Draft EIS Alternatives	J-6-82 & 86
Anonymous		0073	0073-CC-3	2.1 Alternatives Previously Considered	J-2-19, 25 & 174
Anonymous		0073	0083-2	6.2 Effects of Roadways	J-6-55
(illegible)		0345	0345-L -1	4.7 Noise	J-4-71
(s) illegible		0326	0326-L -1	4.7 Noise	J-4-71

Index J.1-2 Supplemental Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Abt	West*Group	0113	0132-14	2.2 Draft EIS Alternatives	J-2-195
Abt	West*Group	0113	0132-19	2.2 Draft EIS Alternatives	J-2-195
Abt	West*Group	0113	0132-20	2.2 Draft EIS Alternatives	J-2-195
Abt	West*Group	0113	0132-22	2.2 Draft EIS Alternatives	J-2-195
Abt	West*Group	0113	0132-11	2.3 Supplemental Draft EIS Alternatives	J-2-225
Abt	West*Group	0113	0132-13	2.3 Supplemental Draft EIS Alternatives	J-2-237
Abt	West*Group	0113	0132-15	2.3 Supplemental Draft EIS Alternatives	J-2-237
Abt	West*Group	0113	0132-16	2.3 Supplemental Draft EIS Alternatives	J-2-236
Abt	West*Group	0113	0132-3	2.3 Supplemental Draft EIS Alternatives	J-2-237
Abt	West*Group	0113	0132-4	3.1 Land Use and Socioeconomics	J-3-8
Abt	West*Group	0113	0132-6	3.1 Land Use and Socioeconomics	J-3-6
Abt	West*Group	0113	0132-23	3.1 Land Use and Socioeconomics	J-3-8
Abt	West*Group	0113	0132-2	4.2 Water Resources	J-4-14
Abt	West*Group	0113	0132-7	4.2 Water Resources	J-4-14
Abt	West*Group	0113	0132-8	4.7 Noise	J-4-89
Abt	West*Group	0113	0132-9	5.1 Economic Conditions	J-5-8
Abt	West*Group	0113	0132-10	6.1 Transit Effects	J-6-16
Abt	West*Group	0113	0132-1	8.1 Capital Funding Strategy	J-8-58
Abt	West*Group	0113	0132-5	General Plans	J-GP-13
Abt	West*Group	0113	0132-12	General Plans	J-GP-12
Abt	West*Group	0113	0132-21	General Plans	J-GP-12
Abt	West*Group	0113	0132-17	General Plans	J-GP-12
Abt	West*Group	0113	0132-18	General Plans	J-GP-13
Allahdoust	Virginia Department of Transportation	0091	2-01	2.1 Alternatives Previously Considered	J-2-203
Allahdoust	Virginia Department of Transportation	0091	0106-1	2.2 Draft EIS Alternatives	J-2-177
Allahdoust	Virginia Department of Transportation	0091	0106-9	2.2 Draft EIS Alternatives	J-2-178
Allahdoust	Virginia Department of Transportation	0091	0106-14	2.2 Draft EIS Alternatives	J-2-178
Allahdoust	Virginia Department of Transportation	0091	0106-18	2.2 Draft EIS Alternatives	J-2-177
Allahdoust	Virginia Department of Transportation	0091	0106-15	2.2 Draft EIS Alternatives Parking	J-2-178
Allahdoust	Virginia Department of Transportation	0091	0106-16	2.3 Supplemental Draft EIS Alternatives	J-2-237
Allahdoust	Virginia Department of Transportation	0091	0106-12	2.4 Suggestions for Other Alternatives	J-2-254
Allahdoust	Virginia Department of Transportation	0091	0106-4	3.2 Neighborhood, Community Services and Community Cohesion	J-3-24
Allahdoust	Virginia Department of Transportation	0091	0106-22	3.5 Cultural Resources	J-3-49
Allahdoust	Virginia Department of Transportation	0091	0106-6	3.6 Parklands and Recreational Areas	J-3-52
Allahdoust	Virginia Department of Transportation	0091	0106-7	3.6 Parklands and Recreational Areas	J-3-52
Allahdoust	Virginia Department of Transportation	0091	0106-23	4.2 Water Resources	J-4-10
Allahdoust	Virginia Department of Transportation	0091	0106-24	4.7 Noise	J-4-80
Allahdoust	Virginia Department of Transportation	0091	4-01	4.7 Noise	J-4-80
Allahdoust	Virginia Department of Transportation	0091	4-01	4.7 Noise	J-4-80
Allahdoust	Virginia Department of Transportation	0091	0106-2	6.2 Effects on Roadways	J-6-48
Allahdoust	Virginia Department of Transportation	0091	0106-3	6.2 Effects on Roadways	J-6-47
Allahdoust	Virginia Department of Transportation	0091	0106-5	6.2 Effects on Roadways	J-6-48
Allahdoust	Virginia Department of Transportation	0091	0106-8	6.2 Effects on Roadways	J-6-47
Allahdoust	Virginia Department of Transportation	0091	0106-10	6.2 Effects on Roadways	J-6-47
Allahdoust	Virginia Department of Transportation	0091	0106-11	6.2 Effects on Roadways	J-6-47
Allahdoust	Virginia Department of Transportation	0091	0106-13	6.2 Effects on Roadways	J-6-47
Allahdoust	Virginia Department of Transportation	0091	0106-17	6.2 Effects on Roadways	J-6-48
Allahdoust	Virginia Department of Transportation	0091	0106-19	6.2 Effects on Roadways	J-6-47
Allahdoust	Virginia Department of Transportation	0091	0106-20	6.2 Effects on Roadways	J-6-48
Allahdoust	Virginia Department of Transportation	0091	0106-21	11.2 Agency Coordination	J-11-20
Allahdoust	Virginia Department of Transportation	0091	11-1	11.2 Agency Coordination	J-11-19
Allahdoust	Virginia Department of Transportation	0091	11-2	11.2 Agency Coordination	J-11-20
Antigone	Dulles Gateway Associates, Inc.	0111	0130-1	2.3 Supplemental Draft EIS Alternatives	J-2-231
Antigone	Dulles Gateway Associates, Inc.	0111	0145-1	2.3 Supplemental Draft EIS Alternatives	J-2-232
Antigone	Dulles Gateway Associates, Inc.	0111	0145-2	2.3 Supplemental Draft EIS Alternatives	J-2-231
Antigone	Dulles Gateway Associates, Inc.	0111	0145-3	2.3 Supplemental Draft EIS Alternatives	J-2-231
Antigone	Dulles Gateway Associates, Inc.	0111	0145-4	2.3 Supplemental Draft EIS Alternatives	J-2-231
Antigone	Dulles Gateway Associates, Inc.	0111	0145-5	2.3 Supplemental Draft EIS Alternatives	J-2-231
Antigone	Dulles Gateway Associates, Inc.	0111	0145-6	2.3 Supplemental Draft EIS Alternatives	J-2-231
Antigone	Dulles Gateway Associates, Inc.	0111	0145-7	2.3 Supplemental Draft EIS Alternatives	J-2-231
Aronson		0143	6-1	6.3 Effects on Other Transportation Facilities and Services	J-6-67
Aronson		0143	8-1	8.1 Capital Funding Strategy	J-8-48
Augustine		0002	0002-1	3.2 Neighborhood, Community Services and Community Cohesion	J-3-26

Index J.1-2 Supplemental Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Bennett, B.		0107	0125-4	2.4 Suggestions for Other Alternatives	J-2-257
Bennett, B.		0107	0125-5	2.4 Suggestions for Other Alternatives	J-2-258
Bennett, B.		0107	0125-6	2.4 Suggestions for Other Alternatives	J-2-258
Bennett, B.		0107	0125-7	2.4 Suggestions for Other Alternatives	J-2-257
Bennett, B.		0107	0125-8	2.4 Suggestions for Other Alternatives	J-2-258
Bennett, B.		0107	0125-13	3.8 Environmental Justice	J-3-61
Bennett, B.		0107	0125-14	3.8 Environmental Justice	J-3-61
Bennett, B.		0107	0125-10	6.1 Transit Effects	J-6-19
Bennett, B.		0107	0125-11	6.1 Transit Effects	J-6-21
Bennett, B.		0107	0125-12	6.1 Transit Effects	J-6-20
Bennett, B.		0107	0125-15	6.1 Transit Effects	J-6-15
Bennett, B.		0107	0125-1	8.1 Capital Funding Strategy	J-8-56
Bennett, B.		0107	0125-2	8.1 Capital Funding Strategy	J-8-56
Bennett, B.		0107	0125-3	8.1 Capital Funding Strategy	J-8-56
Bennett, B.		0107	0125-9	9.1 Secondary Development Effects	J-9-23
Bennett, J.	Hunter Mill Defense League	0109	0147-1	2.3 Supplemental Draft EIS Alternatives	J-2-230
Bennett, J.	Hunter Mill Defense League	0109	0128-7	2.4 Suggestions for Other Alternatives	J-2-259
Bennett, J.	Hunter Mill Defense League	0109	0128-16	2.4 Suggestions for Other Alternatives	J-2-258
Bennett, J.	Hunter Mill Defense League	0109	3-01	3.8 Environmental Justice	J-3-60
Bennett, J.	Hunter Mill Defense League	0109	0128-14	3.8 Environmental Justice	J-3-61
Bennett, J.	Hunter Mill Defense League	0109	0128-24	3.8 Environmental Justice	J-3-61
Bennett, J.	Hunter Mill Defense League	0109	0128-8	5.1 Economic Conditions	J-5-8
Bennett, J.	Hunter Mill Defense League	0109	0128-1	6.1 Transit Effects	J-6-21
Bennett, J.	Hunter Mill Defense League	0109	0128-2	6.1 Transit Effects	J-6-21
Bennett, J.	Hunter Mill Defense League	0109	0128-9	6.1 Transit Effects	J-6-15
Bennett, J.	Hunter Mill Defense League	0109	0128-10	6.1 Transit Effects	J-6-18
Bennett, J.	Hunter Mill Defense League	0109	0128-11	6.1 Transit Effects	J-6-20
Bennett, J.	Hunter Mill Defense League	0109	0128-12	6.1 Transit Effects	J-6-20
Bennett, J.	Hunter Mill Defense League	0109	0128-13	6.1 Transit Effects	J-6-20
Bennett, J.	Hunter Mill Defense League	0109	0128-18	6.1 Transit Effects	J-6-20
Bennett, J.	Hunter Mill Defense League	0109	0128-19	6.1 Transit Effects	J-6-21
Bennett, J.	Hunter Mill Defense League	0109	0128-6	6.2 Effects on Roadways	J-6-58
Bennett, J.	Hunter Mill Defense League	0109	0128-3	8.1 Capital Funding Strategy	J-8-54
Bennett, J.	Hunter Mill Defense League	0109	0128-20	8.1 Capital Funding Strategy	J-8-55
Bennett, J.	Hunter Mill Defense League	0109	0128-21	8.1 Capital Funding Strategy	J-8-55
Bennett, J.	Hunter Mill Defense League	0109	0128-22	8.1 Capital Funding Strategy	J-8-54
Bennett, J.	Hunter Mill Defense League	0109	0128-23	8.1 Capital Funding Strategy	J-8-56
Bennett, J.	Hunter Mill Defense League	0109	0128-17	8.2 Operating Funding Strategy	J-8-64
Bennett, J.	Hunter Mill Defense League	0109	0128-4	12.1 Concerns Over Study Process	J-12-12
Bennett, J.	Hunter Mill Defense League	0109	0128-5	12.1 Concerns Over Study Process	J-12-14
Bennett, J.	Hunter Mill Defense League	0109	0128-25	12.1 Concerns Over Study Process	J-12-13
Bennett, J.	Hunter Mill Defense League	0109	0147-2	12.1 Concerns Over Study Process	J-12-12
Bennett, J.		Bennett	Jody Bennett	8.1 Capital Funding Strategy	J-8-48
Bethke		0021	0022-1	2.3 Supplemental Draft EIS Alternatives	J-2-239
Bogard	Loudoun County Board Supervisor	0114	0133-1	2.3 Supplemental Draft EIS Alternatives	J-2-225
Bogard	Loudoun County Board Supervisor	0114	0133-2	2.3 Supplemental Draft EIS Alternatives	J-2-241
Bogard	Loudoun County Board Supervisor	0114	0133-3	2.3 Supplemental Draft EIS Alternatives	J-2-226
Bowers	Loudoun County Administrator	0084	2-04	2.3 Supplemental Draft EIS	J-2-205
Bowers	Loudoun County Administrator	0084	0099-2	3.5 Cultural Resources	J-3-50
Bowers	Loudoun County Administrator	0084	0099-3	3.6 Parklands and Recreation Areas	J-3-53
Bowers	Loudoun County Administrator	0084	0099-4	4.2 Water Resources	J-4-11
Bowers	Loudoun County Administrator	0084	0099-5	4.2 Water Resources	J-4-11
Bowers	Loudoun County Administrator	0084	6-1	6.3 Effects on Other Transportation Facilities and Services	J-6-67
Bowers	Loudoun County Administrator	0084	0099-1	12.1 Concerns Over Study Process	J-12-11
Bowers	Loudoun County Administrator	0084	13-1	13.1 Schedule/Process for Implementation	J-13-6
Bracher		0013	0014-1	2.3 Supplemental Draft EIS Alternatives	J-2-228
Bravo	Westhampton Civic Association	0026	0027-19	2.2 Draft EIS Alternatives	J-2-193
Bravo	Westhampton Civic Association	0026	0027-2	3.2 Neighborhood, Community Services and Community Cohesion	J-3-26
Bravo	Westhampton Civic Association	0026	00	3.2 Neighborhood, Community Services and Community Cohesion	J-3-28
Bravo	Westhampton Civic Association	0026	0027-9	3.2 Neighborhood, Community Services and Community Cohesion	J-3-29
Bravo	Westhampton Civic Association	0026	0027-11	3.2 Neighborhood, Community Services and Community Cohesion	J-3-26
Bravo	Westhampton Civic Association	0026	0027-5	4.7 Noise	J-4-86
Bravo	Westhampton Civic Association	0026	0027-6	4.7 Noise	J-4-88
Bravo	Westhampton Civic Association	0026	0027-8	4.7 Noise	J-4-88

Index J.1-2 Supplemental Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Bravo	Westhampton Civic Association	0026	0027-10	6.1 Transit Effects	J-6-16
Bravo	Westhampton Civic Association	0026	0027-3	6.2 Effects on Roadways	J-6-51
Bravo	Westhampton Civic Association	0026	0027-4	6.2 Effects on Roadways	J-6-56
Bravo	Westhampton Civic Association	0026	0027-7	6.2 Effects on Roadways	J-6-53
Bravo	Westhampton Civic Association	0026	0027-12	6.2 Effects on Roadways	J-6-56
Bravo	Westhampton Civic Association	0026	0027-13	6.2 Effects on Roadways	J-6-51
Bravo	Westhampton Civic Association	0026	0067-1	8.3 Other Financial Issues	J-8-66
Bravo	Westhampton Civic Association	0026	0027-1	11.1 Public Involvement	J-11-13
Bravo	Westhampton Civic Association	0026	0027-15	11.1 Public Involvement	J-11-12
Bravo	Westhampton Civic Association	0026	0027-16	11.2 Agency Coordination	J-11-21
Bravo	Westhampton Civic Association	0026	0027-17	13.1 Schedule/Process for Implementation	J-13-7
Bravo	Westhampton Civic Association	0026	0027-18	13.1 Schedule/Process for Implementation	J-13-7
Brown		0050	0050-1	2.3 Supplemental Draft EIS Alternatives	J-2-241
Byrnes	McLean Citizens Association Transportation Committee	0034	0035-1	2.2 Draft EIS Alternatives	J-2-193
Byrnes	McLean Citizens Association Transportation Committee	0034	0143-4	2.2 Draft EIS Alternatives Service and Inspection Maintenance Ya	J-2-192
Byrnes	McLean Citizens Association Transportation Committee	0034	2-01	2.3 Supplemental Draft EIS Alternatives	J-2-214
Byrnes	McLean Citizens Association Transportation Committee	0034	2-02	2.3 Supplemental Draft EIS Alternatives	J-2-217
Byrnes	McLean Citizens Association Transportation Committee	0034	0035-2	2.3 Supplemental Draft EIS Alternatives	J-2-209
Byrnes	McLean Citizens Association Transportation Committee	0034	0126-1	2.3 Supplemental Draft EIS Alternatives	J-2-235
Byrnes	McLean Citizens Association Transportation Committee	0034	0126-2	2.3 Supplemental Draft EIS Alternatives	J-2-236
Byrnes	McLean Citizens Association Transportation Committee	0034	0143-1	2.3 Supplemental Draft EIS Alternatives	J-2-226
Byrnes	McLean Citizens Association Transportation Committee	0034	0143-2	2.3 Supplemental Draft EIS Alternatives	J-2-209
Byrnes	McLean Citizens Association Transportation Committee	0034	0143-3	2.3 Supplemental Draft EIS Alternatives	J-2-209
Byrnes	McLean Citizens Association Transportation Committee	0034	2-03	2.4 Suggestions for Other Alternatives	J-2-219
Byrnes	McLean Citizens Association Transportation Committee	0034	0035-3	4.7 Noise	J-4-77
Byrnes	McLean Citizens Association Transportation Committee	0034	0143-5	4.7 Noise	J-4-78
Byrnes	McLean Citizens Association Transportation Committee	0034	0143-6	4.7 Noise	J-4-77
Byrnes	McLean Citizens Association Transportation Committee	0034	11-1	11.1 Public Involvement	J-11-11
Cate		0110	0129-1	2.3 Supplemental Draft EIS Alternatives	J-2-230
Cate		0110	0129-3	6.1 Transit Effects	J-6-18
Cavin		0112	0131-1	2.3 Supplemental Draft EIS Alternatives	J-2-231
Cerny		0076	0087-1	2.2 Draft EIS Alternatives Combined BRT/Metrorail	J-2-192
Cerny		0076	0087-2	2.4 Suggestions for Other Alternatives	J-2-259
Chang	Fairfax County Department of Transportation	0093	2-01	2.2 Draft EIS Alternatives	J-2-182
Chang	Fairfax County Department of Transportation	0093	0109-5	2.2 Draft EIS Alternatives	J-2-180
Chang	Fairfax County Department of Transportation	0093	0109-8	2.2 Draft EIS Alternatives	J-2-180
Chang	Fairfax County Department of Transportation	0093	0109-10	2.2 Draft EIS Alternatives	J-2-181
Chang	Fairfax County Department of Transportation	0093	0109-16	2.2 Draft EIS Alternatives	J-2-180
Chang	Fairfax County Department of Transportation	0093	0109-3	2.2 Draft EIS Alternatives Facilities	J-2-181
Chang	Fairfax County Department of Transportation	0093	0109-7	2.2 Draft EIS Alternatives Facilities	J-2-181
Chang	Fairfax County Department of Transportation	0093	0109-18	2.3 Supplemental Draft EIS Alternatives	J-2-206
Chang	Fairfax County Department of Transportation	0093	0109-2	2.4 Suggestions for Other Alternatives	J-2-255
Chang	Fairfax County Department of Transportation	0093	0109-11	3.1 Land Use and Socioeconomics	J-3-5
Chang	Fairfax County Department of Transportation	0093	0109-12	3.1 Land Use and Socioeconomics	J-3-5
Chang	Fairfax County Department of Transportation	0093	0109-17	3.1 Land Use and Socioeconomics	J-3-5
Chang	Fairfax County Department of Transportation	0093	0109-13	3.3 Property Acquisition and Displacement	J-3-31
Chang	Fairfax County Department of Transportation	0093	0109-14	3.5 Cultural Resources	J-3-50
Chang	Fairfax County Department of Transportation	0093	0109-15	3.5 Cultural Resources	J-3-50
Chang	Fairfax County Department of Transportation	0093	0109-21	4.7 Noise	J-4-81
Chang	Fairfax County Department of Transportation	0093	0109-22	4.7 Noise	J-4-81
Chang	Fairfax County Department of Transportation	0093	0109-4	6.1 Transit Effects	J-6-14
Chang	Fairfax County Department of Transportation	0093	0109-9	6.2 Effects on Roadways	J-6-48
Chang	Fairfax County Department of Transportation	0093	0109-1	6.2 Effects on Roadways	J-6-49

Index J.1-2 Supplemental Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Chang	Fairfax County Department of Transportation	0093	0109-20	11.2 Agency Coordination	J-11-20
Chang	Fairfax County Department of Transportation	0093	0109-6	General Plans	J-GP-10
Chang	Fairfax County Department of Transportation	0093	0109-19	General Plans	J-GP-9
Chang	Fairfax County Department of Transportation	0093	0109-23	General Plans	J-GP-9
Chang	Fairfax County Department of Transportation	0093	0109-24	General Plans	J-GP-10
Chang	Fairfax County Department of Transportation	0093	0109-25	General Plans	J-GP-9
Chang	Fairfax County Department of Transportation	0093	0109-26	General Plans	J-GP-10
Cherner	Cherner Automotive Group	0134	2-01	2.2 Draft EIS Alternatives	J-2-216
Cherner	Cherner Automotive Group	0134	2-02	2.3 Supplemental Draft EIS Alternatives	J-2-213
Cherner	Cherner Automotive Group	0134	2-03	2.3 Supplemental Draft EIS Alternatives	J-2-216
Cherner	Cherner Automotive Group	0134	2-04	2.3 Supplemental Draft EIS Alternatives	J-2-222
Cherner	Cherner Automotive Group	0134	2-05	2.3 Supplemental Draft EIS Alternatives	J-2-213
Cherner	Cherner Automotive Group	0134	8-1	8.1 Capital Funding Strategy	J-8-46
Cima		0133	0172-1	3.2 Neighborhood, Community Services and Community Cohesion	J-3-25
Cima		0133	0172-2	4.7 Noise	J-4-91
Connolly	Fairfax County Board Supervisor	0077	0089-1	2.3 Supplemental Draft EIS Alternatives	J-2-226
Cooper	Prentiss Properties	0028	0029-1	2.3 Supplemental Draft EIS Alternatives	J-2-241
Cooper	Prentiss Properties	0028	0064-1	2.3 Supplemental Draft EIS Alternatives Support Project Phasing	J-2-243
Cooper	Prentiss Properties	0028	0029-2	8.1 Capital Funding Strategy	J-8-58
Cooper	Prentiss Properties	0028	0064-2	8.1 Capital Funding Strategy	J-8-58
Cooper	Prentiss Properties	0028	0064-3	8.1 Capital Funding Strategy	J-8-58
Cooper	Prentiss Properties	0028	0064-4	8.1 Capital Funding Strategy	J-8-58
Cooper	Prentiss Properties	0028	0029-3	8.1 Capital Funding Strategy	J-8-50
Cort	Washington Regional Network For Livable Communities	0090	0105-2	2.2 Draft EIS Alternatives Combined BRT/Metrorail	J-2-192
Cort	Washington Regional Network For Livable Communities	0090	0105-1	2.3 Supplemental Draft EIS Alternatives	J-2-245
Costello		0048	0049-1	8.1 Capital Funding Strategy	J-8-50
Costello		0048	0049-3	8.1 Capital Funding Strategy	J-8-52
Costello		0048	0049-4	8.1 Capital Funding Strategy	J-8-58
Costello		0048	0049-2	8.2 Operating Funding Strategy	J-8-63
Curtis	Virginia Department of Transportation	0149	2-01	2.2 Draft EIS Alternatives	J-2-179
Curtis	Virginia Department of Transportation	0149	2-02	2.2 Draft EIS Alternatives and Recommendations	J-2-179
Curtis	Virginia Department of Transportation	0149	6-1	6.2 Effects on Roadways	J-6-49
Daniels		0044	0045-1	2.3 Supplemental Draft EIS Alternatives	J-2-243
Daniels		0044	0045-2	2.3 Supplemental Draft EIS Alternatives	J-2-241
Daniels		0044	0045-3	2.3 Supplemental Draft EIS Alternatives	J-2-229
Daniels		0044	0045-4	8.1 Capital Funding Strategy	J-8-48
Daniels		0044	0045-5	8.1 Capital Funding Strategy	J-8-54
Davis, C.	Reston Citizen's Association	0050	0095-1	2.3 Supplemental Draft EIS Alternatives	J-2-240
Davis, C.	Reston Citizen's Association	0050	0095-2	2.3 Supplemental Draft EIS Alternatives	J-2-242
Davis, J.		0082	0097-1	2.3 Supplemental Draft EIS Alternatives	J-2-242
Davis, J.		0082	0097-2	2.4 Suggestions for Other Alternatives	J-2-242
Davis, J.		0082	11-1	11.1 Public Involvement	J-11-11
Deam		0001	0001-1	2.3 Supplemental Draft EIS Alternatives	J-2-227
Deam		0001	0001-2	2.3 Supplemental Draft EIS Alternatives	J-2-228
Deam		0001	0093-1	2.3 Supplemental Draft EIS Alternatives	J-2-238 & 239
Devolites	Commonwealth Virginia Senator	0156	2-01	2.3 Supplemental Draft EIS Alternatives	J-2-203
Devolites	Commonwealth Virginia Senator	0156	2-02	2.3 Supplemental Draft EIS Alternatives	J-2-203
Dowd	National Capital Planning Commission	0141	11-1	11.2 Agency Coordination	J-11-18
Driscoll		0135	2-01	2.2 Draft EIS Alternatives	J-2-202
Dulany	Bracewell & Patterson, LLP	0106	0124-1	3.3 Property Acquisition and Displacement	J-3-33
Eder		0068	0173-12	2.2 Draft EIS Alternatives	J-2-201
Eder		0068	0173-8	2.2 Draft EIS Alternatives BRT/Metrorail Stations - General	J-2-192
Eder		0068	0173-10	2.2 Draft EIS Alternatives Facilities	J-2-200
Eder		0068	0173-33	2.2 Draft EIS Alternatives Facilities	J-2-198
Eder		0068	0173-34	2.2 Draft EIS Alternatives Facilities	J-2-198
Eder		0068	0173-1	2.3 Supplemental Draft EIS Alternatives	J-2-229
Eder		0068	0076-4	2.4 Suggestions for Other Alternatives	J-2-261
Eder		0068	0173-5	2.4 Suggestions for Other Alternatives	J-2-260
Eder		0068	0173-6	2.4 Suggestions for Other Alternatives	J-2-260
Eder		0068	0173-11	2.4 Suggestions for Other Alternatives	J-2-260
Eder		0068	0173-17	3.1 Land Use and Socioeconomics	J-3-6
Eder		0068	0173-19	3.2 Neighborhood, Community Services and Community Cohesion	J-3-26

Index J.1-2 Supplemental Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Eder		0068	0173-26	3.3 Property Acquisition and Displacement	J-3-31
Eder		0068	0173-27	3.4 Visual and Aesthetic Conditions	J-3-44
Eder		0068	0173-31	3.4 Visual and Aesthetic Conditions	J-3-44
Eder		0068	0173-28	3.8 Environmental Justice	J-3-61
Eder		0068	0173-32	4.10 Energy	J-4-98
Eder		0068	0173-20	4.2 Water Resources	J-4-13
Eder		0068	0173-21	4.2 Water Resources	J-4-13
Eder		0068	0173-22	4.2 Water Resources	J-4-14
Eder		0068	0173-23	4.3 Aquatic Biota and Habitat	J-4-15
Eder		0068	0173-24	4.6 Air Quality	J-4-30
Eder		0068	0173-29	4.6 Air Quality	J-4-31
Eder		0068	0173-30	5.3 Development Effects/Potential	J-5-46
Eder		0068	0173-15	6.1 Transit Effects	J-6-22
Eder		0068	0173-7	6.2 Effects on Roadways	J-6-49
Eder		0068	0173-25	6.2 Effects on Roadways	J-6-54
Eder		0068	0173-13	6.2 Effects on Roadways	J-6-55
Eder		0068	0173-14	6.2 Effects on Roadways	J-6-51
Eder		0068	0173-37	6.2 Effects on Roadways	J-6-51
Eder		0068	0173-16	8.1 Capital Funding Strategy	J-8-57
Eder		0068	0173-18	9.2 Cumulative Effects	J-9-25
Eder		0068	0173-9	General Plans	J-GP-12
Eder		0068	0173-35	General Plans	J-GP-11
Eder		0068	0173-36	General Plans	J-GP-11
Eder		0068	0173-38	General Plans	J-GP-11
Eder		0068	0076-1	11.1 Public Involvement	J-11-12
Eder		0068	0173-39	11.1 Public Involvement	J-11-12
Eder		0068	0076-2	12.1 Concerns Over Study Process	J-12-14
Eder		0068	0173-4	12.1 Concerns Over Study Process	J-12-13
Edwards		0041	0042-7	2.2 Draft EIS Alternatives	J-2-193
Edwards		0041	0042-12	2.2 Draft EIS Alternatives Facilities	J-2-201
Edwards		0041	0042-2	2.3 Supplemental Draft EIS Alternatives	J-2-225
Edwards		0041	0042-8	2.3 Supplemental Draft EIS Alternatives	J-2-236
Edwards		0041	0042-9	2.3 Supplemental Draft EIS Alternatives	J-2-236
Edwards		0041	0042-13	2.3 Supplemental Draft EIS Alternatives	J-2-226
Edwards		0041	0066-1	2.3 Supplemental Draft EIS Alternatives	J-2-227 & 238
Edwards		0041	0042-1	2.3 Supplemental Draft EIS Alternatives Support Project Phasing	J-2-227 & 238
Edwards		0041	0042-10	2.4 Suggestions for Other Alternatives	J-2-259
Edwards		0041	0042-11	2.4 Suggestions for Other Alternatives	J-2-259
Edwards		0041	0042-6	3.1 Land Use and Socioeconomics	J-3-8
Edwards		0041	0042-4	5.1 Economic Conditions	J-5-8
Edwards		0041	0042-3	8.1 Capital Funding Strategy	J-8-48
Edwards		0041	0042-5	9.1 Secondary Development Effects	J-9-24
Emory	Tuckahoe Recreation Club	0152	2-01	2.2 Draft EIS Alternatives	J-2-186
Falck-Muten	Susan Falck-Muten & Associates	0019	0020-1	8.1 Capital Funding Strategy	J-8-57
Falck-Muten	Susan Falck-Muten & Associates	0019	0020-2	8.1 Capital Funding Strategy	J-8-57
Flemer		0126	0161-1	3.2 Neighborhood, Community Services and Community Cohesion	J-3-25
Flemer		0126	0161-2	4.7 Noise	J-4-91
Fletcher		0127	0162-1	3.2 Neighborhood, Community Services and Community Cohesion	J-3-25
Fletcher		0127	0162-2	4.7 Noise	J-4-91
Fontaine		0122	0156-1	4.7 Noise	J-4-85
Freeman		0012	0012-2	2.3 Supplemental Draft EIS Alternatives	J-2-241
Freeman		0012	0012-1	2.3 Supplemental Draft EIS Alternatives Support Project Phasing	J-2-242
Gear		0162	2-01	2.3 Supplemental Draft EIS Alternatives and Recommendations	J-2-219
Gear		0162	12-1	12.1 Concerns Over Study Process	J-12-9
Gear		0162	12-2	12.1 Concerns Over Study Process	J-12-10
Gear		0162	12-3	12.1 Concerns Over Study Process	J-12-10
Gear		0162	12-4	12.1 Concerns Over Study Process	J-12-10
Gear		0162	12-5	12.1 Concerns Over Study Process	J-12-11
Genetti	Montgomery Co. Dept. of Public Works and Transportation	0079	1-01	1.0 Purpose and Need	J-1-14
Genetti	Montgomery Co. Dept. of Public Works and Transportation	0079	0092-1	2.4 Suggestions for Other Alternatives	J-2-254
Genetti	Montgomery Co. Dept. of Public Works and Transportation	0079	0092-2	8.2 Operating Funding Strategy	J-8-62

Index J.1-2 Supplemental Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Ghannam	Westhampton Civic Association	0099	0115-2	3.2 Neighborhood, Community Services and Community Cohesion	J-3-26
Ghannam	Westhampton Civic Association	0099	0115-10	3.2 Neighborhood, Community Services and Community Cohesion	J-3-29
Ghannam	Westhampton Civic Association	0099	0115-5	4.7 Noise	J-4-93
Ghannam	Westhampton Civic Association	0099	0115-6	4.7 Noise	J-4-88
Ghannam	Westhampton Civic Association	0099	0115-3	6.2 Effects on Roadways	J-6-51
Ghannam	Westhampton Civic Association	0099	0115-7	6.2 Effects on Roadways	J-6-56
Ghannam	Westhampton Civic Association	0099	0115-8	6.2 Effects on Roadways	J-6-53
Ghannam	Westhampton Civic Association	0099	0115-9	6.2 Effects on Roadways	J-6-51
Ghannam	Westhampton Civic Association	0099	0115-1	11.1 Public Involvement	J-11-13
Ghannam	Westhampton Civic Association	0099	0115-4	11.2 Agency Coordination	J-11-21
Ghannam	Westhampton Civic Association	0099	0115-11	13.1 Schedule/Process for Implementation	J-13-7
Gibson		0011	0011-2	2.1 Alternatives Previously Considered	J-2-29
Gibson		0011	0011-1	4.7 Noise	J-4-85
Gilmartin		0129	0164-1	3.2 Neighborhood, Community Services and Community Cohesion	J-3-25
Gilmartin		0129	0164-2	4.7 Noise	J-4-91
Goodman	Wiley, Rein, and Fielding for HBL of Tysons	0070	2-01	2.2 Draft EIS Alternatives	J-2-214
Goodman	Wiley, Rein, and Fielding for HBL of Tysons	0070	2-02	2.2 Draft EIS Alternatives	J-2-202
Goodman	Wiley, Rein, and Fielding for HBL of Tysons	0070	2-03	2.3 Supplemental Draft EIS Alternatives	J-2-210
Goodman	Wiley, Rein, and Fielding for HBL of Tysons	0070	2-04	2.3 Supplemental Draft EIS Alternatives	J-2-214
Goodman	Wiley, Rein, and Fielding for HBL of Tysons	0070	2-05	2.3 Supplemental Draft EIS Alternatives	J-2-216
Goodman	Wiley, Rein, and Fielding for HBL of Tysons	0070	2-06	2.3 Supplemental Draft EIS Alternatives	J-2-217
Goodman	Wiley, Rein, and Fielding for HBL of Tysons	0070	2-07	2.3 Supplemental Draft EIS Alternatives	J-2-224
Goodman	Wiley, Rein, and Fielding for HBL of Tysons	0070	0138-2	2.3 Supplemental Draft EIS Alternatives	J-2-235
Goodman	Wiley, Rein, and Fielding for HBL of Tysons	0070	0138-3	2.3 Supplemental Draft EIS Alternatives	J-2-235
Goodman	Wiley, Rein, and Fielding for HBL of Tysons	0070	0079-1	3.3 Property Acquisition and Displacement	J-3-31
Goodman	Wiley, Rein, and Fielding for HBL of Tysons	0070	0079-2	3.3 Property Acquisition and Displacement	J-3-32
Goodman	Wiley, Rein, and Fielding for HBL of Tysons	0070	0138-1	3.3 Property Acquisition and Displacement	J-3-32
Gorenflo		0043	0044-1	2.3 Supplemental Draft EIS Alternatives	J-2-240
Gorenflo		0043	0044-2	2.3 Supplemental Draft EIS Alternatives	J-2-243
Griffin	Rosenthal Honda	0163	2-01	2.3 Supplemental Draft EIS Alternatives	J-2-220
Grow	Greater Washington Board of Trade	0078	0091-1	2.3 Supplemental Draft EIS Alternatives	J-2-227
Guillot		0022	0023-1	4.7 Noise	J-4-90
Hadd		0155	2-01	2.2 Draft EIS Alternatives	J-2-186
Halpin	West*Group	0123	0158-15	2.2 Draft EIS Alternatives	J-2-195
Halpin	West*Group	0123	0158-16	2.2 Draft EIS Alternatives	J-2-195
Halpin	West*Group	0123	0158-23	2.2 Draft EIS Alternatives	J-2-195
Halpin	West*Group	0123	0158-27	2.2 Draft EIS Alternatives	J-2-195
Halpin	West*Group	0123	0158-1	2.3 Supplemental Draft EIS Alternatives	J-2-227
Halpin	West*Group	0123	0158-4	2.3 Supplemental Draft EIS Alternatives	J-2-238 & 239
Halpin	West*Group	0123	0158-5	2.3 Supplemental Draft EIS Alternatives	J-2-237
Halpin	West*Group	0123	0158-13	2.3 Supplemental Draft EIS Alternatives	J-2-225
Halpin	West*Group	0123	0158-17	2.3 Supplemental Draft EIS Alternatives	J-2-237
Halpin	West*Group	0123	0158-18	2.3 Supplemental Draft EIS Alternatives	J-2-236
Halpin	West*Group	0123	0158-22	2.3 Supplemental Draft EIS Alternatives	J-2-237
Halpin	West*Group	0123	0158-25	2.3 Supplemental Draft EIS Alternatives	J-2-236
Halpin	West*Group	0123	0158-2	3.1 Land Use and Socioeconomics	J-3-7
Halpin	West*Group	0123	0158-6	3.1 Land Use and Socioeconomics	J-3-8
Halpin	West*Group	0123	0158-8	3.1 Land Use and Socioeconomics	J-3-7
Halpin	West*Group	0123	0158-12	3.1 Land Use and Socioeconomics	J-3-6
Halpin	West*Group	0123	0158-3	4.2 Water Resources	J-4-14
Halpin	West*Group	0123	0158-9	4.2 Water Resources	J-4-14
Halpin	West*Group	0123	0158-10	4.7 Noise	J-4-89
Halpin	West*Group	0123	0158-20	4.7 Noise	J-4-84
Halpin	West*Group	0123	0158-24	4.7 Noise	J-4-84
Halpin	West*Group	0123	0158-11	5.1 Economic Conditions	J-5-8
Halpin	West*Group	0123	0158-28	11.1 Public Involvement	J-11-11
Halpin	West*Group	0123	0158-7	General Plans	J-GP-13
Halpin	West*Group	0123	0158-14	General Plans	J-GP-12
Halpin	West*Group	0123	0158-19	General Plans	J-GP-12
Halpin	West*Group	0123	0158-21	General Plans	J-GP-13
Halpin	West*Group	0123	0158-26	General Plans	J-GP-12
Hamberg		0121	0155-1	4.7 Noise	J-4-85
Hamberg		0121	0155-2	6.2 Effects on Roadways	J-6-52

Index J.1-2 Supplemental Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Hanley	Fairfax County Board Chair	0083	0098-4	2.2 Draft EIS Alternatives	J-2-180
Hanley	Fairfax County Board Chair	0083	0098-2	2.2 Draft EIS Alternatives Pedestrian and Bicycle Access	J-2-180
Hanley	Fairfax County Board Chair	0083	0098-1	2.2 Draft EIS Alternatives Parking	J-2-181
Hanley	Fairfax County Board Chair	0083	0098-5	4.7 Noise	J-4-81
Hanley	Fairfax County Board Chair	0083	0098-3	6.2 Effects on Roadways	J-6-49
Hanley	Fairfax County Board Chair	0083	0098-6	General Plans	J-GP-9
Hannigan		0027	0028-3	2.3 Supplemental Draft EIS Alternatives Support BRT Alternative	J-2-244
Hannigan		0027	0028-1	8.1 Capital Funding Strategy	J-8-49
Hannigan		0027	0028-2	8.1 Capital Funding Strategy	J-8-58
Harvey		0125	0160-1	3.2 Neighborhood, Community Services and Community Cohesion	J-3-25
Harvey		0125	0160-2	4.7 Noise	J-4-91
Hawkins		0235	0235-E -5	6.3 Effects On Other Transportation Facilities and Services	J-6-70
Hawkins		0235	0235-E -4	6.3 Effects On Other Transportation Facilities and Services	J-6-70
Hawkins		0235	0235-E -2	6.3 Effects On Other Transportation Facilities and Services	J-6-70
Heim	Sunbelt Rentals, Inc General Counsel	0161	2-01	2.3 Supplemental Draft EIS Alternatives and Recommendations	J-2-218
Herman		0164	11-1	11.2 Agency Coordination	J-11-20
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0072	0082-1	2.3 Supplemental Draft EIS Alternatives	J-2-230
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0072	0082-4	2.4 Suggestions for Other Alternatives	J-2-261
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0072	0150-7	3.8 Environmental Justice	J-3-60
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0072	0150-3	6.1 Transit Effects	J-6-19
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0072	0082-6	8.1 Capital Funding Strategy	J-8-51
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0072	0082-7	8.1 Capital Funding Strategy	J-8-54
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0072	0150-10	8.1 Capital Funding Strategy	J-8-55
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0072	0150-11	8.1 Capital Funding Strategy	J-8-55
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0072	0150-4	8.2 Operating Funding Strategy	J-8-65
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0072	0150-2	10.1 Evaluation Relative to Project Goals and Objectives	J-10-32
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0072	0082-2	12.1 Concerns Over Study Process	J-12-14
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0072	0082-3	12.1 Concerns Over Study Process	J-12-14
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0072	0150-1	12.1 Concerns Over Study Process	J-12-13
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0072	0150-5	12.1 Concerns Over Study Process	J-12-12
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0072	0150-8	12.1 Concerns Over Study Process	J-12-12
Hirst	Rapid Transit Action Committee/Mason Hirst Companies	0072	0150-9	12.1 Concerns Over Study Process	J-12-13
Hoffman	United States Environmental Protection Agency Region III	0085	0100-2	2.3 Supplemental Draft EIS Alternatives	J-2-203
Hoffman	United States Environmental Protection Agency Region III	0085	0100-1	6.1 Transit Effects	J-6-13
Holden	Committee for Dulles	0067	0075-7	2.2 Draft EIS Alternatives	J-2-201
Holden	Committee for Dulles	0067	0075-8	2.2 Draft EIS Alternatives	J-2-201
Holden	Committee for Dulles	0067	0075-2	2.2 Draft EIS Alternatives	J-2-193
Holden	Committee for Dulles	0067	0075-9	2.3 Supplemental Draft EIS Alternatives	J-2-228
Holden	Committee for Dulles	0067	0075-6	2.4 Suggestions for Other Alternatives	J-2-259
Holden	Committee for Dulles	0067	0075-5	6.3 Effects On Other Transportation Facilities and Services	J-6-68
Holden	Committee for Dulles	0067	0075-3	6.3 Effects On Other Transportation Facilities and Services	J-6-68
Holden	Committee for Dulles	0067	0075-4	6.3 Effects On Other Transportation Facilities and Services	J-6-68
Holden	Committee for Dulles	0067	0075-1	9.1 Secondary Development Effects	J-9-24
Holly	Metropolitan Washington Airports Authority	0131	0166-1	2.3 Supplemental Draft EIS Alternatives	J-2-204
Holly	Metropolitan Washington Airports Authority	0131	0166-4	2.3 Supplemental Draft EIS Alternatives	J-2-204
Holly	Metropolitan Washington Airports Authority	0131	0166-2	2.4 Suggestions for Other Alternatives	J-2-255
Holly	Metropolitan Washington Airports Authority	0131	0166-5	3.5 Cultural Resources	J-3-50
Holly	Metropolitan Washington Airports Authority	0131	0166-6	10.1 Evaluation Relative to Project Goals and Objectives	J-10-32
Holly	Metropolitan Washington Airports Authority	0131	0166-3	11.2 Agency Coordination	J-11-20

Index J.1-2 Supplemental Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Holma	Virginia Department of Historic Resources	0010	0010-1	3.5 Cultural Resources	J-3-49
Holma	Virginia Department of Historic Resources	0010	0010-2	3.5 Cultural Resources	J-3-49
Holma	Virginia Department of Historic Resources	0010	0010-3	3.5 Cultural Resources	J-3-49
Horwatt	Peacock Buick	0136	2-05	2.2 Draft EIS Alternatives	J-2-211
Horwatt	Peacock Buick	0136	2-01	2.3 Supplemental Draft EIS Alternatives	J-2-216
Horwatt	Peacock Buick	0136	2-02	2.3 Supplemental Draft EIS Alternatives	J-2-216
Horwatt	Peacock Buick	0136	2-03	2.3 Supplemental Draft EIS Alternatives	J-2-218
Horwatt	Peacock Buick	0136	2-04	2.3 Supplemental Draft EIS Alternatives	J-2-223
Howard	Wellborn Management Co., Inc., Realtors	0096	0112-1	2.3 Supplemental Draft EIS Alternatives	J-2-240
Howard	Wellborn Management Co., Inc., Realtors	0096	0112-3	6.1 Transit Effects	J-6-22
Howard	Wellborn Management Co., Inc., Realtors	0096	0112-2	6.2 Effects on Roadways	J-6-52
Hudgins	Fairfax County Board Supervisor	0058	0059-1	2.3 Supplemental Draft EIS Alternatives	J-2-225
Iglhaut	Northern Virginia Regional Park Authority	0086	0101-1	3.6 Parklands and Recreation Areas	J-3-53
Iglhaut	Northern Virginia Regional Park Authority	0086	0101-2	3.6 Parklands and Recreation Areas	J-3-53
Ingebristen, K.		0020	0021-1	2.3 Supplemental Draft EIS Alternatives	J-2-239
Ingebritsen, S.		0035	0036-1	2.3 Supplemental Draft EIS Alternatives	J-2-239
Ingebritsen, S.		0035	0036-2	6.1 Transit Effects	J-6-14
Irons		0080	0094-8	3.6 Parklands and Recreation Areas	J-3-52
Irons		0080	0094-2	4.2 Water Resources	J-4-9
Irons		0080	0094-4	4.2 Water Resources	J-4-9
Irons		0080	0094-5	4.2 Water Resources	J-4-9
Irons		0080	0094-6	4.2 Water Resources	J-4-10
Irons		0080	0094-7	4.2 Water Resources	J-4-9
Irons		0080	0094-10	4.2 Water Resources	J-4-9
Irons		0080	0094-11	4.2 Water Resources	J-4-9
Irons		0080	0094-15	4.2 Water Resources	J-4-9
Irons		0080	0094-1	4.6 Air Quality	J-4-30
Irons		0080	0094-3	4.9 Hazardous and Contaminated Materials	J-4-97
Irons		0080	0094-9	4.9 Hazardous and Contaminated Materials	J-4-97
Irons		0080	0094-12	4.9 Hazardous and Contaminated Materials	J-4-97
Irons		0080	0094-13	4.9 Hazardous and Contaminated Materials	J-4-97
Irons		0080	0094-14	4.9 Hazardous and Contaminated Materials	J-4-97
Johnston	Boston Properties	0062	0070-1	2.3 Supplemental Draft EIS Alternatives	J-2-240
Johnston	Boston Properties	0062	0070-2	2.4 Suggestions for Other Alternatives	J-2-257
Johnston	Boston Properties	0062	0070-3	6.2 Effects on Roadways	J-6-56
Johnston	Boston Properties	0062	0070-4	8.2 Operating Funding Strategy	J-8-63
Jones	Reston Association	0039	0040-5	2.2 Draft EIS Alternatives	J-2-199
Jones	Reston Association	0039	0040-1	2.3 Supplemental Draft EIS Alternatives	J-2-227
Jones	Reston Association	0039	0040-2	2.3 Supplemental Draft EIS Alternatives	J-2-241
Jones	Reston Association	0039	0040-4	2.3 Supplemental Draft EIS Alternatives	J-2-243
Jones	Reston Association	0039	0040-6	2.3 Supplemental Draft EIS Alternatives	J-2-228
Jones	Reston Association	0039	0040-9	2.3 Supplemental Draft EIS Alternatives	J-2-238
Jones	Reston Association	0039	0040-10	5.3 Development Effects/Potential	J-5-46
Jones	Reston Association	0039	0040-3	6.2 Effects on Roadways	J-6-54
Jones	Reston Association	0039	0040-8	6.2 Effects on Roadways	J-6-55
Jones	Reston Association	0039	0040-7	9.1 Secondary Development Effects	J-9-24
Jones	Reston Association	0039	0040-11	11.1 Public Involvement	J-11-13
Kalet		0025	2-01	2.2 Draft EIS Alternatives	J-2-183
Kalet		0025	2-02	2.2 Draft EIS Alternatives	J-2-187
Kalet		0025	0026-1	3.2 Neighborhood, Community Services and Community Cohesion	J-3-27
Kalet		0025	0065-1	3.2 Neighborhood, Community Services and Community Cohesion	J-3-27
Kalet		0025	0065-2	3.2 Neighborhood, Community Services and Community Cohesion	J-3-27
Kalet		0025	0026-2	3.4 Visual and Aesthetic Conditions	J-3-27
Kalet		0025	0026-3	4.7 Noise	J-4-87
Kalet		0025	0026-4	4.7 Noise	J-4-87
Kalet		0025	0026-5	4.7 Noise	J-4-88
Kalet		0025	0026-6	4.7 Noise	J-4-86
Kalet		0025	0026-8	4.7 Noise	J-4-88
Kalet		0025	0065-3	4.7 Noise	J-4-89
Kalet		0025	0026-7	6.2 Effects on Roadways	J-6-52

Index J.1-2 Supplemental Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Kane		0042	0043-1	2.3 Supplemental Draft EIS Alternatives	J-2-225
Kane		0042	0043-2	2.3 Supplemental Draft EIS Alternatives	J-2-240
Kane		0042	0043-3	2.3 Supplemental Draft EIS Alternatives	J-2-242
Kane		0042	0043-5	3.1 Land Use and Socioeconomics	J-3-7
Kane		0042	0043-6	6.2 Effects on Roadways	J-6-55
Kane		0042	0043-7	6.2 Effects on Roadways	J-6-55
Kane		0042	0043-8	8.1 Capital Funding Strategy	J-8-66
Kane		0042	0043-4	9.1 Secondary Development Effects	J-9-25
Kennedy	Patton, Harris, Rust, and Associates	0053	0054-5	2.2 Draft EIS Alternatives	J-2-197
Kennedy	Patton, Harris, Rust, and Associates	0053	0054-1	2.2 Draft EIS Alternatives	J-2-197
Kennedy	Patton, Harris, Rust, and Associates	0053	0054-4	2.2 Draft EIS Alternatives	J-2-197
Kennedy	Patton, Harris, Rust, and Associates	0053	0054-9	2.2 Draft EIS Alternatives	J-2-198
Kennedy	Patton, Harris, Rust, and Associates	0053	0139-3	2.2 Draft EIS Alternatives	J-2-195
Kennedy	Patton, Harris, Rust, and Associates	0053	0139-5	2.2 Draft EIS Alternatives	J-2-195
Kennedy	Patton, Harris, Rust, and Associates	0053	0139-6	2.2 Draft EIS Alternatives	J-2-194
Kennedy	Patton, Harris, Rust, and Associates	0053	2-01	2.3 Supplemental Draft EIS Alternatives	J-2-210
Kennedy	Patton, Harris, Rust, and Associates	0053	2-02	2.3 Supplemental Draft EIS Alternatives	J-2-210
Kennedy	Patton, Harris, Rust, and Associates	0053	2-03	2.3 Supplemental Draft EIS Alternatives	J-2-217
Kennedy	Patton, Harris, Rust, and Associates	0053	0139-1	2.3 Supplemental Draft EIS Alternatives	J-2-235
Kennedy	Patton, Harris, Rust, and Associates	0053	0139-2	2.3 Supplemental Draft EIS Alternatives	J-2-235
Kennedy	Patton, Harris, Rust, and Associates	0053	0054-2	3.3 Property Acquisition and Displacement	J-3-32
Kennedy	Patton, Harris, Rust, and Associates	0053	0054-3	General Plans	J-GP-14
Kennedy	Patton, Harris, Rust, and Associates	0053	0054-6	General Plans	J-GP-15
Kennedy	Patton, Harris, Rust, and Associates	0053	0054-7	General Plans	J-GP-15
Kennedy	Patton, Harris, Rust, and Associates	0053	0054-8	General Plans	J-GP-15
Kennedy	Patton, Harris, Rust, and Associates	0053	0139-4	General Plans	J-GP-14
Kennedy	Patton, Harris, Rust, and Associates	0053	0139-7	General Plans	J-GP-15
Kennedy	Patton, Harris, Rust, and Associates	0053	0139-8	General Plans	J-GP-15
Kennedy	Patton, Harris, Rust, and Associates	0053	0139-9	General Plans	J-GP-15
Kennedy, L.		0051	0052-1	3.2 Neighborhoods, Community Services, and Community Cohesi	J-3-25
Kessler		0009	0009-1	2.2 Draft EIS Alternatives	J-2-197
Kunz		0110	0129-1	2.3 Supplemental Draft EIS	J-2-230
Liebeler	Tuckahoe Recreation Club	0151	2-01	2.2 Draft EIS Alternatives	J-2-185
Lincoln		0005	0005-1	4.7 Noise	J-4-85
Lincoln		0005	4-01	4.7 Noise	J-4-82
Lowry		0100	0116-1	3.2 Neighborhood, Community Services and Community Cohesion	J-3-25
Lowry		0100	0116-2	4.7 Noise	J-4-91
Maio		0115	0135-3	5.3 Development Effects/Potential	J-5-46
Maio		0115	0135-4	5.3 Development Effects/Potential	J-5-47
Maio		0115	0135-2	5.3 Development Effects/Potential	J-5-47
Maio		0115	0135-1	8.1 Capital Funding Strategy	J-8-58
Marsteller	Merchant Auto and Tire Center	0092	0108-1	3.3 Property Acquisition and Displacement	J-3-32
Marsteller	Merchant Auto and Tire Center	0092	0108-2	3.3 Property Acquisition and Displacement	J-3-32
Marsteller	Merchant Auto and Tire Center	0092	0108-3	3.3 Property Acquisition and Displacement	J-3-32
Martin		0120	0154-1	2.3 Supplemental Draft EIS Alternatives	J-2-225
Martin		0120	0154-2	2.3 Supplemental Draft EIS Alternatives	J-2-240
May	Westhampton Civic Association	0104	0121-8	3.2 Neighborhood, Community Services and Community Cohesion	J-3-29
May	Westhampton Civic Association	0104	0121-2	3.2 Neighborhoods, Community Services, and Community Cohesi	J-3-26
May	Westhampton Civic Association	0104	0121-3	4.7 Noise	J-4-93
May	Westhampton Civic Association	0104	0121-4	4.7 Noise	J-4-88
May	Westhampton Civic Association	0104	0121-5	6.2 Effects on Roadways	J-6-56
May	Westhampton Civic Association	0104	0121-6	6.2 Effects on Roadways	J-6-53
May	Westhampton Civic Association	0104	0121-7	6.2 Effects on Roadways	J-6-51
May	Westhampton Civic Association	0104	0121-1	11.1 Public Involvement	J-11-13
May	Westhampton Civic Association	0104	0121-9	13.1 Schedule/Process for Implementation	J-13-7
McAllister		0029	0030-1	2.2 Draft EIS Alternatives	J-2-196
McAllister		0029	0030-2	2.2 Draft EIS Alternatives	J-2-193
McGuire, C.		0033	0034-2	2.3 Supplemental Draft EIS Alternatives	J-2-243
McGuire, C.		0033	0034-3	2.3 Supplemental Draft EIS Alternatives	J-2-230
McGuire, C.		0033	0034-1	8.1 Capital Funding Strategy	J-8-49
McGuire, M.	National Motorists Association	0015	0016-1	2.3 Supplemental Draft EIS Alternatives	J-2-229
Melton	Westhampton Civic Association	0088	0103-1	4.7 Noise	J-4-87
Michau		0094	0110-1	2.3 Supplemental Draft EIS Alternatives	J-2-240
Michau		0094	0110-2	6.2 Effects on Roadways	J-6-55

Index J.1-2 Supplemental Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Mills		0140	4-01	4.7 Noise	J-4-83
Milon		0017	0118-2	3.2 Neighborhood, Community Services and Community Cohesion	J-3-28
Milon		0017	0118-1	4.7 Noise	J-4-87
Mitchell		0102	0119-3	2.2 Draft EIS Alternatives Parking	J-2-196
Mitchell		0102	0119-1	8.1 Capital Funding Strategy	J-8-56
Mitchell		0102	0119-2	9.1 Secondary Development Effects	J-9-24
Moore		0031	0032-1	3.2 Neighborhood, Community Services and Community Cohesion	J-3-25
Moske	Hallcrest Heights Homeowners Association	0138	4-01	4.7 Noise	J-4-82
Motz	Commercial Condominium Management Company'	0004	0004-1	2.2 Draft EIS Alternatives	J-2-196
Motz	Commercial Condominium Management Company'	0004	0004-2	2.2 Draft EIS Alternatives	J-2-196
Motz	Commercial Condominium Management Company'	0004	0004-4	2.2 Draft EIS Alternatives	J-2-196
Motz	Commercial Condominium Management Company'	0004	0004-3	2.3 Supplemental Draft EIS Alternatives	J-2-236
Motz	Commercial Condominium Management Company'	0004	0004-5	General Plans	J-GP-10
Muten	ARC Corporation	0014	0015-4	3.2 Neighborhood, Community Services and Community Cohesion	J-3-28
Muten	ARC Corporation	0014	0015-2	3.4 Visual and Aesthetic Conditions	J-3-44
Muten	ARC Corporation	0014	0015-1	4.7 Noise	J-4-90
Muten	ARC Corporation	0014	0015-3	4.7 Noise	J-4-92
Naef		0056	0057-2	2.3 Supplemental Draft EIS Alternatives	J-2-243
Naef		0056	0057-3	2.3 Supplemental Draft EIS Alternatives	J-2-241
Naef		0056	0057-1	6.2 Effects on Roadways	J-6-56
Nagle		0071	0080-1	2.3 Supplemental Draft EIS Alternatives	J-2-230
Nagle		0071	0080-2	8.1 Capital Funding Strategy	J-8-49
Nagle		0071	0080-3	8.1 Capital Funding Strategy	J-8-49
Nagle		0071	0080-4	9.1 Secondary Development Effects	J-9-23
Nicoson	Dulles Corridor Rail Association	0060	0063-4	2.2 Draft EIS Alternatives	J-2-199
Nicoson	Dulles Corridor Rail Association	0060	0063-6	2.2 Draft EIS Alternatives	J-2-194
Nicoson	Dulles Corridor Rail Association	0060	0169-7	2.2 Draft EIS Alternatives	J-2-194
Nicoson	Dulles Corridor Rail Association	0060	0169-9	2.2 Draft EIS Alternatives	J-2-199
Nicoson	Dulles Corridor Rail Association	0060	0169-12	2.2 Draft EIS Alternatives	J-2-193
Nicoson	Dulles Corridor Rail Association	0060	0169-1	2.3 Supplemental Draft EIS Alternatives	J-2-227 & 238
Nicoson	Dulles Corridor Rail Association	0060	0063-1	2.3 Supplemental Draft EIS Alternatives	J-2-225 & 239
Nicoson	Dulles Corridor Rail Association	0060	0134-1	2.3 Supplemental Draft EIS Alternatives	J-2-239
Nicoson	Dulles Corridor Rail Association	0060	0134-2	2.3 Supplemental Draft EIS Alternatives	J-2-225
Nicoson	Dulles Corridor Rail Association	0060	0169-2	2.3 Supplemental Draft EIS Alternatives	J-2-225 & 239
Nicoson	Dulles Corridor Rail Association	0060	0169-5	2.3 Supplemental Draft EIS Alternatives	J-2-232
Nicoson	Dulles Corridor Rail Association	0060	0169-6	2.3 Supplemental Draft EIS Alternatives	J-2-232
Nicoson	Dulles Corridor Rail Association	0060	0169-15	2.3 Supplemental Draft EIS Alternatives	J-2-228
Nicoson	Dulles Corridor Rail Association	0060	0063-3	3.1 Land Use and Socio-economics	J-3-8
Nicoson	Dulles Corridor Rail Association	0060	0063-5	3.1 Land Use and Socio-economics	J-3-9
Nicoson	Dulles Corridor Rail Association	0060	0169-4	3.1 Land Use and Socio-economics	J-3-9
Nicoson	Dulles Corridor Rail Association	0060	0169-10	3.1 Land Use and Socio-economics	J-3-7
Nicoson	Dulles Corridor Rail Association	0060	0063-2	5.1 Economic Conditions	J-5-8
Nicoson	Dulles Corridor Rail Association	0060	0169-13	6.1 Transit Effects	J-6-17
Nicoson	Dulles Corridor Rail Association	0060	0169-3	9.1 Secondary Development Effects	J-9-24
Nicoson	Dulles Corridor Rail Association	0060	0169-11	11.2 Agency Coordination	J-11-21
Nicoson	Dulles Corridor Rail Association	0060	0169-14	11.2 Agency Coordination	J-11-21
Nicoson	Dulles Corridor Rail Association	0060	0169-8	General Plans	J-GP-14
Noe	Town of Leesburg Town Manager	0142	6-1	6.3 Effects on Other Transportation Facilities and Services	J-6-67
O'Connor		0128	0163-1	3.2 Neighborhood, Community Services and Community Cohesion	J-3-25
O'Connor		0128	0163-2	4.7 Noise	J-4-91
Oppong		0147	03-01	3.2 Neighborhood, Community Services and Community Cohesion	J-3-25
Page	Federal Aviation Administration, Washington Airports District Office	0146	11-1	11.2 Agency Coordination	J-11-19
Parnes		0064	0072-2	2.2 Draft EIS Alternatives	J-2-200
Parnes		0064	0072-3	2.2 Draft EIS Alternatives	J-2-198
Parnes		0064	0152-2	2.2 Draft EIS Alternatives	J-2-200
Parnes		0064	0152-3	2.2 Draft EIS Alternatives	J-2-198
Parnes		0064	0072-4	2.3 Supplemental Draft EIS Alternatives	J-2-235
Parnes		0064	0152-4	2.3 Supplemental Draft EIS Alternatives	J-2-235
Parnes		0064	0072-1	2.4 Suggestions for Other Alternatives	J-2-262
Parnes		0064	0072-6	2.4 Suggestions for Other Alternatives	J-2-262
Parnes		0064	0152-1	2.4 Suggestions for Other Alternatives	J-2-262
Parnes		0064	0152-7	2.4 Suggestions for Other Alternatives	J-2-262
Parnes		0064	0072-5	6.1 Transit Effects	J-6-15

Index J.1-2 Supplemental Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Parnes		0064	0152-5	6.2 Effects on Roadways	J-6-55
Pattana		0139	4-01	4.7 Noise	J-4-82
Peacock	Peacock Buick	0158	2-01	2.3 Supplemental Draft EIS Alternatives	J-2-210
Pew		0074	0084-1	2.3 Supplemental Draft EIS Alternatives	J-2-240
Pew		0074	0084-2	2.3 Supplemental Draft EIS Alternatives	J-2-243
Pitts	Comstock Companies	0052	0053-1	2.3 Supplemental Draft EIS Alternatives	J-2-225
Pitts	Comstock Companies	0052	0053-3	2.3 Supplemental Draft EIS Alternatives	J-2-225
Pitts	Comstock Companies	0052	0144-1	2.3 Supplemental Draft EIS Alternatives	J-2-225
Pitts	Comstock Companies	0052	0053-2	11.1 Public Involvement	J-11-13
Plum	Dulles Corridor Rail Association	0037	0060-3	2.3 Supplemental Draft EIS Alternatives	J-2-228
Plum	Dulles Corridor Rail Association	0037	0038-1	2.3 Supplemental Draft EIS Alternatives	J-2-228
Plum	Dulles Corridor Rail Association	0037	0060-1	2.3 Supplemental Draft EIS Alternatives	J-2-226
Plum	Dulles Corridor Rail Association	0037	0060-2	2.3 Supplemental Draft EIS Alternatives	J-2-228
Plum	Dulles Corridor Rail Association	0037	0060-4	3.1 Land-Use and Socio-Economics	J-3-8
Prelewicz		0032	0033-1	2.3 Supplemental Draft EIS Alternatives	J-2-226
Pronske		0047	0048-1	2.3 Supplemental Draft EIS Alternatives	J-2-241
Pronske		0047	0048-2	3.2 Neighborhood, Community Services and Community Cohesion	J-3-25
Ralston		0045	0046-1	2.3 Supplemental Draft EIS Alternatives	J-2-241
Ralston		0045	0046-2	6.2 Effects on Roadways	J-6-52
Rauner	Business Bank, United Financial Banking Companies, Inc.	0148	3-01s	3.3 Property Acquisition and Displacement	J-3-31
Reid	Washington Information Source Co	0016	1-01	1.0 Purpose and Need	J-1-14
Reid	Washington Information Source Co.	0016	0122-11	2.2 Draft EIS Alternatives	J-2-192
Reid	Washington Information Source Co.	0016	0122-5	2.2 Draft EIS Alternatives Facilities	J-2-199
Reid	Washington Information Source Co.	0016	0122-7	2.2 Draft EIS Alternatives Facilities	J-2-199
Reid	Washington Information Source Co.	0016	0122-8	2.2 Draft EIS Alternatives Facilities	J-2-199
Reid	Washington Information Source Co.	0016	0122-19	2.2 Draft EIS Alternatives Facilities	J-2-198
Reid	Washington Information Source Co.	0016	0140-1	2.3 Supplemental Draft EIS Alternatives	J-2-242
Reid	Washington Information Source Co.	0016	0140-4	2.3 Supplemental Draft EIS Alternatives	J-2-229
Reid	Washington Information Source Co.	0016	0122-1	2.3 Supplemental Draft EIS Alternatives	J-2-242
Reid	Washington Information Source Co.	0016	0122-4	2.4 Suggestions for Other Alternatives	J-2-261
Reid	Washington Information Source Co.	0016	0122-17	3.1 Land Use and Socio-economics	J-3-7
Reid	Washington Information Source Co.	0016	0122-14	4.6 Air Quality	J-4-31
Reid	Washington Information Source Co.	0016	0122-10	6.1 Transit Effects	J-6-16
Reid	Washington Information Source Co.	0016	0122-22	6.1 Transit Effects	J-6-17
Reid	Washington Information Source Co.	0016	0122-6	6.1 Transit Effects	J-6-14
Reid	Washington Information Source Co.	0016	0122-15	6.1 Transit Effects	J-6-19
Reid	Washington Information Source Co.	0016	0122-13	6.2 Effects on Roadways	J-6-53
Reid	Washington Information Source Co.	0016	0140-3	6.2 Effects on Roadways	J-6-54
Reid	Washington Information Source Co.	0016	0122-9	6.2 Effects on Roadways	J-6-46
Reid	Washington Information Source Co.	0016	0122-18	6.2 Effects on Roadways	J-6-46
Reid	Washington Information Source Co.	0016	0122-20	8.2 Operating Funding Strategy	J-8-65
Reid	Washington Information Source Co.	0016	0017-1	11.1 Public Involvement	J-11-13
Reid	Washington Information Source Co.	0016	0122-2	12.1 Concerns Over Study Process	J-12-11
Reid	Washington Information Source Co.	0016	0122-12	12.1 Concerns Over Study Process	J-12-13
Reid	Washington Information Source Co.	0016	12-01	12.1 Concerns Over Study Process	J-12-9
Rinaldi	RMC-Tyco, LLC	0157	2-01	2.3 Supplemental Draft EIS Alternatives	J-2-211
Rinaldi	RMC-Tyco, LLC	0157	2-02	2.3 Supplemental Draft EIS Alternatives and Recommendations	J-2-91 & 211
Rinaldi	RMC-Tyco, LLC	0157	6-1	6.2 Effects on Roadways	J-6-50
Ritchey	Prospective, Inc.	0038	0039-4	2.3 Supplemental Draft EIS Alternatives	J-2-256
Ritchey	Prospective, Inc.	0038	0039-5	2.3 Supplemental Draft EIS Alternatives	J-2-257
Ritchey	Prospective, Inc.	0038	0088-1	2.3 Supplemental Draft EIS Alternatives	J-2-256
Ritchey	Prospective, Inc.	0038	0088-2	2.3 Supplemental Draft EIS Alternatives	J-2-257
Ritchey	Prospective, Inc.	0038	0039-1	6.2 Effects on Roadways	J-6-54
Ritchey	Prospective, Inc.	0038	0039-2	6.2 Effects on Roadways	J-6-54
Ritchey	Prospective, Inc.	0038	0039-3	6.2 Effects on Roadways	J-6-54
Ritchey	Prospective, Inc.	0038	0039-6	8.2 Operating Funding Strategy	J-8-63
Roderiques	Vastera Solutions for Global Trade	0024	0025-1	4.7 Noise	J-4-87
Roewer	USWAG Executive Director	0144	6-1	6.3 Effects on Other Transportation Facilities and Services	J-6-68
Rosen	Lerner Enterprises	0008	0008-1	5.2 Station Area Development	J-5-10
Rosenfeld		0119	0149-2	2.2 Draft EIS Alternatives	J-2-193
Rosenfeld		0119	0149-1	2.3 Supplemental Draft EIS Alternatives	J-2-225
Sabo		0118	0148-1	2.3 Supplemental Draft EIS Alternatives	J-2-227

Index J.1-2 Supplemental Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Salemo	Eurasian Service Center	0159	2-01	2.3 Supplemental Draft EIS Alternatives	J-2-212
Salemo	Eurasian Service Center	0159	2-02	2.4 Suggestions for Other Alternatives	J-2-255
Schefer	Washington Airports Task Force	0108	0127-1	2.3 Supplemental Draft EIS Alternatives	J-2-244
Schefer	Washington Airports Task Force	0108	0127-2	2.3 Supplemental Draft EIS Alternatives	J-2-244
Schefer	Washington Airports Task Force	0108	0127-3	2.3 Supplemental Draft EIS Alternatives	J-2-244
Schefer	Washington Airports Task Force	0108	0127-8	2.4 Suggestions for Other Alternatives	J-2-261
Schefer	Washington Airports Task Force	0108	0127-6	3.4 Visual and Aesthetic Conditions	J-3-43
Schefer	Washington Airports Task Force	0108	0127-7	5.3 Development Effects/Potential	J-5-46
Schefer	Washington Airports Task Force	0108	0127-9	6.1 Transit Effects	J-6-20
Schefer	Washington Airports Task Force	0108	0127-10	8.1 Capital Funding Strategy	J-8-55
Schefer	Washington Airports Task Force	0108	0127-4	8.2 Operating Funding Strategy	J-8-64
Schefer	Washington Airports Task Force	0108	0127-5	8.2 Operating Funding Strategy	J-8-64
Schefer	Washington Airports Task Force	0108	0127-11	12.1 Concerns Over Study Process	J-12-11
Schor-MacDicken		0105	0123-1	2.3 Supplemental Draft EIS Alternatives	J-2-241
Schor-MacDicken		0105	0123-5	2.3 Supplemental Draft EIS Alternatives	J-2-243
Schor-MacDicken		0105	0123-3	4.2 Water Resources	J-4-13
Schor-MacDicken		0105	0123-2	6.2 Effects on Roadways	J-6-56
Schor-MacDicken		0105	0123-4	9.1 Secondary Development Effects	J-9-23
Scott		0059	0061-1	2.2 Draft EIS Alternatives	J-2-193
Sedaghatfar		0103	0120-1	6.2 Effects on Roadways	J-6-56
Shields	City of Falls Church Assistant City Manager	0145	6-1	6.2 Effects on Roadways	J-6-50
Skidmore		0098	0114-1	2.3 Supplemental Draft EIS Alternatives	J-2-240
Skidmore		0098	0114-2	6.2 Effects on Roadways	J-6-55
Skidmore		0098	0114-3	8.1 Capital Funding Strategy	J-8-50
Smith	Fairfax County Non-Motorized Transportation Committee	0117	2-02	2.2 Draft EIS Alternatives	J-2-187
Smith	Fairfax County Non-Motorized Transportation Committee	0117	0146-3	2.2 Draft EIS Alternatives	J-2-191
Smith	Fairfax County Non-Motorized Transportation Committee	0117	2-01	2.3 Supplemental Draft EIS Alternatives	J-2-208
Smith	Fairfax County Non-Motorized Transportation Committee	0117	2-03	2.3 Supplemental Draft EIS Alternatives	J-2-209
Smith	Fairfax County Non-Motorized Transportation Committee	0117	2-04	2.3 Supplemental Draft EIS Alternatives	J-2-214
Smith	Fairfax County Non-Motorized Transportation Committee	0117	0146-1	2.3 Supplemental Draft EIS Alternatives	J-2-206
Smith	Fairfax County Non-Motorized Transportation Committee	0117	0146-2	2.3 Supplemental Draft EIS Alternatives	J-2-206
Smith	Fairfax County Non-Motorized Transportation Committee	0117	2-05	2.4 Suggestions for Other Alternatives	J-2-209
Stephens		0095	0111-3	2.3 Supplemental Draft EIS Alternatives	J-2-230
Stephens		0095	0111-2	8.1 Capital Funding Strategy	J-8-55
Stern		0030	0031-1	2.3 Supplemental Draft EIS Alternatives	J-2-225
Stern		0030	0031-2	9.1 Secondary Development Effects	J-9-23
Stieg		0081	0107-1	3.2 Neighborhood, Community Services and Community Cohesion	J-3-25
Stieg		0081	0096-2	4.2 Water Resources	J-4-13
Stieg		0081	0107-2	4.7 Noise	J-4-91
Stieg		0081	0096-1	4.7 Noise	J-4-91
Stowers		0040	0041-8	2.2 Draft EIS Alternatives Facilities	J-2-200
Stowers		0040	0041-9	2.2 Draft EIS Alternatives Facilities	J-2-199
Stowers		0040	0078-1	2.2 Draft EIS Alternatives Facilities	J-2-200
Stowers		0040	0041-2	2.3 Supplemental Draft EIS Alternatives	J-2-243
Stowers		0040	0041-6	2.3 Supplemental Draft EIS Alternatives	J-2-238
Stowers		0040	0041-1	2.3 Supplemental Draft EIS Alternatives	J-2-227
Stowers		0040	0041-3	2.3 Supplemental Draft EIS Alternatives	J-2-228
Stowers		0040	0078-2	2.4 Suggestions for Other Alternatives	J-2-259
Stowers		0040	0041-7	5.3 Development Effects/Potential	J-5-47
Stowers		0040	0041-5	6.2 Effects on Roadways	J-6-55
Stowers		0040	0041-4	9.1 Secondary Development Effects	J-9-24
Tennyson		0054	0142-2	2.3 Supplemental Draft EIS Alternatives	J-2-227
Tennyson		0054	2-01	2.3 Supplemental Draft EIS Alternatives and Recommendations	J-2-219
Tennyson		0054	0055-1	4.10 Energy	J-4-98
Tennyson		0054	0090-2	4.7 Noise	J-4-92
Tennyson		0054	0090-3	6.2 Effects on Roadways	J-6-52
Tennyson		0054	0055-4	8.1 Capital Funding Strategy	J-8-52
Tennyson		0054	0090-4	8.1 Capital Funding Strategy	J-8-51

Index J.1-2 Supplemental Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Tennyson		0054	0055-2	8.2 Operating Funding Strategy	J-8-65
Tennyson		0054	0055-3	8.2 Operating Funding Strategy	J-8-65
Tennyson		0054	0090-1	General Plans	J-GP-14
Tennyson		0054	0055-5	10.1 Evaluation Relative to Project Goals and Objectives	J-10-32
Thoesen	Town of Herndon	0132	0171-6	2.3 Supplemental Draft EIS Alternatives	J-2-205
Thoesen	Town of Herndon	0132	0171-5	6.2 Effects on Roadways	J-6-49
Thoesen	Town of Herndon	0132	0171-1	8.1 Capital Funding Strategy	J-8-47
Thoesen	Town of Herndon	0132	0171-02	8.1 Capital Funding Strategy	J-8-47
Thoesen	Town of Herndon	0132	0171-03	8.1 Capital Funding Strategy	J-8-47
Thoesen	Town of Herndon	0132	0171-4	General Plans	J-GP-16
Thomas	Greater Washington Board of Trade	0069	0077-1	2.3 Supplemental Draft EIS Alternatives	J-2-226
Thomas	Greater Washington Board of Trade	0069	0077-2	2.3 Supplemental Draft EIS Alternatives	J-2-228
Thomas	Greater Washington Board of Trade	0069	0077-3	2.3 Supplemental Draft EIS Alternatives	J-2-227
Todres		0137	03-01	3.1 Land Use and Socio-economics	J-3-40
Todres		0137	03-02	3.1 Land Use and Socio-economics	J-3-41
Todres		0137	03-03	3.1 Land Use and Socio-economics	J-3-43
Todres		0137	4-01	4.7 Noise	J-4-82
Tomlinson	Member, Tuckahoe Recreation Club	0154	2-01	2.2 Draft EIS Alternatives	J-2-186
Topper	Westhampton Civic Association	0089	0104-2	3.2 Neighborhood, Community Services and Community Cohesion	J-3-26
Topper	Westhampton Civic Association	0089	0104-10	3.2 Neighborhood, Community Services and Community Cohesion	J-3-29
Topper	Westhampton Civic Association	0089	0104-5	4.7 Noise	J-4-93
Topper	Westhampton Civic Association	0089	0104-6	4.7 Noise	J-4-88
Topper	Westhampton Civic Association	0089	0104-3	6.2 Effects on Roadways	J-6-51
Topper	Westhampton Civic Association	0089	0104-7	6.2 Effects on Roadways	J-6-56
Topper	Westhampton Civic Association	0089	0104-8	6.2 Effects on Roadways	J-6-53
Topper	Westhampton Civic Association	0089	0104-9	6.2 Effects on Roadways	J-6-51
Topper	Westhampton Civic Association	0089	0104-1	11.1 Public Involvement	J-11-13
Topper	Westhampton Civic Association	0089	0104-4	11.2 Agency Coordination	J-11-21
Topper	Westhampton Civic Association	0089	0104-11	13.1 Schedule/Process for Implementation	J-13-7
Tracinelli	Grove Slade Associates	0160	2-01	2.3 Supplemental Draft EIS Alternatives and Recommendations	J-2-217
Tyler	Hallcrest Heights Homeowners Association	0036	0037-2	3.4 Visual and Aesthetic Conditions	J-3-45
Tyler	Hallcrest Heights Homeowners Association	0036	0062-2	3.4 Visual and Aesthetic Conditions	J-3-45
Tyler	Hallcrest Heights Homeowners Association	0036	0037-1	4.7 Noise	J-4-90
Tyler	Hallcrest Heights Homeowners Association	0036	0037-3	4.7 Noise	J-4-88
Tyler	Hallcrest Heights Homeowners Association	0036	0037-4	4.7 Noise	J-4-90
Tyler	Hallcrest Heights Homeowners Association	0036	0037-5	4.7 Noise	J-4-91
Tyler	Hallcrest Heights Homeowners Association	0036	0037-6	4.7 Noise	J-4-91
Tyler	Hallcrest Heights Homeowners Association	0036	0037-7	4.7 Noise	J-4-92
Tyler	Hallcrest Heights Homeowners Association	0036	0062-1	4.7 Noise	J-4-90
Tyler	Hallcrest Heights Homeowners Association	0036	0062-3	4.7 Noise	J-4-89
Tyler	Hallcrest Heights Homeowners Association	0036	0062-4	4.7 Noise	J-A-5
Tyler	Hallcrest Heights Homeowners Association	0036	0062-5	4.7 Noise	J-4-90
Tyler	Hallcrest Heights Homeowners Association	0036	4-01	4.7 Noise	J-4-82
Tyler	Hallcrest Heights Homeowners Association	0036	0062-6	11.1 Public Involvement	J-11-13
Tyrrell		0116	0141-5	3.7 Safety and Security	J-3-59
Tyrrell		0116	0141-7	3.7 Safety and Security	J-3-59
Tyrrell		0116	0141-1	4.7 Noise	J-4-85
Tyrrell		0116	0141-2	4.7 Noise	J-4-93
Tyrrell		0116	0141-3	4.7 Noise	J-4-92
Tyrrell		0116	0141-4	4.7 Noise	J-4-93
Tyrrell		0116	0141-6	4.7 Noise	J-4-89
Van Zee	Northern Virginia Regional Commission	0006	0006-1	4.2 Water Resources	J-4-10
Van Zee	Northern Virginia Regional Commission	0006	0006-2	4.2 Water Resources	J-4-10
Van Zee	Northern Virginia Regional Commission	0006	0006-3	4.2 Water Resources	J-4-10
Vaughn		0057	0058-2	2.3 Supplemental Draft EIS Alternatives	J-2-225 & 239
Vaughn		0057	0058-1	8.1 Capital Funding Strategy	J-8-49
Veatch	Charles A. Veatch Company	0130	0165-2	3.2 Neighborhood, Community Services and Community Cohesion	J-3-34
Veatch	Charles A. Veatch Company	0130	0165-1	3.3 Property Acquisition and Displacement	J-3-33
Vile		0018	0019-1	8.1 Capital Funding Strategy	J-8-57
Vincent	Breakthrough Technologies Institute	0063	0151-9	2.3 Supplemental Draft EIS Alternatives	J-2-230
Vincent	Breakthrough Technologies Institute	0063	0151-6	2.3 Supplemental Draft EIS Alternatives	J-2-242
Vincent	Breakthrough Technologies Institute	0063	0151-14	2.4 Suggestions for Other Alternatives	J-2-257
Vincent	Breakthrough Technologies Institute	0063	0151-10	4.6 Air Quality	J-4-31
Vincent	Breakthrough Technologies Institute	0063	0151-11	4.6 Air Quality	J-4-31

Index J.1-2 Supplemental Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Vincent	Breakthrough Technologies Institute	0063	0151-12	4.6 Air Quality	J-4-31
Vincent	Breakthrough Technologies Institute	0063	0151-5	6.1 Transit Effects	J-6-14
Vincent	Breakthrough Technologies Institute	0063	0151-15	6.1 Transit Effects	J-6-19
Vincent	Breakthrough Technologies Institute	0063	0151-17	6.1 Transit Effects	J-6-15
Vincent	Breakthrough Technologies Institute	0063	0151-18	6.1 Transit Effects	J-6-15
Vincent	Breakthrough Technologies Institute	0063	0151-7	8.1 Capital Funding Strategy	J-8-52
Vincent	Breakthrough Technologies Institute	0063	0151-8	8.1 Capital Funding Strategy	J-8-52
Vincent	Breakthrough Technologies Institute	0063	0151-13	8.1 Capital Funding Strategy	J-8-53
Vincent	Breakthrough Technologies Institute	0063	0151-19	8.1 Capital Funding Strategy	J-8-58
Vincent	Breakthrough Technologies Institute	0063	0151-20	8.1 Capital Funding Strategy	J-8-58
Vincent	Breakthrough Technologies Institute	0063	0151-21	8.1 Capital Funding Strategy	J-8-53
Vincent	Breakthrough Technologies Institute	0063	0151-22	8.1 Capital Funding Strategy	J-8-53
Vincent	Breakthrough Technologies Institute	0063	0151-3	12.1 Concerns Over Study Process	J-12-12
Vincent	Breakthrough Technologies Institute	0063	0151-4	12.1 Concerns Over Study Process	J-12-12
Walker	LOWER	0061	0069-9	2.2 Draft EIS Alternatives	J-A-4
Walker	LOWER	0061	0117-11	2.2 Draft EIS Alternatives	J-A-4
Walker	LOWER	0061	0117-12	2.2 Draft EIS Alternatives	J-A-5
Walker	LOWER	0061	0168-2	2.2 Draft EIS Alternatives	J-A-5
Walker	LOWER	0061	0069-8	2.2 Draft EIS Alternatives	J-2-224
Walker	LOWER	0061	0117-10	2.2 Draft EIS Alternatives	J-2-224
Walker	LOWER	0061	0117-13	2.2 Draft EIS Alternatives	J-2-224
Walker	LOWER	0061	0117-15	2.2 Draft EIS Alternatives	J-2-224
Walker	LOWER	0061	0136-7	2.2 Draft EIS Alternatives	J-2-224
Walker	LOWER	0061	0168-1	2.2 Draft EIS Alternatives	J-2-229
Walker	LOWER	0061	0136-1	2.3 Supplemental Draft EIS Alternatives	J-2-229
Walker	LOWER	0061	0136-10	2.3 Supplemental Draft EIS Alternatives	J-A-5
Walker	LOWER	0061	0136-11	2.3 Supplemental Draft EIS Alternatives	J-2-230
Walker	LOWER	0061	0117-19	2.4 Suggestions for Other Alternatives	J-2-257
Walker	LOWER	0061	0117-20	2.4 Suggestions for Other Alternatives	J-2-260
Walker	LOWER	0061	0069-6	4.6 Air Quality	J-4-31
Walker	LOWER	0061	0117-8	4.6 Air Quality	J-4-31
Walker	LOWER	0061	0136-5	4.6 Air Quality	J-4-31
Walker	LOWER	0061	0069-13	6.1 Transit Effects	J-6-16
Walker	LOWER	0061	0117-14	6.1 Transit Effects	J-6-21
Walker	LOWER	0061	0117-16	6.1 Transit Effects	J-6-17
Walker	LOWER	0061	0117-17	6.1 Transit Effects	J-6-19
Walker	LOWER	0061	0136-6	6.1 Transit Effects	J-6-18
Walker	LOWER	0061	0136-8	6.1 Transit Effects	J-6-18
Walker	LOWER	0061	0136-9	6.1 Transit Effects	J-6-18
Walker	LOWER	0061	0069-7	6.1 Transit Effects	J-6-19
Walker	LOWER	0061	0117-7	6.1 Transit Effects	J-6-19
Walker	LOWER	0061	0136-3	6.2 Effects on Roadways	J-6-50
Walker	LOWER	0061	0069-2	6.2 Effects on Roadways	J-6-53
Walker	LOWER	0061	0069-11	6.2 Effects on Roadways	J-6-53
Walker	LOWER	0061	0069-12	6.2 Effects on Roadways	J-6-53
Walker	LOWER	0061	0117-1	6.2 Effects on Roadways	J-6-53
Walker	LOWER	0061	0117-2	6.2 Effects on Roadways	J-6-50
Walker	LOWER	0061	0117-4	6.2 Effects on Roadways	J-6-53
Walker	LOWER	0061	0117-21	6.2 Effects on Roadways	J-6-57
Walker	LOWER	0061	0136-2	6.2 Effects on Roadways	J-6-53
Walker	LOWER	0061	0069-1	8.1 Capital Funding Strategy	J-8-51
Walker	LOWER	0061	0069-14	8.1 Capital Funding Strategy	J-8-49
Walker	LOWER	0061	0117-18	8.1 Capital Funding Strategy	J-8-52
Walker	LOWER	0061	0117-22	8.1 Capital Funding Strategy	J-8-53
Walker	LOWER	0061	0117-23	8.1 Capital Funding Strategy	J-8-49
Walker	LOWER	0061	0168-3	8.1 Capital Funding Strategy	J-8-53
Walker	LOWER	0061	0069-4	8.2 Operating Funding Strategy	J-8-64
Walker	LOWER	0061	0069-5	8.2 Operating Funding Strategy	J-8-64
Walker	LOWER	0061	0069-10	8.2 Operating Funding Strategy	J-8-65
Walker	LOWER	0061	0117-5	8.2 Operating Funding Strategy	J-8-65
Walker	LOWER	0061	0117-6	8.2 Operating Funding Strategy	J-8-65
Walker	LOWER	0061	0117-9	8.2 Operating Funding Strategy	J-8-64
Walker	LOWER	0061	0136-4	8.3 Other Financial Issues	J-8-66
Walker	LOWER	0061	0069-3	8.3 Other Financial Issues	J-8-66
Walker	LOWER	0061	0117-3	8.3 Other Financial Issues	J-8-66

Index J.1-2 Supplemental Draft EIS Comments by Last Name of Commenter

Last Name	Organization	ID Number	Comment Number	Subject	Page Number
Walker	LOWER	0061	0069-15	10.1 Evaluation Relative to Project Goals and Objectives	J-10-32
Ward	Westhampton Civic Association	0087	0102-2	3.2 Neighborhood, Community Services and Community Cohesion	J-3-26
Ward	Westhampton Civic Association	0087	0102-10	3.2 Neighborhood, Community Services and Community Cohesion	J-3-29
Ward	Westhampton Civic Association	0087	0102-5	4.7 Noise	J-4-93
Ward	Westhampton Civic Association	0087	0102-6	4.7 Noise	J-4-88
Ward	Westhampton Civic Association	0087	0102-3	6.2 Effects on Roadways	J-6-51
Ward	Westhampton Civic Association	0087	0102-7	6.2 Effects on Roadways	J-6-56
Ward	Westhampton Civic Association	0087	0102-8	6.2 Effects on Roadways	J-6-53
Ward	Westhampton Civic Association	0087	0102-9	6.2 Effects on Roadways	J-6-51
Ward	Westhampton Civic Association	0087	0102-1	11.1 Public Involvement	J-11-13
Ward	Westhampton Civic Association	0087	0102-4	11.2 Agency Coordination	J-11-21
Ward	Westhampton Civic Association	0087	0102-11	13.1 Schedule/Process for Implementation	J-13-7
Webb		0101	0118-1	3.2 Neighborhood, Community Services and Community Cohesion	J-3-25
Webb		0101	0118-2	4.7 Noise	J-4-91
Weber		0073	0083-4	2.3 Supplemental Draft EIS Alternatives	J-2-230
Weber		0073	0083-2	6.2 Effects on Roadways	J-6-55
Weber		0073	0083-3	8.1 Capital Funding Strategy	J-8-54
Weber		0073	0083-1	9.1 Secondary Development Effects	J-9-23
White, G.		0124	2-01	2.2 Draft EIS Alternatives	J-2-201
White, G.		0124	0159-1	3.2 Neighborhood, Community Services and Community Cohesion	J-3-25
White, G.		0124	4-01	4.7 Noise	J-4-81
White, G.		0124	0159-2	4.7 Noise	J-4-91
White, T.	Greater Reston Chamber of Commerce	0023	0024-1	2.3 Supplemental Draft EIS Alternatives	J-2-226
White, T.	Greater Reston Chamber of Commerce	0023	0024-5	2.3 Supplemental Draft EIS Alternatives	J-2-238 & 239
White, T.	Greater Reston Chamber of Commerce	0023	0024-2	8.1 Capital Funding Strategy	J-8-51
White, T.	Greater Reston Chamber of Commerce	0023	0024-3	8.1 Capital Funding Strategy	J-8-57
White, T.	Greater Reston Chamber of Commerce	0023	0024-6	8.1 Capital Funding Strategy	J-8-48
White, T.	Greater Reston Chamber of Commerce	0023	0024-7	8.1 Capital Funding Strategy	J-8-57
White, T.	Greater Reston Chamber of Commerce	0023	0024-8	8.1 Capital Funding Strategy	J-8-57
Whittaker		0003	2-01	2.2 Draft EIS Alternatives	J-2-184
Whittaker		0003	2-02	2.2 Draft EIS Alternatives	J-2-186
Whittaker		0003	0003-1	3.2 Neighborhood, Community Services and Community Cohesion	J-3-27
Whittaker		0003	0013-1	3.2 Neighborhood, Community Services and Community Cohesion	J-3-27
Whittaker		0003	0013-2	4.7 Noise	J-4-90
Whittaker		0003	0013-3	4.7 Noise	J-4-92
Whittaker		0003	0003-2	11.1 Public Involvement	J-11-12
Wiese		0046	0047-1	2.3 Supplemental Draft EIS Alternatives	J-2-243
Wiese		0046	0047-3	2.3 Supplemental Draft EIS Alternatives	J-2-241
Wiese		0046	0047-2	6.2 Effects on Roadways	J-6-55
Wright		0065	0073-3	2.2 Draft EIS Alternatives	J-2-193
Wright		0065	0073-4	2.2 Draft EIS Alternatives	J-2-193
Wright		0065	0073-5	2.2 Draft EIS Alternatives	J-2-194
Wright		0065	0073-6	2.2 Draft EIS Alternatives	J-2-195
Wright		0065	2-01	2.2 Draft EIS Alternatives	J-2-194
Wright		0065	0073-2	2.2 Draft EIS Alternatives	J-2-193
Wright		0065	0073-1	2.3 Supplemental Draft EIS Alternatives	J-2-225 & 239
Wright		0065	0073-3	2.3 Supplemental Draft EIS Alternatives	J-2-193
York	Loudoun County Board Chairman	0066	0074-1	2.3 Supplemental Draft EIS Alternatives	J-2-205
York	Loudoun County Board Chairman	0066	0074-3	2.3 Supplemental Draft EIS Alternatives	J-2-206
York	Loudoun County Board Chairman	0066	0074-2	2.3 Supplemental Draft EIS Alternatives	J-2-207
York	Loudoun County Board Chairman	0066	0074-4	2.3 Supplemental Draft EIS Alternatives	J-2-205
Zahm	Cooley Godward, LLP	0075	0086-1	2.3 Supplemental Draft EIS Alternatives	J-2-226
Zahm	Cooley Godward, LLP	0075	2-01	2.4 Suggestions for Other Alternatives	J-2-209
Zicht		0007	0007-1	2.3 Supplemental Draft EIS Alternatives	J-2-229
	Tuckahoe Recreation Club	0153	2-02	2.2 Draft EIS Alternatives	J-2-155
	Tuckahoe Recreation Club	0153	2-01	2.2 Draft EIS Alternatives	J-2-186
	Lovingston & Liebler	0150	2-01	2.2 Draft EIS Alternatives and Recommendations	J-2-186
	Lovingston & Liebler	0150	2-02	2.2 Draft EIS Alternatives and Recommendations	J-2-185

Index J.2-1 Draft EIS Comments by Commenter ID Number

ID Number	Last Name	Organization
0001	Doetzer	Natural Resources Conservation Service
0002	Gavan	Department of Conservation and Recreation
0003	Burkart	Boston Properties
0004	Bowles	Loudoun County Administrator
0005	Ingebritsen	LINK
0006	Millnick	
0007	Naiman	
0009	Dagitz	
0010	Fowler	
0011	Laikin	
0012	Scott	Virginia House of Delegates
0013	Tennyson	
0014	Minchew	Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.
0015	Johanneck	
0016	Panetta	
0017	Shumadine	
0018	Clarke, W.	Action Committee for Transit
0019	Funderburg	
0020	Connolly	
0021	Hickerson	
0022	Roberts	
0023	Bryan	
0024	Vecchiarelli	
0025	Nino	
0026	Trainor	
0027	Deuel	Herndon Dulles Chamber of Commerce
0028	Nouri	
0029	Weimer	
0031	Gibson, D.	
0032	Schindler	
0033	Kamkar-Parsi	
0034	Griswold	
0035	Pender	
0035	Stallings	
0036	Baker	
0037	Mismas	
0038	Gorham	
0039	Brown	
0041	Walsh	
0042	Stevens	
0043	Parnes	
0044	Harvey	
0045	McAllister	
0046	Kindle	
0047	Kindle	
0048	Willson	
0049	Morehead	
0051	Goss	
0052	Neu	
0053	Popa	
0054	Anonymous	
0055	Kamkar-Parsi, M	
0056	Jones	
0057	Batmanghelidj	
0058	Seiler	

Index J.2-1 Draft EIS Comments by Commenter ID Number

ID Number	Last Name	Organization
0059	Gamache	
0060	Janney	Cinnamon Creek Homeowners Association
0061	Mampe	
0062	Marks	
0063	Babington	
0064	Simone	
0065	Gibson, K.	
0066	Muchnick	Virginia Bicycling Federation
0067	Wang	
0068	Maier	
0069	Lapinski	
0070	St. Andre	Springfield Interchange Project Info Center
0071	Morstein	
0072	Burroughs	
0073	Anonymous	
0075	Barletta	
0076	Johnson	
0077	Freudenberger	
0078	Holmes	
0079	Humowiecki	
0080	Pemberton, H.	
0081	Reinhart	
0082	Barry	
0083	Sabo	
0084	Henderson	Alder Branch Management/Lincoln at Tysons Corner
0085	Wyman	
0086	Ormsby	
0087	Dusenbury	Lemon Road Civic Association
0088	Edwards	
0089	Rybak	
0090	Henretty	
0090	Henretty	
0091	Olechna	
0092	Policaro	
0093	Olechna	
0094	Carlson	
0095	Clemente	Comstock Partners LLC
0096	Pitts	Comstock Homes, Inc.
0097	Klein	
0098	Cleal	
0099	Ulrich	
0100	Nusbaum	
0101	DelPorto	
0102	Diamond	
0103	Morris	
0104	Qayum	
0105	McCormick	
0106	Mueller	
0107	Heimsath	
0108	Stevenson	
0110	Kunz	
0111	Barakat	
0112	Reid	WIS Company, MOVEIT.org
0113	Jafree	

Index J.2-1 Draft EIS Comments by Commenter ID Number

ID Number	Last Name	Organization
0114	Berger	
0116	Hannas	
0117/0398	May	
0118	Zugris	
0119	Smith	
0120	Leisz	
0121	Hanley	Fairfax County Board Chairman
0122	Gardner	City of Falls Church
0123	Husch	
0124	Gustin	
0125	Schmidt	
0126/0199	Sonefeld	Pavillion Condominium Association
0130	Connolly	Fairfax County Board Supervisor
0131	Plum	Virginia House of Delegates, Dulles Corridor Rail Association
0132	Welti	Washington Airports Task Force
0133	Schefer	Washington Airports Task Force
0134	Malak	Kings Park Civic Association
0135	Looney	TMS Limited Partnership, Cooley Godward LLP
0136	Herrity	
0137	Tyler	Hallcrest Heights Homeowners Association
0138	Hirst	Rapid Transit Action Committee/Mason Hirst Companies
0139	Cooper	Prentiss Properties
0140	Purves	Fairfax County Taxpayers Alliance
0141	Nicoson	Dulles Corridor Rail Association
0142	Pinkard	Greater Washington Board of Trade
0143	Anderson	
0144	Alcorn	
0145	Whyte	Ellison Heights-Mount Daniel Civic Association
0147	Bennett	Hunter Mill Defense League
0148	Bennett	
0149	Schwartz	Coalition for Smarter Growth
0150	Hunt	
0151	Barksdale	Fairfax County Coalition for Smarter Growth
0152	Menda	Freddie Mac/TYTRAN
0153	Bishop	Chesapeake Region 2012 Coalition
0154	Peterson	Landowners Economic Alliance for the Dulles Extension Rail
0155	McCracken	
0156	Wright	Rotonda Condominium Owners Association
0157	Ray	ENDependence Center of NOVA & the Disability Community
0158	Diedrich	Sierra Club, Virginia Chapter
0159	Broussard	McLean Commons Citizens Association
0160	Rebhun	
0161	Baker	Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.
0162/0184	Walker	Walker and Company
0165	Snyder	City of Falls Church
0166	Costello	
0170	Corrigan	Reston Association
0171	Kane	
0173	Stowers	
0174	Nicolais	Chathams Ford Neighborhood
0175	Fairfield	Ruth C. Launders Marital Trust
0178	Cavin	
0179	Cate	

Index J.2-1 Draft EIS Comments by Commenter ID Number

ID Number	Last Name	Organization
0181	Pemberton, N.	
0183	Kalish	
0185	Peacock	Virginia Association of Railway Patrons
0186	Simpson	Union Metro Washington Council AFL-CIO
0187	O'Connor	Union Local 2 OPEI Chief Shop Steward
0188	Apple	Sierra Club, Great Falls Group
0189	McGuire, C.	
0191	Barrett	
0193	Coale	ABS Committee - Reston Interfaith Board of Directors
0194	Deam	
0195	Simon	
0196	Blackwell	Reston Association
0197	Francese	Centreville Citizens for Rail
0198	Reynolds	American Lung Association
0203	Thomson	
0204	Holden	Committee for Dulles
0206	Cogswell	National Capital Area League of Women Voters
0208	de la Fe	
0209	Hilton	
0210		Reston Association
0220	Caruso	Rotonda Condominium Owners Association
0226	Corry	
0228	Romano	
0229	Jordan	
0230	Huddle	
0232	McGimsey	
0233	Griffin	Fairfax County Executive
0234	Pagano	
0235	Hawkins	
0237	Evans	TishmanSpeyer Properties
0240	Bogard	Loudoun County Board Supervisor
0242	Buchanan	Buchanan Partners, LLC
0244	Larsen	Dulles Area Transportation Association
0248	Antigone	Dulles Gateway Associates LLC
0251	Wood	Coalition for Smarter Growth
0252	Poulson	Walker and Company
0253	Barber	Union Local 689
0255	Stephens	
0256	Carter	Comstock Homes, Inc.
0257	Gordon	Toll Road Investors Partnership II - Dulles Greenway
0258	Harris	
0259	Dieter	Loudoun Chapter of ARK
0260	Leslie	West Wind Crossing Community
0262	Walker	
0263	Dineen	
0265	Reimel	
0266	Whitener	Maryland-Virginia Monorail Initiative
0267	Bender	
0271	Pendleton	
0272	Dublin	
0273	Tolle	
0274	Houser	Gannett Co., Inc.
0278	Mathieu	Union Local 689 Amalgamated Transit
0279	Byrne	

Index J.2-1 Draft EIS Comments by Commenter ID Number

ID Number	Last Name	Organization
0286	Rosenthal	
0287	Thiumann	
0288	McDevitt	Inlet Cluster Association
0290	Hackney	
0291	Kadane	
0292	Benton	Centennial Contractors Enterprises, Inc.
0294	Daniels	
0295	McGrath	
0296	Hornback	
0298	Howell	Commonwealth of Virginia Senator
0299	McGuire, M.	
0301	Fisher	
0302	Newman	Rotonda Condominiums
0303	Arguto	U.S. Environmental Protection Agency Region III
0305	Von	
0306	Lanham	Fairfax County Park Authority
0307	Nowak	
0310	Sivit	
0311	Barresi	
0312	Goodnight	
0313	Speacht	
0314	Allender	
0315	Kreeger	
0316	Bell	
0317	Rassekh	
0318	D(illegible)	
0319	L(illegible)	
0321	Bensimon	
0322	Moon	
0323	Rogan	
0324	Sanderson	
0325	Erfani	
0326	(s) illegible	
0327	Carroll	
0328	Crissey	
0329	Bhilar	
0330	Phelps, C.	
0331	illegible	
0332	Reger	
0333	Brown	
0334	Berry	
0336	Paduda	
0337	Peterson	
0338	Tabriz	
0339	Hashemine	
0340	Deveic	
0341	Alpert	
0342	Casey	
0343	Cain	
0344	Batmanghelidj	
0345	(illegible)	
0346	Courtillet	
0347	Taylor	
0348	Kendig	

Index J.2-1 Draft EIS Comments by Commenter ID Number

ID Number	Last Name	Organization
0349	Sadjadi	
0350	Moshaveghzadeh	
0351	Bado	
0352	Coplon	
0353	Wallace	
0354	Paine	
0355	Connolly	
0356	Holz	
0357	Phelps, R.	
0358	Nazeer	
0359	Halway	
0360	Tredway	
0362	Eubank	
0363	Stetson	
0364	Nehrbakhski	
0365	Freedman	
0366	Block	
0367	Rubin	
0368	Cameron	
0369	Gebraili	
0370	Silverman	
0371	Jugee	
0372	Friedlander	
0373	Sherbe	
0374	Willis	
0375	Howard	
0376	Brevell	
0377	Mills	
0378	Lenard	
0379	Ostheim	
0380	Erickson	
0381	Coffin	
0383	Tyrrell	Chathams Ford Neighborhood
0385	Michael	
0386	Creason	
0387	Bochner	
0388	Topper	
0389	Melton	
0392	Foust	McLean Citizen's Association
0393	Turner	
0394	Starr	
0395	Cunha	Lillian Court at Tysons II
0396	Dyke	NVR
0399	Jones	
0400	Walsh	Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.
0401	Hadlock	
0402	Packard	Fairfax County Federation of Citizens Association
0403	Goldman	
0406	Foerster	Wilmorite Property Management
0407	Ellis	Virginia Department of Environmental Quality
0408	Shirey	
0409	Thoesen	Town of Herndon
0411	Hennick	
0412	Evans	

Index J.2-1 Draft EIS Comments by Commenter ID Number

ID Number	Last Name	Organization
0413	Daniels	The Clover Companies
0414	Tenuta	
0415	Sublette	
0416	Nguyen	
0417	Roop	
0418	MacLane	AGIR Limited
0419	Moles	
0421	Allahdoust	Virginia Department of Transportation
0422	Corish	
0423	Hamberg	
0424	Fiala	
0425	Kelly	Action Committee for Transit
0428	Clarke, J	
0427	Kenny	
0429	Liff	
0430	Bravo	
0431	Ghannam	
0432	Cackler	
0433	TYTRAN	
0435	Davey	West Falls Church Village Homeowners Association
0436	Foster	Long and Foster Real Estate
0437	Hudgins	Fairfax County Board Supervisor
0438	Prakash	
0440	Wilding	Metropolitan Washington Airports Authority
0441	Stroik	
0442	Nagley	
0444	Replogle	Environmental Defense
0445	Vincent	Breakthrough Technologies Institute
0446	Chase	Northern Virginia Transportation Alliance
0449	Howard	Wellborn Management Co. Inc.
0450	White	Greater Reston Chamber of Commerce
0451	Sutliff	McCandlish and Lillard
0453	Walter	Host Marriot Corporation
0454	Hylton	
0455	Equal Metro Access for All of Tysons Corner	Equal Metro Access for All of Tysons Corner
0456	Iglhaut	Northern Virginia Regional Park Authority
0456	Inglhaut	
0460	Twomey	Hunter Mill Defense League Board of Directors
0461	McDermott	Hunton & Williams
0464	Thoburn	Hunter Mill East LLC
0465	Kim	
0466	Tyeryar	
0467	Tillotson	
0469	Krishnan	
0470	Kang	
0471	Marfred	
0473	Brown	
0474	Mays	
0477	Horwatt	Horwatt and Associates PC
0478	Hill & Stowers	RTAC
0479	Chang	Fairfax County Department of Transportation
0481	Jacoby	Fountains at McLean
0482	Spannaus	
0483	Brown	

Index J.2-1 Draft EIS Comments by Commenter ID Number

ID Number	Last Name	Organization
0485	Page	Federal Aviation Administration, Washington Airports District Office
0486	samzyx2007@msn.com	
0487	Levy	
0488	Wilbert	
0489	Prescott	
0490		Fairfax County Board Supervisors
0491	Bowers	Loudoun County Administrator
0492	Dowd	National Capital Planning Commission
0493	Marsteller	Leesburg Pike, LLC
0494	Traylor	
0495	Bellanca	
0496	Larijanii	
0497	Etris	City of Falls Church Public Utilities Manager
0498	Grimsley	Merchant's Tire and Auto Center
0499	Douglas	
0500	Lutz	
0501	Nguyen	
0502	Bowman	
0503	Davis	
0504	Gilbert	
0505	Harris	
0506	Malamud	
0507	Nobarian	
0508	Samuel	Toll Roads Newsletter
0509	Prelewicz	
0510	Eder	
0511	Belt	
0512	Goss	
0513	Hamberger	
0514	Iwanski	
0515	Leland	
0516	Richards	Virginia Department of Historic Resources
0517	Wilkes	Virginia Department of Mines, Minerals, and Energy
0518	Kederzierski	Virginia Department of Environmental Quality
0519	Jones	Virginia Department of Conservation and Recreation
0520	Jones, Sandra	
0520	McCollough	

Index J.2-2 Supplemental Draft EIS Comments by Commenter ID Number

ID Number	Last Name	Organization
0001	Deam	
0002	Augustine	
0003	Whittaker	
0004	Motz	Commercial Condominium Management Company'
0005	Lincoln	
0006	Van Zee	Northern Virginia Regional Commission
0007	Zicht	
0008	Rosen	Lerner Enterprises
0009	Kessler	
0010	Holma	Virginia Department of Historic Resources
0011	Gibson	
0012	Freeman	
0013	Bracher	
0014	Muten	ARC Corporation
0015	McGuire, M.	National Motorists Association
0016	Reid	Washington Information Source Co
0017	Milon	
0018	Vile	
0019	Falck-Muten	Susan Falck-Muten & Associates
0020	Ingebristen, K.	
0021	Bethke	
0022	Guillot	
0023	White, T.	Greater Reston Chamber of Commerce
0024	Roderiques	Vastera Solutions for Global Trade
0025	Kalet	
0026	Bravo	Westhampton Civic Association
0027	Hannigan	
0028	Cooper	Prentiss Properties
0029	McAllister	
0030	Stern	
0031	Moore	
0032	Prelewicz	
0033	McGuire, C.	
0034	Byrnes	McLean Citizens Association Transportation Committee
0035	Ingebritsen, S.	
0036	Tyler	Hallcrest Heights Homeowners Association
0037	Plum	Dulles Corridor Rail Association
0038	Ritchey	Prospective, Inc.
0039	Jones	Reston Association
0040	Stowers	
0041	Edwards	
0042	Kane	
0043	Gorenflo	
0044	Daniels	
0045	Ralston	
0046	Wiese	
0047	Pronske	
0048	Costello	
0050	Brown	
0050	Davis, C.	Reston Citizen’s Association
0051	Kennedy, L.	

Index J.2-2 Supplemental Draft EIS Comments by Commenter ID Number

ID Number	Last Name	Organization
0052	Pitts	Comstock Companies
0053	Kennedy	Patton, Harris, Rust, and Associates
0054	Tennyson	
0056	Naef	
0057	Vaughn	
0058	Hudgins	Fairfax County Board Supervisor
0059	Scott	
0060	Nicoson	Dulles Corridor Rail Association
0061	Walker	LOWER
0062	Johnston	Boston Properties
0063	Vincent	Breakthrough Technologies Institute
0064	Parnes	
0065	Wright	
0066	York	Loudoun County Board Chairman
0067	Holden	Committee for Dulles
0068	Eder	
0069	Thomas	Greater Washington Board of Trade
0070	Goodman	Wiley, Rein, and Fielding for HBL of Tysons
0071	Nagle	
0072	Hirst	Rapid Transit Action Committee/Mason Hirst Companies
0073	Weber	
0074	Pew	
0075	Zahm	Cooley Godward, LLP
0076	Cerny	
0077	Connolly	Fairfax County Board Supervisor
0078	Grow	Greater Washington Board of Trade
0079	Genetti	Montgomery Co. Dept. of Public Works and Transportation
0080	Irons	
0081	Stieg	
0082	Davis, J.	
0083	Hanley	Fairfax County Board Chair
0084	Bowers	Loudoun County Administrator
0085	Hoffman	United States Environmental Protection Agency Region III
0086	Iglhaut	Northern Virginia Regional Park Authority
0087	Ward	Westhampton Civic Association
0088	Melton	Westhampton Civic Association
0089	Topper	Westhampton Civic Association
0090	Cort	Washington Regional Network For Livable Communities
0091	Allahdoust	Virginia Department of Transportation
0092	Marsteller	Merchant Auto and Tire Center
0093	Chang	Fairfax County Department of Transportation
0094	Michau	
0095	Stephens	
0096	Howard	Wellborn Management Co., Inc., Realtors
0098	Skidmore	
0099	Ghannam	Westhampton Civic Association
0100	Lowry	
0101	Webb	
0102	Mitchell	
0103	Sedaghatfar	
0104	May	Westhampton Civic Association

Index J.2-2 Supplemental Draft EIS Comments by Commenter ID Number

ID Number	Last Name	Organization
0105	Schor-MacDicken	
0106	Dulany	Bracewell & Patterson, LLP
0107	Bennett, B.	
0108	Schefer	Washington Airports Task Force
0109	Bennett, J.	Hunter Mill Defense League
0110	Cate	
0110	Kunz	
0111	Antigone	Dulles Gateway Associates, Inc.
0112	Cavin	
0113	Abt	West*Group
0114	Bogard	Loudoun County Board Supervisor
0115	Maio	
0116	Tyrrell	
0117	Smith	Fairfax County Non-Motorized Transportation Committee
0117	W. Smith	
0118	Sabo	
0119	Rosenfeld	
0120	Martin	
0121	Hamberg	
0122	Fontaine	
0123	Halpin	West*Group
0124	White, G.	
0125	Harvey	
0126	Flemer	
0127	Fletcher	
0128	O'Connor	
0129	Gilmartin	
0130	Veatch	Charles A. Veatch Company
0131	Holly	Metropolitan Washington Airports Authority
0132	Thoesen	Town of Herndon
0133	Cima	
0134	Cherner	Cherner Automotive Group
0135	Driscoll	
0136	Horwatt	Peacock Buick
0137	Todres	
0138	Moske	Hallcrest Heights Homeowners Association
0139	Pattana	
0140	Mills	
0141	Dowd	National Capital Planning Commission
0142	Noe	Town of Leesburg Town Manager
0143	Aronson	
0144	Roewer	USWAG Executive Director
0145	Shields	City of Falls Church Assistant City Manager
0146	Page	Federal Aviation Administration, Washington Airports District Office
0147	Oppong	
0148	Rauner	Business Bank, United Financial Banking Companies, Inc.
0149	Curtis	Virginia Department of Transportation
0150		Lovingston & Liebler
0151	Liebeler	Tuckahoe Recreation Club
0152	Emory	Tuckahoe Recreation Club
0153		Tuckahoe Recreation Club

Index J.2-2 Supplemental Draft EIS Comments by Commenter ID Number

ID Number	Last Name	Organization
0154	Tomlinson	Member, Tuckahoe Recreation Club
0155	Hadd	
0156	Devolites	Commonwealth Virginia Senator
0157	Rinaldi	RMC-Tyco, LLC
0158	Peacock	Peacock Buick
0159	Salemo	Eurasian Service Center
0160	Tracinelli	Grove Slade Associates
0161	Heim	Sunbelt Rentals, Inc General Counsel
0162	Gear	
0163	Griffin	Rosenthal Honda
0164	Herman	
0235	Hawkins	

Index J.3-1 Draft EIS Comments by Commenter Organization

Organization	Last Name	ID Number
ABS Committee - Reston Interfaith Board of Directors	Coale	0193
Action Committee for Transit	Clarke, W.	0018
Action Committee for Transit	Kelly	0425
AGIR Limited	MacLane	0418
Alder Branch Management/Lincoln at Tysons Corner	Henderson	0084
American Lung Association	Reynolds	0198
Boston Properties	Burkart	0003
Breakthrough Technologies Institute	Vincent	0445
Buchanan Partners, LLC	Buchanan	0242
Centennial Contractors Enterprises, Inc.	Benton	0292
Centreville Citizens for Rail	Francese	0197
Chathams Ford Neighborhood	Nicolais	0174
Chathams Ford Neighborhood	Tyrrell	0383
Chesapeake Region 2012 Coalition	Bishop	0153
Cinnamon Creek Homeowners Association	Janney	0060
City of Falls Church	Gardner	0122
City of Falls Church	Snyder	0165
City of Falls Church Public Utilities Manager	Etris	0497
Coalition for Smarter Growth	Schwartz	0149
Coalition for Smarter Growth	Wood	0251
Committee for Dulles	Holden	0204
Commonwealth of Virginia Senator	Howell	0298
Comstock Homes, Inc.	Pitts	0096
Comstock Homes, Inc.	Carter	0256
Comstock Partners LLC	Clemente	0095
Department of Conservation and Recreation	Gavan	0002
Dulles Area Transportation Association	Larsen	0244
Dulles Corridor Rail Association	Nicoson	0141
Dulles Gateway Associates LLC	Antigone	0248
Ellison Heights-Mount Daniel Civic Association	Whyte	0145
ENDependence Center of NOVA & the Disability Community	Ray	0157
Environmental Defense	Replogle	0444
Equal Metro Access for All of Tysons Corner	Equal Metro Access for All of Tysons Corner	0455
Fairfax County Board Chairman	Hanley	0121
Fairfax County Board Supervisor	Connolly	0130
Fairfax County Board Supervisor	Hudgins	0437
Fairfax County Board Supervisors		0490
Fairfax County Coalition for Smarter Growth	Barksdale	0151
Fairfax County Department of Transportation	Chang	0479
Fairfax County Executive	Griffin	0233
Fairfax County Federation of Citizens Association	Packard	0402
Fairfax County Park Authority	Lanham	0306
Fairfax County Taxpayers Alliance	Purves	0140
Federal Aviation Administration, Washington Airports District Office	Page	0485
Fountains at McLean	Jacoby	0481
Freddie Mac/TYTRAN	Menda	0152
Gannett Co., Inc.	Houser	0274
Greater Reston Chamber of Commerce	White	0450
Greater Washington Board of Trade	Pinkard	0142
Hallcrest Heights Homeowners Association	Tyler	0137
Herndon Dulles Chamber of Commerce	Deuel	0027
Horwatt and Associates PC	Horwatt	0477
Host Marriot Corporation	Walter	0453
Hunter Mill Defense League	Bennett	0147

Index J.3-1 Draft EIS Comments by Commenter Organization

Organization	Last Name	ID Number
Hunter Mill Defense League Board of Directors	Twomey	0460
Hunter Mill East LLC	Thoburn	0464
Hunton & Williams	McDermott	0461
Inlet Cluster Association	McDevitt	0288
Kings Park Civic Association	Malak	0134
Landowners Economic Alliance for the Dulles Extension Rail	Peterson	0154
Leesburg Pike, LLC	Marsteller	0493
Lemon Road Civic Association	Dusenbury	0087
Lillian Court at Tysons II	Cunha	0395
LINK	Ingebritsen	0005
Long and Foster Real Estate	Foster	0436
Loudoun Chapter of ARK	Dieter	0259
Loudoun County Administrator	Bowles	0004
Loudoun County Administrator	Bowers	0491
Loudoun County Board Supervisor	Bogard	0240
Maryland-Virginia Monorail Initiative	Whitener	0266
McCandlish and Lillard	Sutliff	0451
McLean Citizen's Association	Foust	0392
McLean Commons Citizens Association	Broussard	0159
Merchant's Tire and Auto Center	Grimsley	0498
Metropolitan Washington Airports Authority	Wilding	0440
National Capital Area League of Women Voters	Cogswell	0206
National Capital Planning Commission	Dowd	0492
Natural Resources Conservation Service	Doetzer	0001
Northern Virginia Regional Park Authority	Iglhaut	0456
Northern Virginia Transportation Alliance	Chase	0446
NVR	Dyke	0396
Pavillion Condominium Association	Sonefeld	0126/0199
Prentiss Properties	Cooper	0139
Rapid Transit Action Committee/Mason Hirst Companies	Hirst	0138
Reston Association	Corrigan	0170
Reston Association	Blackwell	0196
Reston Association		0210
Rotonda Condominium Owners Association	Wright	0156
Rotonda Condominium Owners Association	Caruso	0220
Rotonda Condominiums	Newman	0302
RTAC	Hill & Stowers	0478
Ruth C. Launders Marital Trust	Fairfield	0175
Sierra Club, Great Falls Group	Apple	0188
Sierra Club, Virginia Chapter	Diedrich	0158
Springfield Interchange Project Info Center	St. Andre	0070
The Clover Companies	Daniels	0413
TishmanSpeyer Properties	Evans	0237
TMS Limited Partnership, Cooley Godward LLP	Looney	0135
Toll Road Investors Partnership II - Dulles Greenway	Gordon	0257
Toll Roads Newsletter	Samuel	0508
Town of Herndon	Thoesen	0409
U.S. Environmental Protection Agency Region III	Arguto	0303
Union Local 2 OPEI Chief Shop Steward	O'Connor	0187
Union Local 689	Barber	0253
Union Local 689 Amalgamated Transit	Mathieu	0278
Union Metro Washington Council AFL-CIO	Simpson	0186
Virginia Association of Railway Patrons	Peacock	0185
Virginia Bicycling Federation	Muchnick	0066

Index J.3-1 Draft EIS Comments by Commenter Organization

Organization	Last Name	ID Number
Virginia Department of Conservation and Recreation	Jones	0519
Virginia Department of Environmental Quality	Ellis	0407
Virginia Department of Environmental Quality	Kederzierski	0518
Virginia Department of Historic Resources	Richards	0516
Virginia Department of Mines, Minerals, and Energy	Wilkes	0517
Virginia Department of Transportation	Allahdoust	0421
Virginia House of Delegates	Scott	0012
Virginia House of Delegates, Dulles Corridor Rail Association	Plum	0131
Walker and Company	Walker	0162/0184
Walker and Company	Poulson	0252
Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.	Minchew	0014
Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.	Baker	0161
Walsh, Colucci, Stackhouse Emrich & Lubeley P.C.	Walsh	0400
Washington Airports Task Force	Welti	0132
Washington Airports Task Force	Schefer	0133
Wellborn Management Co. Inc.	Howard	0449
West Falls Church Village Homeowners Association	Davey	0435
West Wind Crossing Community	Leslie	0260
Wilmorite Property Management	Foerster	0406
WIS Company, MOVEIT.org	Reid	0112

Index J.3-2 Supplemental Draft EIS Comments by Commenter Organization

Organization	Last Name	ID Number
ARC Corporation	Muten	0014
Boston Properties	Johnston	0062
Bracewell & Patterson, LLP	Dulany	0106
Breakthrough Technologies Institute	Vincent	0063
Business Bank, United Financial Banking Companies, Inc.	Rauner	0148
Charles A. Veatch Company	Veatch	0130
Cherner Automotive Group	Cherner	0134
City of Falls Church Assistant City Manager	Shields	0145
Commercial Condominium Management Company'	Motz	0004
Committee for Dulles	Holden	0067
Commonwealth Virginia Senator	Devolites	0156
Comstock Companies	Pitts	0052
Cooley Godward, LLP	Zahm	0075
Dulles Corridor Rail Association	Plum	0037
Dulles Corridor Rail Association	Nicoson	0060
Dulles Gateway Associates, Inc.	Antigone	0111
Eurasian Service Center	Salemo	0159
Fairfax County Board Chair	Hanley	0083
Fairfax County Board Supervisor	Hudgins	0058
Fairfax County Board Supervisor	Connolly	0077
Fairfax County Department of Transportation	Chang	0093
Fairfax County Non-Motorized Transportation Committee	Smith	0117
Federal Aviation Administration, Washington Airports District Office	Page	0146
Greater Reston Chamber of Commerce	White, T.	0023
Greater Washington Board of Trade	Thomas	0069
Greater Washington Board of Trade	Grow	0078
Grove Slade Associates	Tracinelli	0160
Hallcrest Heights Homeowners Association	Tyler	0036
Hallcrest Heights Homeowners Association	Moske	0138
Hunter Mill Defense League	Bennett, J.	0109
Lerner Enterprises	Rosen	0008
Loudoun County Administrator	Bowers	0084
Loudoun County Board Chairman	York	0066
Loudoun County Board Supervisor	Bogard	0114
Lovingston & Liebler		0150
LOWER	Walker	0061
McLean Citizens Association Transportation Committee	Byrnes	0034
Member, Tuckahoe Recreation Club	Tomlinson	0154
Merchant Auto and Tire Center	Marsteller	0092
Metropolitan Washington Airports Authority	Holly	0131
Montgomery Co. Dept. of Public Works and Transportation	Genetti	0079
National Capital Planning Commission	Dowd	0141
National Motorists Association	McGuire, M.	0015
Northern Virginia Regional Commission	Van Zee	0006
Northern Virginia Regional Park Authority	Iglhaut	0086
Patton, Harris, Rust, and Associates	Kennedy	0053
Peacock Buick	Horwatt	0136
Peacock Buick	Peacock	0158
Prentiss Properties	Cooper	0028
Prospective, Inc.	Ritchey	0038
Rapid Transit Action Committee/Mason Hirst Companies	Hirst	0072

Index J.3-2 Supplemental Draft EIS Comments by Commenter Organization

Organization	Last Name	ID Number
Reston Association	Jones	0039
Reston Citizen's Association	Davis, C.	0050
RMC-Tyco, LLC	Rinaldi	0157
Rosenthal Honda	Griffin	0163
Sunbelt Rentals, Inc General Counsel	Heim	0161
Susan Falck-Muten & Associates	Falck-Muten	0019
Town of Herndon	Thoesen	0132
Town of Leesburg Town Manager	Noe	0142
Tuckahoe Recreation Club	Liebeler	0151
Tuckahoe Recreation Club	Emory	0152
Tuckahoe Recreation Club		0153
United States Environmental Protection Agency Region III	Hoffman	0085
USWAG Executive Director	Roewer	0144
Vastera Solutions for Global Trade	Roderiques	0024
Virginia Department of Historic Resources	Holma	0010
Virginia Department of Transportation	Allahdoust	0091
Virginia Department of Transportation	Curtis	0149
Washington Airports Task Force	Schefer	0108
Washington Information Source Co	Reid	0016
Washington Regional Network For Livable Communities	Cort	0090
Wellborn Management Co., Inc., Realtors	Howard	0096
West*Group	Abt	0113
West*Group	Halpin	0123
Westhampton Civic Association	Bravo	0026
Westhampton Civic Association	Ward	0087
Westhampton Civic Association	Melton	0088
Westhampton Civic Association	Topper	0089
Westhampton Civic Association	Ghannam	0099
Westhampton Civic Association	May	0104
Wiley, Rein, and Fielding for HBL of Tysons	Goodman	0070

APPENDIX K: AGENCY CORRESPONDENCE

Correspondence is organized by agency as follows, and in reverse chronological order.

K.1 Federal

K.1.1 Advisory Council on Historic Preservation
- August 8, 2003
- July 20, 2000

K.1.2 Federal Emergency Management Agency
- June 27, 2000

K.1.3 United States Army Corps of Engineers
- March 22, 2002

K.1.4 United States Department of Agriculture, Natural Resources Conservation Service
- July 8,2002

K.1.5 United States Department of the Interior, National Park Service
- August 9, 2000

K.1.6 United States Department of Transportation, Federal Aviation Administration
- February 12, 2004
- October 25, 2002
- April 12, 2002

K.1.7 United States Environmental Protection Agency
- December 18, 2003
- August 20, 2002

K.2 Regional

K.2.1 Metropolitan Washington Airports Authority
- December 29, 2003
- August 27, 2002
- August 10, 2000

K.2.2 National Capital Planning Commission
- February 23, 2004
- August 23, 2002

K.2.3 Northern Virginia Regional Commission
- November 4, 2003

K.2.4 Northern Virginia Regional Park Authority
- December 18, 2003
- November 1, 2002
- August 28, 2002
- August 10, 2000

K.3 State

K.3.1 Commonwealth of Virginia, House of Delegates

- Verbal Testimony at December 2003 Public Hearings (The Honorable Jim Scott)
- Verbal Testimony at December 2003 Public Hearings (The Honorable Kenneth R. Plum)
- August 26, 2002
- Verbal Testimony at July 2002 Public Hearings (The Honorable Kenneth R. Plum)
- Verbal Testimony at July 2002 Public Hearings (The Honorable Kenneth R. Plum)
- Verbal Testimony at July 2002 Public Hearings (The Honorable Kenneth R. Plum)
- July 22, 2002

K.3.2 Commonwealth of Virginia, Senate

- August 18, 2002

K.3.3 Commonwealth of Virginia, Department of Agriculture and Consumer Services

- January 19, 2001

K.3.4 Commonwealth of Virginia, Department of Conservation and Recreation

- February 9, 2004
- November 1, 2002
- January 16, 2002
- June 15, 2001
- February 1, 2001
- July 17, 200

K.3.5 Commonwealth of Virginia, Department of Environmental Quality

- December 18, 2003
  - Participating agencies:
    - Department of Environmental Quality
    - Department of Agriculture and Consumer Services
    - Department of Conservation and Recreation
    - Marine Resources Commission
    - Department of Historic Resources
    - Chesapeake Bay Local Assistance Department
    - Northern Virginia Regional Commission
    - Loudoun County
    - Town of Leesburg
- October 28, 2002
- August 27, 2002
  - Participating agencies:
    - Department of Environmental Quality
    - Department of Conservation and Recreation
    - Department of Transportation
    - Marine Resources Commission
    - Department of Historic Resources
    - Department of Mines, Minerals, and Energy
    - Department of Forestry
    - Chesapeake Bay Local Assistance Department

K.3.6 Commonwealth of Virginia, Department of Historic Resources

- May 27, 2004
- May 19, 2004
- November 19, 2003
- October 29, 2002

K.3.7 Commonwealth of Virginia, Department of Mines, Minerals, and Energy
- § October 28, 2002

K.3.8 Commonwealth of Virginia, Department of Transportation
- § February 25, 200
- § December 23, 2002
- § October 28, 2002
- § August 27, 2002
- § August 4, 2000
- § July 2, 1999
- § December 7, 1999

K.3.9 Commonwealth of Virginia, Marine Resources Commission
- § October 28, 2002

K.4 County

K.4.1 County of Fairfax, Board of Supervisors
- § December 17, 2003
- § December 16, 2003
- § Verbal Testimony at 12/2003 Public Hearings (Ms. Kathy Hudgins)
- § Verbal Testimony at 12/2003 Public Hearings (Mr. Gerald E. Connolly)
- § August 28, 2002
- § August 16, 2002
- § August 13, 2002
- § August 2, 2002

K.4.2 County of Fairfax, Department of Transportation
- § December 19, 2003
- § August 10, 2000

K.4.3 Fairfax County Park Authority
- § August 16, 2002
- § August 7, 2002
- § August 4, 2002
- § August 19, 2002

K.4.4 Loudoun County, Board of Supervisors
- § December 16, 2003
- § Verbal Testimony At July 2002 Public Hearing (Mr. William Bogard)

K.4.5 Loudoun County, Office of the County Administrator
- § February 25, 2004
- § December 9, 2003
- § December 20, 2002
- § October 24, 2002

K.4.6 Loudoun County, Department of Planning
- § August 31, 2000

K.4.7 Montgomery County
- § February 23, 2004
- § December 16, 2003

K.5 Local

K.5.1 City of Falls Church
- § February 25, 2004
- § October 23, 200 Verbal Testimony at July 2002 Public Hearings (The Honorable Daniel E. Gardner)
- § Verbal Testimony at July 2002 Public Hearings (The Honorable David Snyder)
- § July 30, 2002
- § June 25, 1999

- February 4, 1999

K.5.2 Town of Herndon

- December 31, 2003
- August 26, 2002
- April 2, 2002
- August 8, 2000

K.5.3 Town of Leesburg

- February 25, 2004

K.1 FEDERAL

K.1.1 Advisory Council on Historic Preservation

- August 8, 2003
- July 20, 2000

DMC

August 8, 2003

Mr. Karl Rohrer, AICP
Project Manager
Dulles Corridor Rapid Transit Project
1550 Wilson Boulevard, Suite 300
Arlington, VA 22209

REF: Proposed Dulles Corridor Rapid Transit Project
Fairfax and Loudoun Counties, Virginia

Dear Mr. Rohrer:

The ACHP received your notification and supporting documentation regarding the adverse effects of the referenced project on properties listed on and eligible for listing on the National Register of Historic Places. Based upon the information you provided, we do not believe that our participation in consultation to resolve adverse effects is needed. However, should circumstances change and you determine that our participation is required, please notify us. Pursuant to 36 CFR 800.6(b)(iv), you will need to file the final Programmatic Agreement (PA) and related documentation at the conclusion of the consultation process. The filing of the PA with us is required in order to complete the requirements of Section 106 of the National Historic Preservation Act.

Thank you for providing us with your notification of adverse effect. If you have any questions or require further assistance, please contact Martha Catlin at 202-606-8505.

Sincerely,

Don L. Klima
Director
Office of Federal Agency Programs

ADVISORY COUNCIL ON HISTORIC PRESERVATION
1100 Pennsylvania Avenue NW, Suite 809 • Washington, DC 20004
Phone: 202-606-8503 • Fax: 202-606-8647 • achp@achp.gov • www.achp.gov

TS 92 Scoping Comments
B-3

Advisory Council On Historic Preservation

The Old Post Office Building
1100 Pennsylvania Avenue, NW, #809
Washington, DC 20004

JUL 20 2000

Mr. Len Alfredson
WMATA Project Manager
Dulles Corridor Rapid Transit Project
1550 Wilson Boulevard, Suite 300
Arlington, VA 22209

Ref: Dulles Corridor Rapid Transit Project
Fairfax and Loudoun Counties, Virginia

Dear Mr. Alfredson:

Recently the Council received your invitation to a pre-scoping session for the referenced project. While we appreciate your notification and request for our participation in this process, it is not the Council's role, nor do we have the resources to participate at this stage. However, we do wish to call your attention to the requirements of Section 106 of the National Historic Preservation Act and the Council's implementing regulations (36 CFR Part 800). The Council's regulations set forth the steps to be taken in order to identify historic properties and assess effects associated with a proposed Federal undertaking. We strongly recommend that any environmental document be coordinated with the information necessary to initiate and complete the 106 process. If it is determined, in consultation with the Virginia State Historic Preservation Officer and other consulting parties, that the project may adversely affect historic properties, the Council should be notified by the Federal Transit Administration (FTA) and given the opportunity to participate in further consultation to consider means to avoid or minimize those impacts.

FTA and WMATA should initiate coordination with the Virginia State Historic Preservation Officer as soon as possible and work closely with them to take advantage of their knowledge of cultural resources in the area. Any further request for the Council's involvement regarding this project should be initiated by the sponsoring Federal agency, and accompanied by the requisite supporting documentation specified at 36 CFR § 800.11. Should you have any questions regarding the Section 106 process, you may contact MaryAnn Naber at (202) 606-8534 or by email at mnaber @achp.gov.

Sincerely,

Priscilla J. Mull

Don L. Klima
Director
Office of Planning and Review

K.1.2 Federal Emergency Management Agency

- June 27, 2000

TS 87 | Scoping Comments
8/2/00

Federal Emergency Management Agency

Region III
One Independence Mall, Sixth Floor
615 Chestnut Street
Philadelphia, PA 19106-4404

MT

June 27, 2000

Mr. Len Alfredson
WMATA Project Manager
Dulles Corridor Rapid Transit Project
1550 Wilson Boulevard, Suite 300
Arlington, Virginia 22209

Reference: Dulles Airport-Loudoun County Virginia

Dear Mr. Robb:

This letter is in response to the invitation to attend the pre-scoping session scheduled for July 11, 2000. Our office is unable to send a representative, however we would like to submit our comments at this time. To better respond, let me briefly provide some background information on the National Flood Insurance Program (NFIP). In 1968, the U.S. Congress passed the National Flood Insurance Act, which created the NFIP. The NFIP was later broadened and modified with the passage of the Flood Disaster Protection Act of 1973 and other legislative measures. The NFIP is designed to reduce future flood losses through local floodplain management and to provide protection for property owners against potential losses through flood insurance. As part of the agreement for making flood insurance available in a community, the NFIP requires the participating community to adopt floodplain management ordinances containing certain minimum requirements intended to reduce future flood losses.

Any project involving the development, encroachment, or modification of the 100-year floodplain, including channel relocation, must meet the requirements as stipulated by the community's floodplain management ordinance.

In support of the NFIP, FEMA has undertaken a massive effort of flood hazard identification and mapping to produce Flood Hazard Boundary Maps (FHBM), Flood Insurance Rate Maps (FIRM), and Flood Boundary and Floodway Maps (FBFM). Since the proposed project will impact or relocate existing streams, you must apply for a Conditional Letter of Map Revision (CLOMR) prior to construction.

I have enclosed for your use all the necessary application forms required for a CLOMR. As explained in the packet, "Revisions to National Flood Insurance Program Maps", FEMA will issue a Conditional Letter of Map Revision for proposed projects in the 100-year floodplain provided all

the necessary plans and hydraulic data are submitted. FEMA will then follow up with a physical map revision when as-built plans are submitted. The only way we can keep each community's floodplain maps up-to-date is by obtaining your cooperation in this effort.

In addition, Executive Order (E.O.) 11988 requires that Federal agencies avoid the direct and indirect support of floodplain development whenever there is a practicable alternative. The preferred method for satisfying this requirement is to avoid sites in the 100-year floodplain and, for those actions deemed critical, sites in the 500-year floodplain. If an action must be located in the floodplain, then the agency must avoid the long-and short-term adverse impacts associated with the occupancy and modifications of the floodplain and must minimize the potential harm to people and property and to natural and beneficial floodplain values. For example, flood easements, deed restrictions, elevation of residential structures, or buy-outs may be necessary to mitigate property owners adversely impacted by this project.

I have enclosed a copy of a booklet entitled "Floodplain Management Guidelines for Implementing E.O. 11988". Within this booklet, *Part II - Decision Making Process*, outlines an eight step process designed to reflect the decision making process required under Section 2(a)(1) of the Order. Section 2 states,

> *"In carrying out the activities described in Section 1 of this Order, each agency has a responsibility to evaluate the potential effects of any actions it may take in a floodplain; to ensure that its planning programs and budget requests reflect consideration of flood hazards and floodplain management; and to prescribe procedures to implement the policies and requirements of this Order."*

In summary, the Federal Agency funding or constructing a project is responsible to ensure compliance with E.O. 11988. If the floodplain cannot be avoided, then the minimum requirements of the National Flood Insurance Program must be met.

If you have any questions concerning this letter, the map revision process, E.O. 11988 or any other floodplain management issue, please feel free to contact me (215) 931-5665 or our technical hotline at (877) FEMA MAP (toll free). Additional information may be obtained by logging onto www.fema.gov/mit/tsd.

Sincerely,

Erik J. Rourke

Erik J. Rourke
Regional Hydrologist

Enclosure: 1. Revisions to National Flood Insurance Program Maps
2. Floodplain Management Guidelines for Implementing E.O. 11988

K.1.3 United States Army Corps of Engineers

- March 22, 2002

U.S. Army Corps of Engineers
Norfolk District,

March 22, 2002

Project Number: 02-N0033

Waterway: Various waterways

1. Participant:
Dulles Corridor
Attn: John Dittmeier
1550 Wilson Boulevard, Suite 300
Arlington, Virginia 22209

2. Authorized Agent:
Coastal Resources, Inc.
Attn: Bridgette Girllo
2988 Solomns Island Raod
Edgewater, Maryland 21037

3. Address of Job Site:
The Dulles Corridor Rapid Transit Project study area begins at the I-66/Dulles Connector Road interchange in Fairfax County and extends north along the Dulles Airport Access/Toll Road to its terminus at the Route 772 interchange with the Greenway in Loudoun County, Virginia.

4. Project Description:
The project consists of a jurisdictional determination for the proposed Dulles Corridor Rapid Transit Project.

5. Findings

A site inspection has verified that waters and/or wetlands regulated under Section 404 of the Clean Water Act (33 U.S.C. 1344) exist at the location stated above. The wetland delineation and site plan submitted by letter dated June 26, 2001 and revisions contained in your field review memo dated February 27, 2002 by Coastal Resources, Inc., in accordance with the methodology described in the 1987 Corps of Engineers Wetland Delineation Manual. This confirmation is valid for a period of five years from the date of this letter unless new information warrants revision before the expiration date.

Prior to commencing work you must obtain the proper authorization to perform work in wetlands and/or waters of the U.S. Please note that performing the proposed work without proper authorization would be in violation of the Clean Water Act.

6. Corps Contact: Cynthia J. Wood at (703) 221-6967

for Bruce F. Williams
Chief, Northern Virginia Regulatory

NAO FL 13 REVISED DEC 90

K.1.4 United States Department of Agriculture, Natural Resources Conservation Service

- July 8, 2002

United States Department of Agriculture

NRCS
Natural Resources Conservation Service
1606 Santa Rosa Road, Suite 209
Richmond, VA 23229-5014

Telephone: 804/287-1668
Fax: 804/287-1736

RECEIVED
JUL 12 2002
By 15,234

July 8, 2002

0001 A

Mr. Corey W. Hill
Northern Virginia Regional Manager
Virginia Dept. of Rail and Public Transportation
1550 Wilson Boulevard, Suite 300
Arlington, Virginia 22209

Dear Mr. Hill:

RE: Dulles Corridor Rapid Transit Project Draft EIS

NRCS has reviewed this document to ensure that impacts to soils and prime farmland were adequately documented. Section 4.1.3.3 – Soils and Section 4.1.3.4 – Prime Farmland provide this documentation.

Virginia NRCS has no objection to this proposal.

Sincerely,

M. Denise Doetzer

M. DENISE DOETZER
State Conservationist

K.1.5 United States Department of the Interior, National Park Service

- August 9, 2000

89 Scoping Comments

United States Department of the Interior

NATIONAL PARK SERVICE
Wolf Trap Farm Park for the Performing Arts
1551 Trap Road
Vienna, Virginia 22182

IN REPLY REFER TO:
W46 (NCR-WOTR)

AUG 9 2000

Mr. Len Alfredson, WMATA Project Manager
Dulles Corridor Rapid Transit Project
1550 Wilson Boulevard, Suite 300
Arlington, Virginia 22209

Dear Mr. Alfredson:

I appreciate this opportunity to comment on the Dulles Corridor Rapid Transit Project. I attended the public scoping meeting held on July 26, and I have reviewed the Scoping Information Packet.

Wolf Trap Farm Park for the Performing Arts is the only national park dedicated solely to the performing arts. The park's primary performance venue, the Filene Center, is an amphitheater that normally operates from mid-May through mid- September. Because the park, our patrons, and our community may be affected by any of the project's three "build" alternatives, we have a keen interest in the project.

The project's third build alternative includes a "to be determined" metro station at Wolf Trap Farm Park for the Performing Arts. Our partner, the Wolf Trap Foundation for the Performing Arts, currently contracts for Metro Bus service to and from the West Falls Church Metro Station for Filene Center patrons. There is no other mode of public mass transportation to the park. Therefore, a station that allows access to park facilities and programs, would be a great convenience to our patrons.

However, a full-time, full-service station next to Wolf Trap Farm Park would be troubling. Not only is land availability an issue, we would have concerns about noise, traffic, and other potential conflicts with the park.

We are particularly concerned about any potential noise impacts. Public Law 97-310, establishes acceptable Dulles Road corridor noise levels to protect the Filene Center from undue noise pollution. We are hopeful that potential noise impacts and appropriate mitigation will receive consideration in all alternatives.

A final concern is the Trap Road Bridge that traverses over the Dulles Highway and the Toll Road. This bridge greatly affects traffic circulation in the park and in the neighboring community. Should any of the build alternatives require replacement of this bridge, we would like to be involved in the redesign.

I appreciate your efforts to include us in this project study. If you have any questions or if I can be of any assistance, please do not hesitate to call me at (703) 255-1808.

Sincerely,

William J. Crockett
Director

cc: Mr. Charles A. Walters, Jr., Executive Vice President and CEO
Wolf Trap Foundation for the Performing Arts
1624 Trap Road
Vienna, Virginia 22182

K.1.6 United States Department of Transportation, Federal Aviation Administration

- February 12, 2004
- October 25, 2002
- April 12, 2002

U. S. Department
of Transportation

**Federal Aviation
Administration**

WASHINGTON AIRPORTS DISTRICT OFFICE
23723 Air Freight Lane, Suite 210
Dulles, Virginia 20166
Telephone: 703/661-1354
Fax: 703/661-1370

February 12, 2004

Mr. Karl A. Rohrer, AICP
Project Manager, VDPRT
1550 Wilson Boulevard, Suite 300
Arlington, VA 22209

SA 9105

Dear Mr. Rohrer:

We have reviewed the Supplemental Draft Environmental Impacts Statement (EIS) for the Dulles Corridor Rapid Transit Project. The Federal Aviation Administration (FAA) is supportive of the efforts and we have the following comments related to the document.

Concerning FAA's issuance of a Decision for the Environmental Impact Statement.

We understand that Phase 1 of the project would provide rail access to a station at Whiele Avenue with Executive Bus Service providing access from that station to the airport terminal. This phase also provides for an expansion of the Dulles North Transit Center primarily to provide parking for increased ridership over the existing bus service to points east and to Washington, D.C. Phase 2 of the project would extend the rail service to the airport and construct the rail service yard. Subject to satisfactory completion of the EIS, and after the Federal Transit Administration issues their Record of Decision, we would anticipate issuing an FAA Decision on the entire ultimate project.

Concerning the release of the Dulles Access Highway right-of-way for the Rapid Transit project:

We believe that the Metropolitan Washington Airports Authority (the Authority), which operates the airport under a lease agreement from the United States of America, can provide a right-of-way on airport property, specifically along and within the median of the Dulles Airport Access Highway, provided that it provides a means for passengers to access the airport. Our office would have to review and approve the proposed Right of Way agreement before it is executed by the Authority. However, our office cannot authorize a "fee simple" release of this Right of Way or of any airport property. We can only concur with the Authority releasing their interest in the land for the remaining life of their lease. We believe that release of a "fee simple" interest in the property would require approval action at the U. S. Department of Transportation level or possibly higher.

Furthermore, we believe that the Authority can release its interest in the Right of Way at no cost to the rail operating authority, provided the rail system accesses and benefits the airport. Executive bus service from the proposed Whiele Avenue station to the airport would be considered as providing airport access for the purposes of this no-cost land interest transfer. However, if passenger service is not provided from the rail station to the airport then the Authority's interest in the land could not be conveyed at no-cost, and the rail authority would have to pay the fair market value for the land interest.

Concerning the release of airport property for a rail maintenance yard.

While we can concur with the Authority's release of its interest in airport property for the rail maintenance yard, the Authority must receive the fair market value for this land. We could consider a reduction in the fair market value proportional to the airport passengers' share of the use of the rail extension compared to the total passengers. A release of "fee interest" in the land for the rail maintenance yard would require the same approval level as for the access road right-of-way discussed above.

We hope this information is helpful with continued planning for the Dulles Corridor Transit improvements. If you have any questions on the above comments, please do not hesitate to contact us.

Sincerely,

Terry J. Page, Manager
Washington Airports District Office

cc: MWAA, Mr. Lebegern
AEA-610, Ms. Mather
APP-600, Mr. Smigelski

0 2002

17,390

U. S. Department
of Transportation

**Federal Aviation
Administration**

WASHINGTON AIRPORTS DISTRICT OFFICE
23723 Air Freight Lane, Suite 210
Dulles, Virginia 20166
Telephone: 703/661-1354
Fax: 703/661-1370

2 3 2 4

RECEIVED
OCT 29 2002
WMATA/EXTN-DCRTP

October 25, 2002

~~Mr. John Dittmeier~~
Dulles Corridor Rapid Transit Project
1550 Wilson Boulevard, Suite 300
Arlington, VA 22209

Dear Mr. Dittmeier:

As requested in the coordination meeting held October 10th this letter provides elaboration on some of the issues we have raised in our earlier comment letter and various communications we have had over the last year concerning the proposed Dulles Corridor rail project.

As we have stated earlier, under the Federal Aviation Administration (FAA) **Policy and Procedures Concerning the Use of Airport Revenue**, published in the Federal Register on February 16, 1999, the Authority would be required to obtain the fair market value in compensation for any airport property used for the project. This policy applies to the Dulles Airport Access Road and any stations or other facilities that would be located on airport land.

One of the major issues under discussion has been the siting of a rail yard on airport property. We are concerned that constructing the rail yard on Site 15 appears to have the greatest environmental impacts of the three alternatives presented in the Draft Environmental Impact Statement (DEIS). Also, the FAA believes that a rail yard located on Dulles International Airport is not a desirable use of airport land. We have concerns that the preferred alternative may not pass legal muster under the National Environmental Policy Act since there appears to be an practicable alternative rail yard site that meets the project purpose with less adverse environmental impact.

To access Site 15 on the airport property, the yard rail lead cuts a swath through approximately 2,500 linear feet of mostly forested wetlands and crosses Horsepen Run. The impacts of Site 7, previously identified as the most viable site both operationally and environmentally, has floodplain impacts but no wetland impacts. Federal regulations allow impacts to wetlands only if there are no practicable alternatives. Likewise, Executive Order 11988 has a practicability test for floodplain impacts. Our Airport Environmental Handbook, FAA Order 5050.4a, requires that coordination be done with agencies with special interest in wetlands. This Order states that agencies with permitting actions, such as the U.S. Army Corps of Engineers and state agencies, Virginia

Department of Environmental Quality (DEQ) in this case, shall be asked to advise if they foresee any difficulty issuing their permits for the project. I understand from our last meeting that the Corps has not been asked this but the DEQ may have commented. We suggest that you coordinate with these agencies and provide documentation from them in the Final Environmental Impact Statement (FEIS). The FEIS must demonstrate that Site 15 is the least damaging practicable alternative if it were to be approved. The FAA is required to write a Record of Decision (ROD) for the project that must pass legal review.

We have also expressed concerns about security for the Airport. The project, particularly the proposed rail yard, is a substantial intrusion into airport property. As we discussed, the Transportation Security Agency (TSA) now handles airport security. We would not be comfortable with the proposed project unless TSA "signs off" on the project. The Federal Transit Administration may also require "sign off" for the whole project since it is a transportation project and may be within the purview of TSA.

In order for FAA to write a favorable ROD for the project, first the Federal Transit Administration (FTA) must issue their ROD and the Metropolitan Washington Airports Authority must show the project on their Airport Layout Plan and obtain FAA approval.

At the last meeting, MWAA's policy on keeping occupied structures out of the inner approach to runways was discussed. This is an extension of FAA's policy to keep Runway Protection Zones clear of places of public assembly as well as some other uses. The building associated with the rail yard is shown outside of the approach to a proposed new runway located 4,000' west of the existing Runway 1L/19R. As discussed, this is only one of several alternatives for the location of the proposed new runway that is being studied in our EIS. If a new runway were to be constructed at some other separation distance from the existing runway, the design of the rail yard must respect the new approach or MWAA must revise their policy.

If you have any questions about these comments, please contact Mr. Joe Delia at (703) 661-1358 in regard to the land issues or Mr. Frank Smigelski at (703) 661-1365 in regard to environmental issues.

Sincerely,

Terry J. Page, Manager
Washington Airports District Office

cc: Mr. Glenn, FTA
Mr. Hackett, MWAA
Ms. Mather, AEA 610

U. S. Department
of Transportation

**Federal Aviation
Administration**

WASHINGTON AIRPORTS DISTRICT OFFICE
23723 Air Freight Lane, Suite 210
Dulles, Virginia 20166
Telephone: 703/661-1354
Fax: 703/661-1370

RECEIVED
APR 15 2002
WMATA/EXTN-DCRTP

April 12, 2002

Mr. John Dittmeier
Dulles Corridor Rapid Transit Project
1550 Wilson Boulevard, Suite 300
Arlington, VA 22209

0485

Dear Mr. Dittmeier:

Thank you for sending the Federal Aviation Administration (FAA) the 95% Draft Environmental Impact Statement (DEIS) for the Dulles Corridor Rapid Transit Project. We have several comments for you to consider.

As you know from our meeting, held October 17, 2001, a rail yard sited on Dulles International Airport is not a desirable use of airport land. Rail yard Site 15, one of three remaining alternatives, would be located on the airport. If it is determined through the EIS process that this site meets your operational needs and receives environmental approval, land will have to be acquired from the airport.

The land on which Site 15 is located is dedicated airport property. The Metropolitan Washington Airports Authority (the Authority) is required to seek FAA approval for the release of any property dedicated for airport purposes as identified on the Exhibit "A" Property Map for the airport. Also, under the **Federal Revenue Diversion Policy**, FAA will be required to publish the intent to release this property in the Federal Register for 30 days to solicit public comments. The Authority would be required to obtain the fair market value in compensation for the property.

We are also concerned with the comparison of environmental impacts for the three rail yard sites. Site 15 appears to have the greatest environmental impacts. In addition to the impacts quantified in the 95% DEIS, it appears that there would be additional impacts to resources. It appears that a swath would have to be cut through the forested wetlands and that additional fill, beyond the footprint of the pier footings, would have to be placed for construction access and perhaps track maintenance. We believe that these impacts should be quantified and presented in the DEIS.

The graphics provided should be consistent. The Draft General Plans for Facilities show environmental resources on some drawings yet they are omitted on others. For example, sheet 922, Metrorail Yard Site 7 shows wetlands, waters and floodplains in the area while

sheet numbers 925 depicting the Metrorail Yard Site 15 and sheet 926 depicting Metrorail Yard Site 20 do not show these environmental resources.

If you have any questions about these comments, please contact Mr. Joe Delia at (703) 661-1358 in regard to the land issues or Mr. Frank Smigelski at (703) 661-1365 in regard to environmental issues.

Sincerely,

Terry J. Page, Manager
Washington Airports District Office

cc: Mr. Hackett, MWAA

K.1.7 United States Environmental Protection Agency

- December 18, 2003
- August 20, 2002

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch St., Philadelphia, PA 19103

21.335

Mr.Karl Roher
Project Manager
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard
Suite 300
Arlington, Virginia 22209

DEC 18 2002

0085
0100 -

Dear Mr. Roher:

In accordance with the National Environmental Policy Act (NEPA), and Section 309 of the Clean Air Act , the Environmental Protection Agency Region 3 (EPA) offers the following comments regarding the Dulles Corridor Rapid Transit Project Supplemental Draft Environmental Impact Statement (SDEIS) and Section 4(f) Evaluation. This project was initially described in the context of a Draft Environmental Impact Statement (DEIS) in June 2002. EPA rated the DEIS and the locally preferred alternative with Lack of Objections with Adequate documentation (LO-1) in August 2002.

The SDEIS describes and summarizes changes of the potential transportation and environmental impacts related to minor design changes that resulted from the review of the DEIS and public comments. In addition, due to funding constraints, the overall project is now proposed to be completed in two phases with the final completion pushed to 2015 instead of 2009. These changes in the project scope and design were made after the completion of the DEIS and are the major focus of the SDEIS.

The locally preferred alternative continues to be the development of the full scope of the project with the minor design changes that resulted from the review of the DEIS and public comment. The project limits extend 24 miles from the vicinity of the existing West Falls Church Metrorail station in Fairfax County, Virginia westward to the vicinity of Rt 772 just west of Dulles Airport in Loudoun County, Virginia. The project is located in the rapidly growing and heavily congested Dulles Corridor which includes Dulles International Airport and the major employment hub of Tyson's Corner. The project would serve to link these major traffic generators with the regional mass transit system providing a direct rapid transit link between downtown Washington DC, Tyson's Corner and Dulles Airport.

Alternatives studied in the SDEIS included 1) the no-build alternative, 2) the DEIS locally preferred alternative (Metrorail extension to Dulles Airport). 3) the SDEIS modified locally preferred alternative (Metrorail extension to Dulles Airport with deign modifications) and 4) a phased approach, which includes Metrorail extension as far as Tyson's Corner and interim bus service to Dulles Airport by 2009 with completion of the Metrorail to Dulles Airport by 2015.

The suggested design changes to the locally preferred alternative, Alternative 3, mostly resulted in no change or a reduction in impacts. There are no identified major community impacts, Environmental Justice issues, or natural resource issues. The project continues to be confined to existing right-of-way or is located on existing parking lots, streets and other developed lands. There are still no residential displacements and commercial displacements appear to be less as a result of the revisions. Wetland and stream impacts are less than that associated with a typical residential development in the area. The modified Metrorail alternative remains on the Metropolitan Washington Council of Governments (MWCOG) Constrained Long Range Transportation Plan (CLRP) and it conforms with regional air quality plans.

Phasing of the project will result in total impacts similar to the SDEIS modified locally preferred alternative (Metrorail extension to Dulles Airport with deign modifications). However, phasing of the project does appear to adversely effect early year ridership numbers and thus may have less of an air quality and traffic benefit in the short run as compared to an early full build out. However, all alternatives conform to the regional air quality plans.

Consequently EPA continues to rate the Dulles Corridor Rapid Transit Project and the SDEIS with a Lack of Objections with Adequate documentation (LO-1). We encourage the development of the full Metrorail alternative because with the highest ridership, it will have the greatest capacity of moving people through the corridor, and should have the greatest impact on reducing congestion and air pollution.

If you have any questions or concerns regarding this letter please feel free to contact me at 215-814-2995 or Mr. Peter Stokely of my staff at 703-648-4292.

Sincerely,

William Hoffman, Director
Office of Environmental Programs

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch St., Philadelphia, PA 19103

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AUG 22 2002
0303 A

AUG 20 2002

Mr. Corey W. Hill
Northern Virginia Regional Manager
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard
Suite 300
Arlington, VA 22209

Dear Mr. Hill:

In accordance with the National Environmental Policy Act, and Section 309 of the Clean Air Act, the Environmental Protection Agency Region III (EPA) offers the following comments regarding the Dulles Corridor Rapid Transit Project Draft Environmental Impact Statement (DEIS) and Section 4(f) Evaluation.

The DEIS describes and summarizes the potential transportation and environmental impacts related to developing major new transit system enhancements in the Dulles Corridor by providing a direct connection to the existing regional Metrorail system. The project limits extend 24 miles from the vicinity of the existing West Falls Church Metrorail station in Fairfax County, Virginia westward to the vicinity of Rt 772 just west of Dulles Airport in Loudoun County, Virginia.

Alternatives studied in the DEIS included 1) the no-build alternative, 2) Bus Rapid Transit on a dedicated ROW the entire project length, 3) Metrorail extension to Tysons Corner and Bus Rapid Transit to the westward limits of the study, 4) Metrorail the entire project length and 5) a phased implementation of the full Metrorail alternative beginning with Bus Rapid Transit, followed by incremental construction of Metrorail.

This project is located in the rapidly growing and heavily congested Dulles Corridor which includes Dulles International Airport and the major employment hub of Tysons Corner. The project would serve to link these major traffic generators with the regional mass transit system providing a direct rapid transit link between downtown Washington DC, Tysons Corner and Dulles Airport.

Environmental impacts of this proposal are minor and EPA has not identified any potential environmental impacts that would require substantive changes to any of the alternatives. The project is confined to existing right-of-way or is located on existing parking lots, streets and other developed lands. There are no residential displacements and up to only six commercial displacements associated with any of the alternatives. The Metrorail alternative is on the Metropolitan Washington Council of Governments (MWCOG) Constrained Long Range Transportation Plan (CLRP) and it conforms with regional air quality plans. Wetland and stream

impacts are less than that associated with a typical residential development in the area. Noise, vibration and visual impacts were the only significant issues identified in the DEIS and the DEIS identified ways to minimize and mitigate these impacts.

Projected opening year ridership is estimated to be 27,000 to 72,000 average weekday riders depending on the alternative chosen. This project will provide a clean air alternative transportation mode for many commuters and travelers. The environmental impacts are less than the typically more environmentally damaging highway improvements. For example this project is projected to move up to 87,000 riders a day by 2025 with no residential displacements. Compare that to the recently proposed Capital Beltway improvements which displaced up to 300 residences and would adversely impact many more, while providing 2025 capacity for 2000-6000 more cars each rush hour or up to 42,000 cars per day.

Consequently EPA rates this project and the associated documentation with Lack of Objections with Adequate documentation (LO-1). Enclosed for your reference is a copy of EPA's rating system. We encourage the development of the full Metrorail alternative because with the highest ridership it will have the greatest capacity of moving people through the corridor and should have the greatest impact on reducing congestion and air pollution. The full Metrorail alternative will be a permanent alternative to the heavily congested roads in the Dulles Corridor and is supported by more businesses, residences and community groups than any other alternative. In addition, the full Metrorail alternative is on the MWCOG CLRP and has been found to conform to regional air quality plans.

If you have any questions or concerns regarding this letter please feel free to contact me at 215-814-3367 or Mr. Peter Stokely at 703-648-4292.

Sincerely,

William Arguto
NEPA/Fed Fac Team Leader

Enclosure

SUMMARY OF RATING DEFINITIONS AND FOLLOW UP ACTION*

Environmental Impact of the Action

LO--Lack of Objections
The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC--Environmental Concerns
The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EO--Environmental Objections
The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU--Environmentally Unsatisfactory
The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1--Adequate
The EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2--Insufficient Information
The draft EIS does not contain sufficient information for the EPA fully assess the environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3--Inadequate
EPA does not believe that draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640 Policy and Procedures for the Review of the Federal Actions Impacting the Environment.

K.2 REGIONAL

K.2.1 Metropolitan Washington Airports Authority

- December 29, 2003
- August 27, 2002
- August 10, 2000

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DEC 29 2003

01,405

Mr. Karl A. Rohrer
Project Manager
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard, Suite 300
Arlington, VA 22209

Dear Mr. Rohrer:

On behalf of the Metropolitan Washington Airports Authority (Airports Authority) I am pleased to reiterate our support for the Dulles Corridor Rapid Transit Project, and to comment on the October 2003 Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation. The Airports Authority has a very substantial interest in providing the best access to Washington Dulles International Airport (IAD) for the Washington metropolitan region, and supports the extension of Metrorail to IAD as vital to such access. For this reason, the Airports Authority Board of Directors on November 6, 2002 endorsed the Metrorail alternative, providing heavy rail service through the entire corridor, as essential to the region's and its own interests, and the Board urged the Commonwealth Transportation Board to adopt Metrorail as the Locally Preferred Alternative.

The Airports Authority is disappointed that the Federal Transit Administration is considering only a first phase of construction, from West Falls Church to Wiehle Avenue, for inclusion in the FY 2004-2009 New Starts Program, and is making no commitment to funding the completion of the project to IAD and beyond. Nevertheless, we are pleased that the proposed Phase I does not stop at Tysons Corner, but carries the project back to the median of the Dulles International Airport Access Highway (DIAAH).

The Authority's continued support of the project is subject to three conditions:

1. The FTA reauthorization process needs to recognize the ultimate goal to complete the rail line out to and beyond IAD.
2. Advanced additional engineering, must proceed beyond the initial segment and include the entire project.
3. There needs to be a Memorandum of Understanding among the local partners that captures a joint commitment to see the entire project through to completion.

A list of more specific comments is attached. In conclusion, the Airports Authority supports rail in the Dulles Corridor as consistent with the Master Plan for Washington Dulles International Airport.

Sincerely,

for Richard Culbertson

Frank D. Holly, Jr.
Vice President for Engineering

Attachment

RCC:pp

ATTACHMENT 1

Specific Comments
Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation
Dulles Corridor Rapid Transit Project

1. The Airports Authority supports the concept of Premium Bus Service as an interim measure that would provide non-stop service on 15-minute headways between the Wiehle Avenue Station and the Main Terminal, Washington Dulles International Airport.

2. The establishment of construction staging areas on Airport property will need to be coordinated with the Airports Authority to ensure that adequate provisions are made to mitigate potential adverse effects on existing and planned uses of candidate sites.

3. The discussion of the proposed Route 28 Station (page 2-32 of the SDEIS) indicates that the DIAAH would need to be realigned to accommodate the proposed station, and that the Dulles Toll Road would need to be realigned to allow future construction of a third lane in each direction on the realigned DIAAH. The SDEIS declares that the "future effects of this widening are no longer assumed to be a direct effect of the Dulles Corridor Rapid Transit Project." The Airports Authority strongly disagrees with this assertion. In our August 27, 2002 comments on the Draft EIS, we stressed our future plans to widen the DIAAH to six lanes, and we emphasized the need for the Dulles Corridor Rapid Transit Project not to infringe on the right-of-way for the future widening. Realignment of the Toll Road to preserve this right-of-way is indeed a direct effect of the Dulles Corridor Rapid Transit Project, and the effects of this realignment need to be addressed in the EIS for the Dulles Corridor Rapid Transit Project.

4. Regarding the discussion of the Dulles Airport Historic District (page 3-33), the Airports Authority maintains that the eastern boundary of the eligible historic district does not extend east of the location on the DIAAH where westbound travelers are first able to view the Main Terminal and the original Air Traffic Control Tower.

5. Regarding issues to be resolved (page 10-5), it should be noted that the current Airport Layout Plan (ALP) for IAD dated February 2003 does include a rail alignment and a proposed rail yard on Airport property. Although the rail alignment shown on the ALP in the area northeast of the Main Terminal differs somewhat from that shown in the SDEIS, the Airports Authority is committed to working with the Virginia Department of Rail and Public Transportation to facilitate the FAA approvals necessary for the project.

METROPOLITAN WASHINGTON AIRPORTS AUTHORITY

AUG 27 2002

Mr. Corey W. Hill
Northern Virginia Regional Manager
Commonwealth of Virginia
Department of Rail and Public Transportation
1550 Wilson Boulevard, Suite 300
Arlington, VA 22209

Re: Draft Environmental Impact Statement
Dulles Corridor Rapid Transit Project

Dear Mr. Hill:

On behalf of the Metropolitan Washington Airports Authority (Airports Authority), I am pleased to provide support for the Dulles Corridor Rapid Transit Project and comment on the Draft Environmental Impact Statement. The Airports Authority has a very strong interest in providing the best possible access to Washington Dulles International Airport (Dulles) from throughout the Washington metropolitan region. Since the inception of Dulles more than 40 years ago, access has been a primary consideration as evidenced by the dedicated Dulles Corridor. The Federal Aviation Administration and subsequently the Airports Authority have planned for, acquired, and protected the median of the Dulles International Airport Access Highway (DIAAH) for the specific use of rail to Dulles.

Dulles continues to grow as a major international airport and the Airports Authority has not wavered in its vision to have a rail connection to the Nation's Capital. As part of that vision the Airports Authority supports the Draft Environmental Impact Statement alternatives that utilize the median of the DIAAH for rail, including phased implementation that provides for rail on a reasonable, predictable schedule. The Airports Authority recognizes that BRT could well be a part of such a phasing strategy. We do not, however, believe that BRT has the capacity to meet the long term needs of the region and the future growth of Dulles, and thus do not support it as a long-term solution to the corridor's transit needs.

The Airports Authority, as stewards of the Dulles Corridor, has an interest in optimizing the throughput of the corridor while maintaining access to Dulles. Accordingly, the Airports Authority would like to emphasize our future plans to widen the DIAAH to six lanes and the need for the Dulles Corridor Rapid Transit Project not to infringe on the right-of-way for this future widening. Also as we see a majority of this rail extension serving commuters, we have some concern whether adequate parking is being planned for in this project. The Airports Authority is prepared to make reasonable accommodations for commuters and commuter parking on airport property in the form of

the BRT maintenance facility, the Dulles North Transit Center, and future parking accommodations at the Route 606 Station. We are willing to consider siting the rail inspection and maintenance facility on Airport property provided there are no other reasonable and prudent alternatives. However, these regional commuter accommodations proposed on Dulles property represent the upper limit of what the Airports Authority may be willing to accept. To help realize the full potential of this rail extension, accommodations for additional parking beyond what is proposed in the draft EIS should be further considered.

As part of our review of the Draft Environmental Impact Statement we have prepared a list of more specific comments related to proposed facilities at Dulles. This list is offered as Attachment 1 for consideration as the project proceeds into further stages of development.

In conclusion, the Airports Authority supports rail in the Dulles Corridor, and is prepared to continue to help fulfill the vision created more than 40 years ago when Dulles was built.

Sincerely,

James A. Wilding
President and Chief Executive Officer

attachment

cc: J. Kenneth Klinge, CTB
Leo J. Bevon, VDRPT
Richard White, John Dittmeier, WMATA
Anthony Griffin, Fairfax County
Kirby Bowers, Loudoun County
Terry J. Page, FAA Washington Airports District Office

JAW:pp

ATTACHMENT 1

Specific Comments on Draft Environmental Impact Statement (DEIS)

The Metropolitan Washington Airports Authority (Airports Authority) offers the following comments on the DEIS:

- The source of the IAD passenger projections for air travel presented in DEIS Section 1.2.2.4 needs to be identified. The figures do not agree with MWAA's unconstrained projections of passenger activity, which have been reviewed and approved by FAA. MWAA projects 37.9 million annual passengers (MAP) for 2010 and a build-out scenario of 65.7 MAP. Note that the term "million annual passengers" includes the sum of enplanements and deplanements, not simply "boardings" as stated in the DEIS.

- DEIS Section 3.4.3 on visual and aesthetic effects indicates that views of the IAD tower and Main Terminal from the Dulles International Airport Access Highway (DIAAH) would not be blocked by the east rail portal or by traction power substations; however, the DEIS does not discuss whether views would be affected by fencing or other barriers in the DIAAH median, particularly near Sully Road.

- The eligible historic district at IAD is substantially larger than that shown in Figure 7.3-1b, and includes the proposed location of the rail tunnel portal and elevated track northwest of the Main Terminal. The effects of these structures need to be addressed in the context of cultural resources and the Section 4(f) evaluation.

- As the development of the IAD Metrorail station would occur below grade, it would not have direct visual impact on the Main Terminal or historic district; however, this new facility would still technically fall within the historic district and the architectural design would need to take into account the general historic character of the airport. The original Saarinen plan included a careful consideration of both the inbound and outbound "passenger experience". As the new facility will become a new element of that experience, architectural sensitivity to the character of the airport will need to be addressed. Further consultation with the Airports Authority and the review agencies (under the terms of a Programmatic Memorandum of Agreement) would be required to assess potential effects and develop mitigation measures (if required).

- DEIS Figure 2.3-15 indicates the potential location of four traction power substations on airport property. Although it appears that two of these would be located in the north airport, one would be in the vicinity of the Main Terminal and one along the DIAAH. In both these location, the site selection and facility design will need to take into account potential visual impact on views of the Main Terminal complex and the architectural character of the historic district. It is anticipated that the MWAA Design Manual would dictate the design treatment in order to assure compatibility with the airport's other service structures.

- DEIS Section 4.2.3.5 states that the project is not in the coastal zone. It is our understanding that Fairfax County is part of the Virginia Coastal Zone, and that consistency with the Virginia Coastal Zone Management Plan should be addressed in the EIS.

Coordination Needs

Extensive continuing coordination is needed between the DCRTP design team and the Airports Authority throughout project design and construction to avoid potential conflicts between DCRTP and future IAD projects, and to minimize disruption during construction. The following is a list of technical comments related to the rail alignment, which the Airports Authority expects the project to address in the preliminary engineering stage:

- Preliminary engineering for this project should study the widening of the Dulles Airport Access Highway (DAAH) to six lanes in sufficient enough detail to determine what accommodations will be required to allow both projects to be accomplished.

- The western portal at station 1681+00 blocks ingress/egress to the Dulles Marriott Hotel and to Navigation Road at 1685+50. Consideration should be given to either relocating the portal further north or relocating Navigation Road and the Marriott access.

- The Airports Authority intends on preserving the right-of-way for future underground pedestrian connections to the Terminal from the vehicle parking north of the Terminal to remove pedestrian-vehicle conflicts and increase capacity of the commercial vehicle road. This pedestrian connection would be similar to the pedestrian connection that this project proposes to use for rail passengers to gain access to the Terminal. The current plans do not provide sufficient detail but it appears that the east portion of the Dulles Station and the #10 double crossover do not allow sufficient clearance between existing grade and the top of the station structure for the pedestrian connection to cross over the top of the station.

- The Airports Authority's expectation, though not specified in the documents, is that between both portals and the station, a tunneling construction method will be used which does not impact existing roads or facilities.

- Vertically, the Metrorail profile is in conflict with several of our proposed roadways, including EB-CD Rd., Ramp C and the entire Aviation Drive Ext./Rudder Rd. intersection. Each of these roadways have been set vertically to meet FAA airspace vertical clearances for Part 77 surfaces and proposed structures, so raising their profiles would not be feasible.

- The eastern portal at station 1590+00 is within the runway protection zone of runway 1R-19L. Accordingly, extensive coordination with the Airports Authority and FAA will be required and height restrictions will be imposed on cranes and equipment during construction.

- The Airports Authority has not yet determined the best location for a BRT stop/station at the Terminal Building. Though the general plans call for three bus parking positions at the easternmost end of the commercial vehicle curb, the Airports Authority's desire is to further study the best location for a BRT facility if a BRT system becomes part of the locally preferred alternative.

TS 93 Scoping Comments B-231-33

METROPOLITAN WASHINGTON AIRPORTS AUTHORITY

Ronald Reagan Washington National Airport ✈ Washington, DC 20001-4901

AUG 10 2000

Mr. Leonard Alfredson, P.E.
Dulles Corridor Rapid Transit Project
1550 Wilson Blvd., Suite 300
Arlington, VA 22209

RE: Environmental Impact Statement (EIS) Scoping Comments

Dear Mr. Alfredson:

The Metropolitan Washington Airports Authority (Authority) endorses the proposed Dulles Corridor Rapid Transit Project. Activity and development in the Dulles vicinity -- commercial, residential, and aviation -- are clearly some of the fastest growing in the country, and in our case at the airport, in the world. Reliable transportation and efficient mobility for the Dulles Corridor is essential for all parties, and this proposed program offers our best hope.

At your invitation, we offer the following for the record as our scoping comments:

Transit System Concepts

At the public scoping meetings there were comments to the effect that the EIS should consider an alternative involving multiple rail stops at Washington Dulles International Airport (Dulles); e.g., one stop at the Terminal and an employee stop farther north. While it may be appropriate for the Bus Rapid Transit (BRT) concepts, the Authority believes there should be only one airport rail station at Dulles. The Authority has a shuttle bus system for circulation on airport grounds. Moreover, we are concerned that an excessive number of stops will increase travel time and discourage ridership. 6.3.16

Regarding the second BRT stop at the airport, we will continue to work with you to establish a location that optimizes ridership and convenience.

In terms of public comments received that an airport rail station should be remote from the terminal, we believe such arrangements will significantly cut airport ridership. This conclusion can be demonstrated by comparing airports with existing at-terminal stations to airports with remote stations, and is consistent with conventional transit wisdom. The Authority believes that the airport station should be immediately adjacent to the terminal.

Some ability to operate multiple routes on the rail line with different eastern termini is of interest. For example, interlacing trains going into and through the District of Columbia with trains that terminate in Tysons Corner or on the Virginia portion of the Orange Line may yield system benefits. This requires some turn-back such as would be provided in the Tysons "loop" concept.

We believe that the Route 606 station, on airport property offers the only politically acceptable location for a major commuter park-and-ride facility for the western portion of the rail alignment, and that such a facility is vital to the healthy operation and effectiveness of the Dulles Rail line. It is on this basis that the Authority has cooperated with the concept of such a station and the establishment of the Western Regional Park-and-Ride lot. There have been other competing visions that have surfaced for this station that threaten airport development and the efficacy of the rail system. The Authority is strongly opposed to these alternative proposals. Any concept that fails to deliver a minimum of 6,000 to 7,000 automobile parking spaces in relative proximity to a Route 606 Station will fail to meet our mutual interests for a station at this location. We are amenable to working with the study team in Preliminary Engineering to optimize the station location so as to maximize the parking potential. To ensure that this facility is used for commuter parking for rail transit through the Corridor, and not for additional remote airport parking on the transit community's dollar, we recommend a ban on overnight parking. These overnight prohibitions are in place at many existing park-and-ride facilities.

Transit Maintenance and Storage Facilities

Regarding the concept of a significant on-airport development for transit maintenance and storage functions, that concept has been previously explored and proves problematic for a number of reasons. From an airport perspective, availability of land in the northern areas of Dulles is constrained by a number of factors. First, FAA rules establish runway protection zones which include Object-Free Areas (OFA) alongside and at the ends of runways, and Runway Safety Areas outside the OFAs, within which buildings are prohibited.

Second, the Dulles Land Use Plan, which is part of the FAA-approved Airport Layout Plan, reserves all available land north and east of the Terminal for uses that are essential to operation of the airport. The Land Use Plan also identifies runway protection zones for future runways.

Third, much of the undeveloped land on Dulles that is not subject to these restrictions contains wetlands. Because of these constraints the Authority believes it is unlikely that a suitable site for the proposed BRT/rail maintenance yard can be found on airport property in convenient proximity to the rail alignment.

A number of rail operational considerations also make airport locations undesirable; expert opinion on these issues can be found from some of the other agencies and from the Major Investment Study (MIS) investigations.

Environment – Visual Impacts

The Dulles Terminal is eligible for listing on the National Register of Historic Places. The historic district associated with the Terminal includes nearly all of the developed portions of the airport property between the Terminal and the airport hotel. In addition, the extreme western portion of the Dulles Access Highway has certain provisions protecting viewsheds toward the terminal. However, the Authority does not see a conflict between the historic designation and the proposed project because the Access Highway median has long been intended for rail transit use.

Terminal Area Facilities

Implementation of BRT at Dulles needs to be coordinated with the Authority to maintain vehicle and pedestrian traffic flow at the Dulles curb. Severing the curb in prime locations to provide a secured corridor between pre-ticketed passengers and the vehicles they are boarding will be impractical to the remainder of our operation.

The placement of the proposed Dulles Airport Metrorail station and tunnel will need to be coordinated with underground facilities planned for the airport. The most critical of these is a pedestrian tunnel connecting the terminal building and a parking garage planned for the north flank of the parking "bowl." This tunnel system is anticipated to be equipped with moving walkways. It is being designed to bridge open-cut construction for the rail station. The project, currently in advertisement for construction proposals, should be capable of allowing a three-track, two-platform station.

Consideration and provision for a future landside people mover is also a requirement at the Dulles rail station. Members of your team have graciously assisted us in developing a concept similar to that being built at San Francisco International Airport where the regional rail and the airport's landside people mover are vertically stacked together. This means the elevation of the airport's station will be lower than estimated in the MIS.

Regarding the construction of the rail station, we are very interested in any early information or opinion you can share regarding construction techniques and impacts anticipated for building the station immediately next to the terminal, and below this curb.

Other On-airport Facilities

The proposed rapid transit improvements need to be coordinated with the Authority's program to improve the airport road network. The road improvements could affect the routing of buses under the BRT alternative and the placement of Metrorail tunnel portals. 6.3.10

The EIS should compare the impacts of tunneling vs. cut-and-cover Metrorail construction methods on Dulles Airport traffic and operations. 6.3.16

The issue of alternative rail alignments adjacent to the rental car companies should be easily resolved early in the EIS process. We can discuss this with you at the next convenient technical meeting.

The Access Highway and Toll Road Corridor

Contrary to some statements made by others in the course of the scoping meetings, only some of the proposed median station locations in Fairfax County have been provided "bubbles" in the course of the design and construction of the eight-lane Dulles Toll Road. We believe that at least one, and perhaps two, stations will require reworking the Dulles Toll Road in order to accommodate the expected stations. If we are correct, the most complicated and expensive location to adjust will be at the proposed Herndon/Monroe Station. 6.2.10

The Access Highway will be widened to six lanes, probably within the decade. Preliminary Engineering for rail will need to consider the Access Highway in its six-lane configuration, not in its present four-lane section. 6.1.10

We are interested in having the EIS state a vision for the portion of the median adjacent to Tysons Corner in which no rail is designated at this time. We believe it may be prudent to continue to protect for rail in the median between Route 123 and Route 7 for a future use beyond the proposed project.

Policy and criteria for noise and noise walls along the Dulles Corridor are unique. They have been established in various Dulles Connector and Toll Road projects over the years. The Authority will be pleased to assist you as you define impacts and mitigation actions.

The Dulles Airport property, including the Dulles Access Road and the Dulles Connector, is owned by the U.S. Government (Department of Transportation) and leased to the Metropolitan Washington Airports Authority. An easement from the Authority or similar agreement will be required for the proposed project.

The Authority is considering your invitation to serve as a cooperating agency in the preparation of the EIS. Our senior management will make a decision in this matter during the next few weeks. In the interim, we have designated Dr. Charles Baummer of our Planning Department as the Authority's liaison with the Dulles Corridor Rapid Transit Project on the EIS. He can be reached at (703) 417-8168. Mr. Mike Hackett, also of Planning, will be our lead contact on Preliminary Engineering. His number is (703) 417-8164. Charlie and Mike will be each other's alternate on their respective assignments.

If you need additional information, please feel free to contact me at (703) 417-8160. We look forward to working with you on this worthy endeavor.

Sincerely,

William C. Lebegern
Manager, Planning Department

K.2.2 National Capital Planning Commission

- February 23, 2004
- August 23, 2002

February 23, 2004

NCPC
NATIONAL CAPITAL PLANNING COMMISSION

401 9th Street, NW
North Lobby, Suite 500
Washington, DC 20576
tel 202 482-7200
fax 202 482-7272
www.ncpc.gov

Mr. Karl Rohrer
Project Manager
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard - Suite 300
Arlington, VA 22209

Re: Docket Number R03-6

Dear Mr. Rohrer:

The National Capital Planning Commission (NCPC) supports the efforts of the Washington Metropolitan Area Transit Authority (WMATA) and the Virginia Department of Rail and Public Transportation (VDRPT) to expand transit service in northern Virginia along the Dulles/Interstate-66 Corridor. As the central planning agency for the federal government in the National Capital Region, NCPC takes great interest not only in maintaining the quality of Federal development throughout the region, but also in preserving the quality of life for metropolitan area residents and visitors. We believe that reducing traffic congestion and improving air quality are major factors in enhancing regional quality of life, and that quality transit service is an important component of any solution to reach these goals.

The final preferred Metrorail extension to Dulles would greatly enhance general mobility within the Dulles/I-66 Corridor and provide an important regional transit linkage between Dulles Airport and the District of Columbia. The Public Hearings Report indicates that the Project Team will work with local governments to support and implement the Fairfax County and Loudoun County comprehensive plans, which contain guidelines to support transit, higher densities, mixed-use development, and pedestrian and bicycle friendly development patterns near transit stations. We are pleased that you share our vision of fostering transit-oriented development along the Dulles Corridor in order to ensure that future transit ridership is maximized. The comment responses contained in the Public Hearings Report show that the Project Team has been adequately responsive to our concerns regarding implementation of supportive station area transit-oriented development as part of the project.

We look forward to the release of the Final Environmental Impact Statement. Please let us know if we may be of any assistance to you in furthering this important project. If you have any questions regarding these comments, please direct them to Mr. Michael Weil, who may be reached at (202) 482-7253.

Sincerely,

William G. Dowd, P.E.
Director, Plan and Project Implementation Division

NCPC

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Washington, DC 20576
tel 202 482-7200
fax 202 482-7272
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Dr. Patricia Elwood

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U.S. House of Representatives
The Honorable Dan Burton

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Honorable Anthony A. Williams

Chairman, Council of the
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The Honorable Linda W. Cropp

Executive Director
Patricia E. Gallagher, AICP

IN REPLY REFER TO:
NCPC File No. 6287

AUG 23, 2002

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1014

Mr. Corey W. Hill
Northern Virginia Regional Manager
Virginia Department of Rail
and Pubic Transportation
1550 Wilson Boulevard, Suite 300
Arlington, Virginia 22209

Re: Comments on Dulles Corridor Rapid Transit Project Draft Environmental Impact Statement (DEIS)

Dear Mr. Hill:

Thank you for the opportunity to comment on the Dulles Corridor Rapid Transit Project DEIS. As the central planning agency for the federal government in the National Capital Region, the National Capital Planning Commission takes great interest in new transit projects in the region. In both its project review and planning roles, the Commission is focused strongly on smart growth and transit-oriented development. Our comments follow:

Whether the final preferred alternative is Bus Rapid Transit (BRT); Metrorail; a combination of BRT and Metrorail; or phased implementation, the project must include changes to land use policies and zoning that will support Transit-Oriented Development (TOD) in the project station areas. This should include higher allowable densities, a mix of uses, and compact walkable development patterns within a ½ mile radius of the stations. It is preferable that park and ride facilities not interfere with development of this area, particularly within the inner ¼ mile radius around the station. This area is better suited to pedestrian-scale development patterns. If parking facilities are located within this area, they should not be placed between the station and the immediately surrounding development and are best placed below ground. BRT stations and stops should be designed as if they were rail stations.

For portions of the project that will lie in freeway medians, air rights above the freeway right-of-way should be transferred and developed so that walkable uses can be placed within ¼ and ½ mile radii of the stations. The project should also include the design of supporting transit services such as shuttle buses from neighborhoods to the transit corridor and from the transit corridor to work and shopping activity centers.

We look forward to the release of the Final Environmental Impact Statement. If you have any questions regarding these comments, please direct them to Mr. David Levy of our staff at (202) 482-7247.

Sincerely,

William G. Dowd, P.E.
Director, Office of Plans Review

K.2.3 Northern Virginia Regional Commission

- November 4, 2003

535 Little River Turnpike, Suite 100
Annandale, Virginia 22003-2937
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0006-

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Northern Virginia Regional Commission

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n. William T. Druhan, Jr.

Town of Vienna
n. Albert J. Boudreau

February 26, 2003).

November 4, 2003

21,109

Mr. Karl Rohrer, Project Manager
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard, Suite 300
Arlington, VA 22209

Re: Dulles Corridor Rapid Transit Project Draft EIS

Dear Mr. Rohrer:

The Northern Virginia Regional Commission staff has reviewed the document described above and has the following comments.

Please be advised that Fairfax County and the Town of Herndon have enacted jurisdiction-wide Chesapeake Bay Resource Management Area (RMA) designation. This RMA designation requires that all development result in a no-net-increase standard for phosphorus loadings, based on the jurisdiction's average imperviousness.

Special attention should be given to post-construction stormwater quality management. The developing agency must adhere to the **post-development** water quality requirements set forth by the Virginia Stormwater Management Regulations (VR 215-02-00 Part IV and §2.3). Meeting the Virginia Stormwater Management Regulations should comply with the requirement that state agencies meet the local ordinances pursuant to the Virginia Chesapeake Bay Act.

Please refer to the *Northern Virginia BMP Handbook* for calculation procedures. A copy of the handbook is available on NVRC's website, www.novaregion.org.

We would also suggest that, where possible, opportunities for retrofit of existing stormwater quantity facilities to stormwater **quality** facilities through new construction activities should be explored. NVRC's *Guidebook for Maintaining BMPs in Northern Virginia* is available, without charge, should you need it, and can also be downloaded from our website, or call me if you would like to receive a copy to use as a reference.

A copy of this letter should be included with your submission to indicate that the review by this agency has been completed.

Your cooperation in the intergovernmental review process is appreciated.

Sincerely yours,

James Van Zee
Director, Regional Planning Services

K.2.4 Northern Virginia Regional Park Authority

- December 18, 2003
- November 1, 2002
- August 28, 2002
- August 10, 2000

Northern Virginia Regional Park Authority
5400 Ox Road, Fairfax Station, VA 22039 • 703-352-5900 • Fax: 703-273-0905 • Email:info@nvrpa.org
Gary N. Fenton, Executive Director • www.nvrpa.org

December 18, 2003

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0101 -

Karl A. Rohrer, AICP
Project Manager
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard, Suite 300
Arlington, VA 22209

21,336

RE: Dulles Corridor Rapid Transit Project Supplemental Draft Environmental Impact Statement

Dear Mr. Rohrer:

We have reviewed the Supplemental Draft EIS and offer the following comments related to the W&OD Railroad Regional Park.

Section 7.3
The Supplemental Draft EIS states that at the W&OD Railroad Regional Park, access to the park would be maintained during hours of peak use. As stated in previous comments on the Draft EIS, it is Park Authority policy and the intent of the *Guidelines for the Development of W&OD Trail Bridge Crossings* that the trail is to remain open and safe at all times during bridge construction. Overhead protection for the trail, phased construction across the park property, trail detours, and other safety features will be required as necessary. Also, please confirm that construction access to the Toll Road easement area will be along the Toll Road and not along the W&OD paved or gravel trails.

We look forward to working with you to ensure that the proposed trail bridge meets our design requirements and that the trail remains open and safe during construction. Thank you for the opportunity to comment.

Sincerely,

Daniel Iglhaut
Land Administration and Planning Specialist

Paul McCray, Manager, W&OD Railroad Regional Park

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NORTHERN VIRGINIA REGIONAL PARK AUTHORITY
5400 Ox Road, Fairfax Station, Virginia 22039-1022
Telephone: (703) 352-5900 • FAX: (703) 273-0905

Gary N. Fenton
Executive Director

November 1, 2002

Corey W. Hill
Northern Virginia Regional Manager
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard, Suite 300
Arlington, VA 22209

RE: Dulles Corridor Rapid Transit Project Public Hearings Report

Dear Mr. Hill:

We have reviewed the Public Hearings Report for the Dulles Corridor Rapid Transit Project Draft EIS and offer the following comment related to the W&OD Railroad Regional Park.

Section 7.3.2 states, "Any artificial lighting, which the Project might install, would be the maintenance responsibility of the park owners." Since the artificial lighting is proposed as mitigation for the project's negative visual and safety impacts on park property, its maintenance would be the responsibility of the project sponsor.

Thank you for the opportunity to comment. Please contact me at 703-359-4628 or at diglhaut@nvrpa.org if you have any questions or concerns.

Sincerely,

Daniel Iglhaut
Land Administration and Planning Specialist

Paul McCray, Manager, W&OD Railroad Regional Park

PARTICIPATING JURISDICTIONS - MEMBERS

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Gary N. Fenton
Executive Director

August 28, 2002

Corey W. Hill
Northern Virginia Regional Manager
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard, Suite 300
Arlington, VA 22209

RE: Dulles Corridor Rapid Transit Project Draft Environmental Impact Statement

Dear Mr. Hill:

We have reviewed the Dulles Corridor Rapid Transit Project Draft EIS and offer the following comments related to the W&OD Railroad Regional Park.

Section 3.6.3.3
As stated in the Draft EIS, the planned widening of the Dulles Toll Road overpasses and the new bridge for Metrorail would nearly eliminate the existing light well between the existing overpasses resulting in "a visual impact to the trail." The Draft EIS states that the visual impact can be mitigated with the incorporation of natural and artificial lighting under the bridge. It should also be noted that elimination of the light well might result in safety and security impacts such as reduced visibility and crime. The Final EIS should address safety and security issues related to elimination of the light well and related mitigation, such as lighting and call boxes. Moreover, the Park Authority must be involved in the development of mitigation measures during all design phases.

Section 3.6.5.3
The Draft EIS states that construction would be timed for low-use periods and continued access to the park would be maintained during hours of peak use. The Draft EIS also states that construction would be in compliance with the Park Authority's Guidelines for the Development of W&OD Trail Bridge Crossings. It is Park Authority policy and the intent of the Guidelines that the trail is to remain open and safe at all times during bridge construction. Overhead protection for the trail, phased construction across the park property, trail detours, and other safety features will be required as necessary. Although not addressed in the Draft EIS, it is assumed that construction access to the Toll Road easement area will be along the Toll Road and not along the W&OD paved or gravel trails.

Section 7.4.3.12
As stated in the Draft EIS, the W&OD is a Section 6(f) protected property under the Land & Water Conservation Fund Act. In the early 1960's the federal government acquired an easement across the W&OD for the Toll Road overpass. However, rail uses do not appear to be included in the easement. Therefore, the Virginia Department of Conservation and Recreation has requested a determination from the National Park Service as to whether a conversion of use

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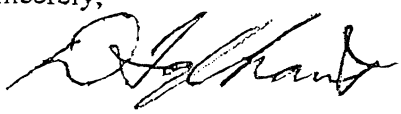
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would be required for construction of an additional overpass for Metrorail within the easement area. To date, a determination has not been made by the National Park Service. Therefore, the Draft EIS should not state, "no conversion of Section 6(f) land would occur." Regardless of whether or not a conversion is required, the Park Authority must review and approve, in writing, any new construction within the easement.

Thank you for the opportunity to comment. Please contact me at 703-359-4628 or diglhaut@nvrpa.org if you have any questions or concerns.

Sincerely,



Daniel Iglhaut
Land Administration and Planning Specialist

Jerry Cassidy, Virginia Department of Conservation and Recreation
Paul McCray, Manager, W&OD Railroad Regional Park
Derric Bolton, Safety Officer, NVRPA

TS 86 | Scoping Comments
8-22-00

NORTHERN VIRGINIA REGIONAL PARK AUTHORITY

5400 Ox Road, Fairfax Station, Virginia 22039-1022
Telephone: (703) 352-5900 • FAX: (703) 273-0905

Gary N. Fenton
Executive Director

August 10, 2000

Len Alfredson
WMATA Project Manager
Dulles Corridor Rapid Transit Project
1550 Wilson Boulevard, Suite 300
Arlington, VA 22209

RE: PE/NEPA Scoping for Dulles Corridor Rapid Transit Project

Dear Mr. Alfredson:

We attended the pre-scoping session for the project and offer the following comments for consideration.

As you know, the Northern Virginia Regional Park Authority owns and operates the W&OD Railroad Regional Park. The 45-mile long park runs from Arlington County to Purcellville and is improved with multi-use trails within the former W&OD Railroad right-of-way. The W&OD provides an important recreational amenity for the region and a non-motorized transportation corridor that roughly parallels the Toll Road except where it crosses the Toll Road in Reston. Therefore, the Park Authority recommends that planners address connectivity from the proposed passenger stations to the W&OD for pedestrians and bicyclists.

The W&OD is a Section 6(f) protected property under the Land & Water Conservation Fund Act. In the early 1960's the federal government acquired an easement across the W&OD in Reston for the Dulles Toll Road overpass. Rail uses do not appear to be included in the easement. In the event the proposed rail line is established within the Toll Road, it may be necessary for the project sponsor to acquire additional easement rights from the Park Authority. Granting these rights may constitute a "conversion of use" under Section 6(f). A conversion of use would also be required if additional right-of-way is required within the W&OD. 6.6.6

The Park Authority also owns and operates Meadowlark Gardens Regional Park on Beuhlah Road near the Town of Vienna and Brambleton Regional Park near Beaverdam Reservoir in Loudoun County. Also, the Park authority is the state appointed administrator assisting the Goose Creek Scenic River Advisory Board to oversee activities along Goose Creek. Although it does not appear that the project will impact these resources, the Park Authority may have concerns if the proposed rail line is relocated outside the existing Toll Road right-of-way. 1.c

PARTICIPATING JURISDICTIONS - MEMBERS

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William C. Dickinson	Amanda R. Ellis	Patrick R. Clarkin	Arthur F. Little	Barry D. Buschow	Joan G. Rokus

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Thank you for the opportunity to comment. Please keep us informed as the study continues and contact me at (703) 359-4628 or diglhaut@nvrpa.org if you have any questions or concerns. We will be happy to meet with you as the planning process advances.

Sincerely,



Daniel Iglhaut
Land Administration and Planning Specialist

K.3 STATE

K.3.1 Commonwealth of Virginia, House of Delegates

- Verbal Testimony at December 2003 Public Hearings (The Honorable Jim Scott)
- Verbal Testimony at December 2003 Public Hearings (The Honorable Kenneth R. Plum)
- August 26, 2002
- Verbal Testimony at July 2002 Public Hearings (The Honorable Kenneth R. Plum)
- Verbal Testimony at July 2002 Public Hearings (The Honorable Kenneth R. Plum)
- Verbal Testimony at July 2002 Public Hearings (The Honorable Kenneth R. Plum)
- July 22, 2002

at

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MR. KLINGE: Thank you, Delegate Plum. Next is Delegate Jim Scott.

MR. SCOTT: Thank you, Mr. Chairman, Madame Chairman, Supervisor Kaufman. It is a pleasure to be with you tonight. I am here wearing two hats. The first is representing the 53rd Legislative District which includes the West Falls Church and Dunloring Stations on the Orange Line and also representing the committee known as the House Joint Resolution 273 Committee which, as some of you know, is authorized by the General Assembly to begin work on interim improvements between now and then and the time of rail construction to the Tysons area.

I am also here tonight to ask you to listen carefully to constituents from the 53rd Legislative District, particularly those of two or three folks whom you have heard from before. I want to draw your attention particularly to the remarks of Mr. Clark Tyler from the Hallcrest Heights Civic Association whose concerns in support of the extension of rail to Dulles have to do with

the location of his community and the need for sound-mitigation measures which you have heard about on a number of occasions and I am grateful to say that Director Karen Ray has indicated that she will be addressing, through a coordinated effort on the part of the Commonwealth of Virginia and the other agencies.

Secondly, you will be hearing, I think, from Francesca Bravo who is the President of the West Hampton Civic Association who has made some comments about the revised EIS and will be addressing you, I believe, this evening. I think you have already received her remarks but, in case you haven't, I have a copy available for you.

Maybe a note of history might be useful tonight. Some of you realize that I was representing the Providence District when the Orange Line opened in 1986. It was actually my last official action as Providence Supervisor, as Chairman Hanley will recall. Before that took place, there were a lot of people who felt that it was not going to happen. There were a lot of

people who felt it shouldn't happen. There were a lot of people who were convinced it was happening in the wrong place.

But I draw your attention to the results. The Orange Line is now one of the most successful lines in the Metro system. There were people who suggested that the Vienna Station would never come about and, as a matter of fact, all we needed was buses down the Route 66 Corridor to solve all of our transportation problems.

We have seen that that was not the case then and I don't think it is the case now. I hope that you will not take temporary setbacks to mean anything but temporary setbacks and, in light of what has happened in the past, I am certain that you will be able to move this project forward as it deserves to be moved forward as one of our top priority projects for the addressing of our congestion problems in Fairfax County and in Northern Virginia.

Some final remarks in addition to calling your attention to the other speakers, I always try

to say that it is very important in each of my statements to remind those who will listen that non-motorized access to Metro stations remains a very high priority for not only my constituents but also for me, and I hope you will keep that in mind as you move forward with this project.

Finally, I want to just quote from a letter written to Mr. Rohrer from Ms. Francesca Bravo about the project a very supportive letter but one which draws attention to the need for some additional mitigation measures, and I quote; "There is no need to sacrifice the community for the greater good. With proper planning and coordination between agencies, this can be a win-win for all. In the context of a $3 billion rail and a $13 million Park-and-Ride facility, it seems that minor investment in sound walls, signs, speed bumps, to mitigate sound and visual pollution in traffic for adjacent areas is a small price to pay for community safety, health and good will."

Thank you very much.

MR. KLINGE: Thank you, Mr. Scott.

at

about it, but I think that, as we address those concerns, I hope that we will be able to complete our commitment that we made when we supported the local preferred alternative in the Corridor.

I would like to a moment, in that you have indicated that public officials have ten minutes; the Reston Association is a homeowner association of over 50,000 people Susie Jones is here to [illegible] able to incorporate as much time as possible for her to provide her testimony.

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By 21,283

Thank you very much.

MS. HANLEY: Thank you.

MR. KLINGE: Thank you. Next is Delegate Ken Plum.

MR PLUM: Thank you very much and good evening. My name is Kenneth Plum. I welcome you to my neighborhood. I live two blocks down the street at 2073 Cobblestone Lane, Reston. I speak to you tonight as a member of the Virginia House of Delegates representing the 36th District but I also speak as Chairman of the Dulles Corridor Rail

Association. My remarks will be directed to the Supplemental Draft Environmental Impact Statement but I also want to just, by way of introduction, say a few comments about the project in general.

What I would want to say to you is that the Dulles Corridor project is very much alive in the hearts and minds and commuters in this region. The need for the project increases daily. You have the well-documented figures of the need already in the EIS. But those aren't just numbers. They are men and women trying to get to work each morning and they are people who are still out on the toll road tonight trying to get home to their dinner and to their families.

The choice of rail as the Locally Preferred Alternative was correct when it was made and the wisdom of that choice becomes even more clear as economic prosperity returns to the Corridor. Make no mistake; economic prosperity is returning to the Corridor.

But beyond rail as the Locally Preferred Alternative, I know I speak on behalf of the

citizens in my area who ask that we build Dulles Rail now. The Dulles Corridor Rail Association organized 20 groups as diverse as the Washington Board of Trade and the Sierra Club, the AAA and League of Women Voters, to say that we support Dulles Rail now. I will enter into your record the list of those 20 organizations.

But while tonight we are talking about the Supplemental Draft Environmental Impact Statement as a way to get Dulles Rail now, I would request that it be handled with all possible dispatch. Dulles Corridor Rail recognizes and acknowledges the necessity by the federal funding limitations and by the funding cycle that the project funding be done in phases.

We are pleased that the first phase of funding brings rail into the Corridor. We support that phase of funding as you have proposed in the Supplemental Draft EIS. We ask, however, that the funding phases not affect the construction schedule. In that regard, we request that the preliminary engineering be done for the entire

project and that the phasing of the financing be seamless in order that the construction be seamless.

The Dulles Corridor Rail Association supports a 23.1-mile project. As money becomes available for funding, the management of those funds and the planning for them to ensure that project--need to be done so that the project is built from the Orange Line to Route 772 in Loudoun as a seamless project.

In other words, make it clear that you do not intend to build to Wiehle and, at some later date, decide to finish the project. My hope is that when we go to the opening of the site at Wiehle that we are able to look west and see that, in fact, the construction is proceeding forward.

Delays in attempts to phase the construction would only add to its cost and would confuse the design and application of the stations. What I am saying to you, in other words, is that we recognize the reality. We are going to have to finance this thing in phases, but let's make sure

that those financing phases work together in a seamless fashion to that, in fact, construction can follow as well.

DCRA believes that the areas around the station should be left to local land-use decisions. Likewise, any designs around the station should involve a broad complement of the community actively involved in the design process. We have seen, I think, in the past, the wisdom of that community involvement.

To say that this is a very complex project is an oversimplification. It must go forward for the citizens of this region. But, just as the Supplemental EIS has worked out many design issues, so I know that the negotiations and actions over the next several weeks will make the project also financially viable.

We are pleased to support the Supplemental EIS and look forward to working with you in accomplishing that first phase of financing and construction and the total 23.1 miles.

Thank you very much.

JAMES M. SCOTT
POST OFFICE BOX 359
MERRIFIELD, VIRGINIA 22116-0359

FIFTY-THIRD DISTRICT

COMMONWEALTH OF VIRGINIA

HOUSE OF DELEGATES

RICHMOND

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August 26, 2002

Mr. Corey W. Hill
Northern Virginia Regional Manager
Virginia Department of Rail and
Public Transportation
1550 Wilson Boulevard, Suite 300
Arlington, Virginia 22209

Re: Draft Environmental Impact Statement and Proposed General Plans for the Dulles Corridor Rapid Transit Project

Dear Mr. Hill:

I am pleased to comment on the Draft Environmental Impact Statement and the Proposed General Plans for the Dulles Corridor Rapid Transit Project.

Unfortunately, I had to be out of town and was therefore unable to attend the public hearings on July 29-31. However, I was represented by my legislative aide, and I have reviewed testimony presented during the hearings.

Mass transit to Tysons Corner and to Dulles Airport is overdue. It is essential to the continued economic health of the region. It should be the top priority among major unfunded projects in the region.

Fortunately, there seems to be consensus that the necessary state, local and federal funding, along with substantial private funding, must be found to move the project to construction as soon as possible. Two important funding sources are within reach. Thanks to the initiative of the business community, LEADER has been created to help provide private funding. Governor Warner's leadership has put full funding for the local share before the voters this fall as a part of the sales tax referendum.

DISTRICT: (703) 560-8338 • RICHMOND: (804) 698-1053 • E-MAIL: DELJSCOTT@AOL.COM

Now we must move promptly to the next stage: selection of route and mode alternatives. Toward that end, I commend and support the work of the Dulles Rail Now!, the McLean Citizens' Association and Hallcrest Heights. I agree with their positions. I particularly call your attention to the MCA statement for its thoroughness in highlighting the importance of pedestrian and bus access to the Tysons' stations, as well as the need to mitigate the impact of construction and system noise on nearby communities and businesses. Ease of access by pedestrians, buses and bicyclists, including conformance with Fairfax County's County-wide Trail Plan, will be important measures of the success of our planning and implementation of this critical link in our transportation network.

In addition, I want to call your attention to the analysis and statements of one of MCA's constituent organizations: Hallcrest Heights, as well as citizens living in the Westhampton area. Their very legitimate concerns about immediate and long-term noise impacts deserve careful and prompt attention. Attached is a copy of a letter dated, August 21, 2002, from Mr. Clark Tyler. That letter details his community's concern about noise from construction and from transit operations. I concur with Mr. Tyler's request that Hallcrest Heights should receive the same level of noise attention measures as nearby communities adjacent to the Dulles Airport Access Road have already received. I also agree with his suggestion that noise attenuation measures to address the concerns of Hallcrest Heights and the Westhampton area citizens should be initiated before the construction of transit operations facilities. Please advise me of your plans in this regard.

Thank you for the opportunity to submit these comments for the record.

Sincerely Yours,



James M. Scott

cc: John Foust, MCA
Clark Tyler, Hallcrest Heights
Cathy Melton, Westhampton area

Hallcrest Heights Associates, Inc.
P.O. Box 621
McLean, Virginia 22101-0621
www.hallcrestheights.org

21 August 2002

Mr. Corey W. Hill
Northern Virginia Regional Manager
VA Dept. of Rail and Public Transportation
1550 Wilson Blvd., suite 300
Arlington, VA 22209

RE: Hearing No. 147, Docket R02-1

Dear Mr. Hill:

I wish to add to a statement I submitted earlier at the Public Hearing on July 29. Since that time, the Transportation Committee (which I chair) of the McLean Citizens Association has passed and sent to you a resolution and extended comments on the Dulles Corridor EIS. One of the issues that came up during this process concerned not only the criteria for noise abatement at Hallcrest Heights, but the prospect of construction noise, whichever rail option is selected.

On these issues there are three points that we feel the EIS needs to more substantively address:

1. VDOT's noise criteria were judged not to apply because "no other roadway changes affecting either capacity or elevation are expected..." This is a narrow and not totally accurate viewpoint since both VDOT traffic projections and expectation for increased vehicle usage stemming from density allowances, will substantially increase traffic in the Dulles Connector section that adjoins our community. The EIS references plans to widen the connector, giving further indication of the prospect of increased vehicular traffic. The EIS should broaden its noise abatement scope to include both MWAA and VDOT policy as well as that of the FTA.

2. In light of #1 above, the EIS further references local ordinances on noise, but again narrowly excludes transit operations. The Policy Plan for the Comprehensive Plan of Fairfax County has as its objective (number 5) : "Minimize human exposure to unhealthful levels of transportation generated noise." It makes no distinction between vehicular and transit generated noise. In fact the local ordinance regulates new development, to ensure that people are protected from "transportation noise," and that noise impacts in areas of existing development should be reduced. The EIS needs to address noise mitigation in this light.

3. Although specifics are not given in the EIS, it is not hard to judge from precedents in other elevated sections of the Metro system, that construction noise will be considerable. Since our community lies some 10-12 feet below the level of the roadway in the corridor, the construction of the elevated and curving section of the proposed rail service into Tysons, will involve substantial and sustained construction noise over an extended period of time. Given the

FTA's policy of coordinated transportation planning (which I assume would include dealing with such public agencies as MWAA and VDOT), the EIS should sequence significant transportation noise mitigation measures in the corridor (and particularly our adjoining section) ahead of construction activities. Since VDOT has chosen not only to not maintain the existing ineffective barrier,(which is too low and too short anyway), and since MWAA has said that they will not retrofit any communities for such abatement, the EIS should address the problem in a comprehensive way if the project's objective to protect adjoining communities has any meaning at all. If the EIS were to include such analysis, then a noise barrier of modern design equivalent to that erected for Wolf Trap and other communities in the corridor should be placed at our section of the corridor. Such a barrier must extend all the way down the off-ramp to the merge with Route 123 if it is to have any effect at all.

Thank you for considering these additional points for inclusion in the record of decision for the Final EIS.

Sincerely,

Clark Tyler

Clark Tyler
President

only make congestion much worse. We cannot afford to be a victim of our own success. We cannot let the high quality of life that's attracted so many of us and the jobs to Fairfax County in the first place be undermined by that traffic congestion. We are on the verge of making the long-awaited vision of rail service to Tysons on the way to Dulles a reality. The time to take bold steps to solve the transportation problems has arrived, Mr. Chairman. Fairfax County and the Washington, D.C. region cannot afford to wait any longer.

Thank you.

[Applause.]

MR. KLINGE: The next speaker is the Honorable Kenneth R. Plum, member of the House of Delegates from Reston.

STATEMENT OF KENNETH R. PLUM

MR. PLUM: Mr. Chairman, members of the panel, I am here in three capacities. One is elected member of the Virginia House of Delegates representing the 36th District; secondly, as the convener of the Dulles Rail Now Coalition; and

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third, chair of the Dulles Corridor Rail Association.

Let me first say in terms of the Dulles Rail Now Coalition, a coalition made up of AAA, Mid Atlantic, American Lung Association of Virginia, Coalition for Smarter Growth, Committee for Dulles, Dulles Area Transportation Association, Dulles Corridor Rail Association, Herndon-Dulles Chamber of Commerce, Leader Link National Wildlife Federation, Reston Association, Reston Citizens Association, Reston Interfaith Sierra Club, the Greater Washington Board of Trade, Washington Airports Task Force.

We, the organizations just mentioned, having studied the alternatives analyzed in the draft environmental impact statement of the Dulles corridor rapid transit project, recommend that the Commonwealth of Virginia select as a locally preferred alternative the rail option that produces the most ridership and has the most flexibility for increasing ridership in the future. To optimize ridership, continuing planning efforts should focus

on improving station access and transit-oriented development around the stations.

While we are testifying at the hearings on issues of particular concern to our individual organizations, we are united in our support of bringing rail transit to a corridor of the region that is second only to the District of Columbia in terms of employment and contains several major activity centers.

Rail would serve Tysons Corner and is able to accommodate the projected growth in corridor transit trips. The coalition supports rail now. We will work with the region's elected leadership to bring rail to the Dulles corridor by 2010, sooner if feasible.

Now turning to my role a chair of the Dulles Corridor Rail Association, DCRA has been advocates for rail since we were organized four years in August of 1998. The analyses that have been done as part of the work preparing the draft EIS and the facts that emerged about the alternatives under study support our goal of seeing

rail adopted as the locally preferred alternative.

We urge the Commonwealth to reach agreement with the Dulles transit partners, the private sector team, to engineer and complete construction of the entire rail system as quickly as possible.

I will highlight just a couple of the major reasons why I say we should move forward with rail now.

First and foremost is the tremendous impact on the quality of life that rail transit will have for residents and employees in the corridor. People will be able to choose to take high quality, efficient rail transit service long envisioned for the corridor. Rail transit will enhance mobility and access to jobs and to cultural and educational facilities throughout the region. By providing a high capacity alternative to the single-occupant vehicle, we can use incentives in transportation measures to reduce vehicle miles of travel and improve air and water quality, a particularly important objective now.

Development in the corridor has proceeded more quickly than forecast. Twice as many jobs were created in the Dulles corridor as in the rest of the region over the last decade, fueling construction of office space.

Regional forecasts indicate that the corridor will continue to grow at nearly double the rate of the rest of the region in employment and residents, adding 206,000 people, an increase of 56 percent, and 203,000 jobs, a 71 percent increase in employment levels, over the next 25 years.

While vacancy rates and office space are high now, there is no doubt in my mind that this region will see the energy and entrepreneurship of our local business community lead us into new and promising directions that we will see business form and grow.

Another major reason for our support of rail in the corridor is the opportunity it provides to use transient-oriented development to create attractive neighborhoods and communities with a pedestrian focus, the kind of planning that has

made much of Reston a model of community scale development for the rest of the world.

Transit-oriented development provides opportunities to develop a variety of housing types for an increasingly diverse population and to reduce household expenditures on transportation.

A well-planned and mixed use in close proximity to the station is the key to generating rail ridership. To optimize ridership, we urge that the engineering studies for the station take into account the potential for air rights development as well.

With the addition of a fourth runway and other major airport improvements and passenger amenities, Washington Dulles International Airport is poised for significant growth. Forecasts for passenger trips for 2010 have been increased from 30 million to 37 million, an increase of more than 20 percent. Forecasts for 2025 have been increased from 55 to 63 million passenger trips.

The Dulles Center of the National Air and Space Museum will open in December 2003 and is

expected to generate three to five million visitors per year. While these visitors should be able to use transit, the growth of jobs in the hotel and restaurant and service industries will also bring additional employees and visitors to the area who could benefit from rail transit.

The rail alternative is projected to carry 9600 passengers per hour, compared with 2370 for bus rapid transit. Rail, with the ability to carry 50 to 60,000 passengers per hour, has the capacity over the long term to serve the growing trip demands in the corridor.

While the bus rapid transit alternative described in the draft EIS has a number of serious limitations, we think that there can and should be significant improvements to express bus service and passenger amenities in the interim, including the use of technology to enable prepayment before boarding, real time information about the location of buses, and more neighborhood and circular services.

We also suggest that with the adoption of

rail as the locally preferred alternative that the counties move forward with station access planning to ensure that station area development provides an enhanced bicycle and pedestrian access facility as well as feeder bus services.

The engineering for rail should allow for future air rights development. And finally, the final financial plan for using toll road revenues provides the opportunity to explore several innovative pricing strategies, including incentives to switch to the fast toll transponder to improve roadway capacity, high occupancy toll lanes, whereby single drivers can use the hot lanes for a price, the cost of which is determined by a pricing structure that controls congestion.

Let the record show that before the yellow light came on, I completed my testimony, and for those reasons, we recommend the adoption of the rail option.

Thank you, Mr. Chairman.

[Applause.]

MS. KAUFFMAN: Thank you, Delegate Plum.

McCandlish at the registration table at this time so that we can accommodate you.

If you wish to provide comments and do not want to speak at tonight's hearing, I encourage you to fill out the comment form, write us a letter, or send us an e-mail. We will be accepting comments until the public comment period closes on August the 28th.

And as we said earlier, if you want to testify and not have to hang around, we have a court reporter outside who will take your testimony and that becomes part of the public record.

And I shall now introduce the public officials who are here to testify and each will get 10 minutes to speak.

The first speaker is the Honorable Kenneth R. Plum.

STATEMENT OF THE HONORABLE KENNETH R. PLUM

MR. PLUM: Thank you very much, Mr. Chairman, members of the panel, ladies and gentlemen. My name is Kenneth R. Plum. I live two blocks down the street at 2073 Cobblestone Lane

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here in Reston.

I don't intend to take my full 10 minutes, so everyone can relax.

I am here to speak as an elected official representing this community in the Virginia House of Delegates. I am also here to speak as a convener of a coalition and also as chair of the Dulles Corridor Rail Association.

You are aware that yesterday we announced -- and I want to make the public here aware -- that we announced yesterday the convening of a coalition called Dulles Rail Now. That coalition is made up of the following organizations:

Triple AA Mid-Atlantic, American Lung Association of Virginia, the Coalition for Smarter Growth, the Committee for Dulles, the Dulles Area Transportation Association, the Dulles Corridor Rail Association, Herndon-Dulles Chamber of Commerce, LEADER, LINK, the National Wildlife Federation, the Reston Association, Reston Citizens Association, Reston Interfaith, Sierra Club, the Greater Washington Board of Trade, the Washington

Airports Task Force.

The organizations I have just listed issued a statement yesterday saying that having studied the alternatives analyzed in the draft environmental impact statement of the Dulles corridor rapid transit project, recommends that the Commonwealth of Virginia select as the locally preferred alternative the rail option that produces the most ridership and has the most flexibility for increasing ridership in the future.

While we may, speaking of the organizations that I have listed, testify at the hearings on issues of particular concern to our individual organizations, we are united in our support of bringing rail transit to a corridor of the region that is second only to the District of Columbia in terms of employment and contains several major activity centers.

The statement goes on to say the coalition supports rail now. We will work with the region's elected leadership to bring rail to the Dulles corridor by 2010, sooner if feasible.

Turning now to my statement as chair of the Dulles Corridor Rail Association, I know that you heard at the public hearing last evening and will probably hear some say again tonight, why are we in such a hurry on this project?

Well, I would say to you as someone who has worked on the project for more than 25 years, I would ask why has it taken so long?

The truth of the matter is the concept of this project goes back some 40 years. In the last several years there has been an active history of public involvement, studies by professionals and others, to bring us to this very pivotal point. And this is a pivotal point, I think, for the project and for the quality of life of our community.

We have problems to solve and they include, among other things, congestion, air quality, growth. But we want to, I would suggest to you, simply not solve these problems for today, we want to solve them for the long-term future.

I would say to you that I speak today also

in another capacity, in that of being a grandfather. My son Christopher, sitting here on the front row, and I want us to solve the problems not simply for me and for us today, but for Christopher and the other people who will live in our communities in the future.

Furthermore, as a public official, I know we all share the interest that we get the maximum value for the public monies we spend. We don't want to in the short run simply be cheap. Cheap such that we make a solution today and we have to multiply that in the future. In the long run we have ended up spending more money, inconvenienced a number of people. We need to go forward with a working solution for the long run.

The Dulles Corridor Rail Association recommends the rail option now. It responds to our needs today, but most importantly, it provides a key element for a quality future for our communities in the corridor.

Rail enhances our mobility in the corridor and eases access to jobs, but it also, and I think

importantly, opens the region to a myriad of cultural and educational programs that are available throughout the area.

Rail also responds to the phenomenal growth expected in this corridor; 56 percent in population and 71 percent in employment by 2025. With a capacity to carry 50 to 60,000 passengers maximum per hour, rail can in the future not simply meet the needs of today, but it can meet the needs of tomorrow.

Rail will help us meet the needs of a rapidly expanding Dulles airport, where passenger trips forecast for 2010 have been increased from 30 million to 37 million.

Rail will help meet the demands of the National Air and Space Museum, which is expected to generate 3 to 5 million visits per year.

Local governments are to be complimented for the express bus system it has put in place. It is a form of bus rapid transit. It should be increased and enhanced. But future plans should be directed to the rail alternative, using express bus

in the interim.

Likewise, future planning needs to build upon the pioneering work already completed in Fairfax and Loudoun Counties to amend their comprehensive plans. That planning calls for rail stations with maximum access and flexibility for riders and transit-oriented development around the stations.

But for the decision before us tonight, that decision being the locally preferred alternative, the Dulles Corridor Rail recommends that we move to rail now.

Finally, I would ask that the record indicate that I used four minutes and 22 seconds of my 10 minutes.

Thank you.

MR. KLINGE: Thank you.

[Applause.]

MR. KLINGE: Now I'd like to introduce the mayor of the city of Falls Church, the Honorable Daniel E. Gardner.

STATEMENT OF THE HONORABLE DANIEL E. GARDNER

registration table at this time so that we can accommodate you.

If you wish to provide comments and do not want to speak at tonight's hearing, I encourage you to fill out a comment form, write us a letter, or send us an e-mail. We will be accepting comments until the public comment period closes at 5 p.m. on August the 28th.

I would also remind you that we have a court reporter in the hall who can take your statement if you so choose.

I shall now introduce the public officials here present to testify. They will each have 10 minutes to speak, and the first is the Honorable Kenneth R. Plum, member of the Virginia House of Delegates and chairman of the Dulles Corridor Rail Association.

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STATEMENT OF THE HONORABLE KENNETH R. PLUM

MR. PLUM: Thank you, Mr. Chairman, and distinguished panel, ladies and gentlemen.

I want to start by thanking the panel for indulging me at the last two public hearings for

the last two evenings, and I will be brief tonight. But I also want to take a moment to thank you for the very professional manner in which these hearings have been conducted, the support that you have given to the public to understand what the questions are before us, the accommodations, aside from the air conditioning last evening, which no one had planned on. We have had, I think, a very successful series of hearings. Again, my thanks and my compliments to you for that.

I am here again this evening because I want to make sure my message is very clear. I am an elected official involved in the study of this project in various forms for almost 25 years. I come to you tonight as an elected official saying that from my studies and my conclusions, looking at the alternatives proposed, I recommend that we choose as the locally preferred alternative the rail option.

Likewise, as an organizer with others of the Dulles Rail Coalition Now, I want to bring to you a statement brought forth by a number of

organizations supporting again the rail option.

And finally, as Mr. Klinge had mentioned, I chair a group called the Dulles Corridor Rail Association, and likewise our analysis says that we should go to the rail option.

Back just a moment to the Dulles Rail Now Coalition, that coalition is made up of the following organizations:

Triple AAA Mid Atlantic, the American Lung Association of Virginia, the Coalition for Smarter Growth, the Committee for Dulles, Dulles Area Transit Transportation Association, Dulles Corridor Rail Association, the Herndon-Dulles Chamber of Commerce, LEADER, LINK, the National Wildlife Federation, Reston Association, Reston Citizens Association, Reston Interfaith, Sierra Club, the Greater Washington Board of Trade, the Washington Airports Task Force.

Because this is a statement bringing together many diverse groups, I am going to ask you to indulge me again for just a couple of seconds as I read through the prepared statement. The

organizations I have just listed have studied the alternatives analyzed in the draft environmental impact statement of the Dulles corridor rapid transit project, and recommend that the Commonwealth of Virginia select as the locally preferred alternative the rail option that produces the most ridership and has the most flexibility for increasing ridership in the future.

While the organizations in the coalition will testify at the hearings on issues of particular concern to our individual organizations, we are united in our support of bringing rail transit to the corridor of the region that is second only to the District of Columbia in terms of employment, and contains several major activity centers.

We applaud Fairfax and Loudoun Counties for adopting comprehensive plans in 2001 that support increased mixed use development around the rail stations.

We recognize that much work needs to be done to realize the walkable mixed use communities

envisioned by the transit-oriented development criteria in the plans and to make the rail extension a reality.

We support rail now. We will work with the region's elected leadership to bring rail to the Dulles corridor by 2010, sooner if feasible.

Then in my capacity as chairman of the Dulles Corridor Rail Association, as I indicated, we are a membership organization made up of business and community leaders. We likewise have looked at the alternatives proposed in the project study. We unequivocally support the rail option now.

Patty Nicoson, the president of the Dulles Corridor Rail Association, will testify a little later tonight and she will talk about some continued concerns we have about the planning as it relates to an access of individual stations, but the point being is that among these various groups, along with the Dulles Corridor Rail Association, we respectfully request that we go to the locally preferred alternative of rail.

COMMONWEALTH OF VIRGINIA
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July 22, 2002

0012 A

Mr. John Dittmeier
Project Manager
Dulles Corridor Rapid Transit Project
WMATA
1550 Wilson Blvd., Suite 300
Arlington, VA 22209

RE: Noise impact on Hallcrest Heights community

Dear Mr. Dittmeier:

Over a year ago (May, 2001), Mr. Clark Tyler, President, Hallcrest Heights Associates, Inc. sent you a copy of a letter (enclosed) written by Mr. Michael A. Staiano, an acoustical engineer advising the Hallcrest Heights homeowners on the potential noise impact of the Dulles Corridor Rapid Transit Project. The letter makes recommendations to mitigate noise and suggests they be considered in the planning process. Mr. Tyler requested a response from you. Since he never heard from you, he sent another copy of the letter on February 28, 2002.

I am a strong supporter of public transit for Northern Virginia, including the Dulles Corridor Rapid Transit Project. I also think a major project such as this one requires the serious consideration of citizens' concerns. Please reply to Mr. Tyler's letters (May 2001 and February 2002) as soon as possible and send me a copy.

Thank you.

Sincerely yours,

Jim Scott

James M. Scott

Cc: Clark Tyler
Enclosure

DISTRICT: (703) 560-8338 • RICHMOND: (804) 698-1053 • E-MAIL: DELJSCOTT@AOL.COM

Hallcrest Heights Associates, Inc.
P.O. Box 621
McLean, Virginia 22101-0621
www.hallcrestheights.org

28 February 2002

Mr. John Dittmeier
Project Manager
Dulles Corridor Rapid Transit Project
WMATA
1550 Wilson Blvd. Suite 300
Arlington, VA 22209

Dear John:

You may recall that after our meeting with you and Len in May 2001, I followed up with a letter from our acoustical engineer, Mike Staiano, relative to the concept of "parallel barriers." Have your engineers considered this in their preliminary work? Because it has been some time, I am enclosing another copy of Mike's letter and would be interested in any reaction from your team.

It is my understanding that the draft EIS will be available sometime this spring with hearings to follow sometime early this summer. Is that still the timetable?

Thanks for your interest.

Sincerely,

Clark Tyler
President

STAIANO ENGINEERING, INC.

Sound & Vibration
Measurement, Research & Control

1923 STANLEY AVENUE
ROCKVILLE, MD. 20851-2225

MICHAEL A. STAIANO, PE, INCE Bd. Cert.

301-468-1074

22 May 2001

Mr. M.L. Clark Tyler
Hallcrest Heights Associates, Inc.
7327 Eldorado Street
McLean, Virginia 22102

Subject: Meeting with WMATA Representatives re
Dulles Corridor Rapid Transit Project

Dear Clark:

I thought that our 17-May meeting at the County Board of Supervisors offices regarding the noise concerns of the Hallcrest Heights homeowners was productive. The WMATA representatives appeared to be forthcoming and reasonable. There is one matter that upon consideration of the likely project description in the vicinity of your community I believe should be addressed by WMATA as they perform their noise assessment: Where the Metrorail right-of-way rises above grade adjacent to your development, the vertical retaining walls and elevated structure will create sound-reflecting surfaces parallel to the existing highway noise barrier. Reflections from the railway structures may degrade the barrier performance in the manner of "parallel barriers." The significance of this should be examined and mitigation incorporated if necessary. (Mitigation can be accomplished by various means, the simplest of which is absorptive treatment of the vertical surfaces.)

If you have any questions, let me know.

Sincerely,

Michael A. Staiano

Michael A. Staiano

K.3.2 Commonwealth of Virginia, Senate

- August 18, 2002

JANET D. HOWELL
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August 18, 2002

Mr. Corey W. Hill
Northern Virginia Regional Manager
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard, Suite 300
Arlington, VA 22209

Dear Mr. Hill:

The purpose of this letter is to inform you of my views on the Draft Environmental Impact Statement for the Dulles Corridor Rapid Transit Project.

Having studied the alternatives analyzed in the study, I strongly support Metrorail to Dulles Airport and Loudoun County as the locally preferred alternative. This alternative will provide both the highest transit ridership and the highest number of new riders, resulting in a higher percentage of people using transit. More commuters will benefit from shorter travel times than other alternatives. The best option is to build rail the full length of the project from the beginning. Most people living in my Senate district, which extends from McLean to the Loudoun County border, clearly prefer this alternative. They view rail as an attractive way to commute. They also want to have the entire system at the earliest possible date.

However, there are numerous concerns in the community that I wish to emphasize.

It is completely inappropriate to increase tolls on the Dulles Toll Road to pay for the construction of rail. Commuters in the Corridor have been paying for the Dulles Toll Road for the past eighteen years. No other Virginians north of Richmond have been subjected to tolls. A typical commuter driving to work in D.C. from Reston fifty weeks a year is paying $375 each year. If that commuter has lived here for eighteen years, he has already paid $6750!

In addition, these same commuters have paid for construction of the Metrorail system for the rest of the Washington Metropolitan area.

The proposals in the Draft EIS that would increase tolls either $0.50 or $0.25 in 2003 and then an additional $0.25 every three years until 2015 are neither fair nor equitable. As the Draft EIS demonstrates, the benefits of rail to Dulles are extensive and far-

reaching, accruing to the entire metropolitan region and the state as a whole. To expect commuters paying increased tolls to generate between $725 and $800 million in funding for construction is unreasonable and simply wrong. These ill-conceived proposals to raise tolls should be discarded immediately.

Fortunately, there is an alternative. A portion of the undesignated funds that will be generated if the transportation referendum passes could be earmarked for this purpose.

Insufficient attention is being paid to mitigating the impact of rail on adjoining communities. Communities that are already suffering from inadequate abatement of noise from the Toll Road must be guaranteed that they will finally receive sufficient mitigation measures. Of particular concern is Hallcrest Heights in McLean, which has had only a deteriorating, dilapidated wooden barrier to stop the noise. Given that the proposal is for an elevated, curving rail structure to adjoin the community, they urgently need attention. However, noise is a serious concern for communities along the entire length of the proposed rail system and must be addressed responsibly.

Although viewed mainly as a business center, Tysons Corner is also a major residential area. The preferences of the residents of the Rotunda and other established residential communities deserve special consideration. The goal is to improve the quality of life for residents in the corridor; no one's quality of life should suffer as a result.

Special sensitivity is needed in the design of the Reston stations to encourage bridging the Corridor, which currently severs the community. The design of rail stations should further the goal of linking the opposite sides of the corridor. The station designs should not preclude the possibility of air right linkages across the Dulles Corridor.

To avoid disruption of communities and to encourage rail usage, adequate structured parking as well as pedestrian and bicycle access are required system-wide.

Careful planning for the related land use impacts is essential. Rail will bring dramatic changes to the area – whether these are positive or negative will depend on the land use planning. This is an unprecedented opportunity to implement "smart growth" principles throughout the Corridor. Both Fairfax and Loudoun Counties have adopted Comprehensive Plans that support increased mixed-use development around the rail stations. Careful coordination of land use and transportation plans, with extensive public participation, needs to continue and take the highest priority.

Like the vast majority of residents and businesses in my district, I enthusiastically embrace the prospect of Rail Now to Dulles. And I look forward to assuring that it is done right.

Sincerely yours,

Janet Howell

Senator Janet Howell

K.3.3 Commonwealth of Virginia, Department of Agriculture and Consumer Services

- January 19, 2001

J. Carlton Courter, III
Commissioner

COMMONWEALTH of VIRGINIA

Department of Agriculture and Consumer Services
Division of Consumer Protection
Office of Plant & Pest Services
PO Box 1163, Richmond, Virginia 23218
Phone: 804/786-3515 • Fax: 804/371-7793 • Hearing Impaired: 800/828-1120
http://www.state.va.us/~vdacs/vdacs.htm

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January 19, 2001

Leonard E. Alfredson 1/30/01
Washington Metropolitan Area Transit Authority
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Arlington, VA 22209

RE: Dulles Corridor Rapid Transit Project

This letter is in response to your request concerning threatened or endangered plant or insects species in the vicinity of the proposed rapid transit project along Route 267 from the communities of Pimmit Hills in Fairfax County to Ryan in Loudoun County, VA. To date, Virginia Department of Agriculture and Consumer Services records indicate that no threatened or endangered plant or insect species have been documented in the area indicated in communications you provided. We do not anticipate significant adverse impacts upon plant or insect species under our jurisdiction to result from this project. However, the absence of data does not necessarily mean that no listed species occur in the area, but that our files do not currently contain information to document their presence.

The Virginia Department of Agriculture and Consumer Services has jurisdiction only over plant and insect species listed as threatened or endangered. To better serve citizens and agencies of the Commonwealth, the Virginia Departments of Agriculture and Consumer Services and Conservation and Recreation have entered into an agreement for the review of projects within Virginia. Future requests for information concerning endangered and threatened plants and insects should be directed to the Natural Heritage Division of the Department of Conservation and Recreation for initial evaluation. Projects found to demonstrate potential impact on these species will be referred to the Department of Agriculture and Consumer Services for further review and possible mitigation. Additional information on unique geologic formations, rare or critical habitat, and rare and candidate species can be obtained from VDCR/NH. The Virginia Department of Game and Inland Fisheries has jurisdiction over similarly listed endangered and threatened animal species.

Sincerely,

Keith R. Tignor
Endangered Species Coordinator

K.3.4 Commonwealth of Virginia, Department of Conservation and Recreation

- February 9, 2004
- November 1, 2002
- July 10, 2002
- January 16, 2002
- June 15, 2001
- February 1, 2001
- July 17, 2000

w. Tayloe Murphy, Jr.
Secretary of Natural
Resources



Joseph H. Maroon
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION
203 Governor Street, Suite 326
TDD (804) 786-2121 Richmond, Virginia 23219-2010 (804) 786-2556 FAX (804) 371-7899

February 9,2004

Mr. Gary Fenton, Executive Director Northern
Virginia Regional Park Authority 5400 Ox Road
Fairfax Station, Virginia 22039

Re: W &On Railroad Regional Park and nulles Corridor Rapid Transit Project Land and Water Conservation Fund (L&WCF) Projects #51-00186, #51-00221, and #51-00282

Dear Mr. Fenton:

After consultation with the National Park Service, we have determined that the proposed Dutles Corridor Rapid Transit Project will not constitute a conversion ofuse under the L&WCF Act. This determination is based on the fact that the metro rail overpass location will be within an existing transportation easement that now has an existing four-lane highway overpass.

We **are confident the Park Authority will mitigate the metro rail construction** in **accordance with the items that were addressed** in **the Environmental Impact Statement, and that the project will not impede the nonnal trail use by the citizens ofNorthem Virginia.**

Thank you for keeping us **informed about the** W **&OD Trail. This trail is** a **valuable national asset and** a **"star" for the L&WCF Program.**

Sincerely, 4~

John R. Davy, Division Director
Planning and Recreation Resrouces

cc: Joseph H. Maroon
Jerry Cassidy

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

Joseph H. Maroon
Director

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION
203 Governor Street
Richmond, Virginia 23219-2010
TDD (804) 786-2121

1 November 2002

Mr. Corey W. Hill
Northern Virginia Regional Manager
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard, Suite 300
Arlington, Virginia 22209

Re: Docket Number R02-1-Dulles Corridor Rapid Transit Project Public Hearings Report

Dear Mr. Hill:

The Department of Conservation and Recreation (DCR) has previously submitted comments on the Dulles Corridor Rapid Transit Project. After review of the "Public Hearings Report for the Draft Environmental Impact Statement and General Plans for the Dulles Corridor Rapid Transit Project", the DCR's Division of Natural Heritage DCR-DNH would like to offer the following comments:

1) According to the response comment documented on the top of page 209, Coastal Resources conducted a survey for rare, threatened and endangered plants in April and August of 2002 and the survey results indicated no species were found. DCR-DNH would like to review this survey report before it is included in the Final Environmental Impact Statement to verify all potential sites within the study area were surveyed for rare plants and verify the survey was conducted during the appropriate time of year. DCR-DNH is concerned that the rare diabase plant, earleaf foxglove (*Agalinis auriculata*, G2/S1/SOC/NS), may have been missed in the August survey due to the difficulty in identifying the plant in its vegetative state. The actual flowering period for this plant is September.

2) Also the reference to "Mr. Lugwig" in the response comment should be corrected to " Mr. Ludwig".

3) Please send the survey results to Rene Hypes, Project Review Coordinator-Division of Natural Heritage, Department of Conservation and Recreation, 217 Governor Street, 2nd Floor, Richmond, Virginia 23219.

Thank you for the opportunity to review the public hearings report.

Sincerely,

Derral Jones
Planning Bureau Manager

W. Tayloe Murphy, Jr.
Secretary of Natural Resources



Joseph H. Maroon
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

203 Governor Street, Suite 206
Richmond, Virginia 23219-2094
Phone (804) 786-2064 FAX: (804) 786-1798 TDD (804) 786-2121

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By 15,235

July 10, 2002

0002 A

Mr. Corey Hill
Virginia Department of Rail and Public Transportation
1550 Wilson Blvd, Suite 300
Arlington, VA 22209

Subject: **2003 General Erosion & Sediment Control Specifications**

Dear Sir/Madam:

On behalf of the Virginia Soil & Water Conservation Board, the Virginia Department of Conservation and Recreation (DCR) requests Erosion & Sediment Control (ESC) Specifications for 2003 for your company per Section 10.1-563 of the Virginia Erosion & Sediment Control Law. The deadline for submitting these specifications is **September 15, 2002**. Land-disturbing activities planned for the remainder of 2002 will still operate under previously approved 2001 ESC Specifications.

The enclosed "Virginia Linear Land-Disturbance Guidance" provides detailed information on the regulation and submittal requirements. Please forward your completed documents to **Kelly Ramsey, Urban Programs Engineer, DCR, 203 Governor St., Ste. 206, Richmond, Virginia 23219.**

Additionally, please provide updated company contact person information along with your ESC Specifications, and route this letter to the appropriate engineer or regulatory person within your company.

Please contact Kelly Ramsey above at (804) 371-7440 or e-mail LinearProjects@dcr.state.va.us, if you have questions or require assistance. Website information concerning erosion and sediment control, including the enclosed guidelines, is available at www.dcr.state.va.us/sw.htm.

Thank you in advance for attending to this matter.

Sincerely,

Lawrence J. Gavan
Manager, Urban Programs

Encl.

DCR

Department of Conservation & Recreation

CONSERVING VIRGINIA'S NATURAL AND RECREATIONAL RESOURCES

VIRGINIA LINEAR LAND-DISTURBANCE GUIDANCE FOR UTILITY, PIPELINE, AND RAILROAD COMPANIES

I. Regulated and Exempt Linear Activities

The Virginia Erosion and Sediment Control Law (VESCL) defines a land-disturbing activity as any land change of 10,000 square feet or greater that involves clearing, grading, excavating, transporting, and filling of land. The Department of Conservation and Recreation (DCR) regulates linear land-disturbance projects undertaken by utility, pipeline, and railroad companies. However, non-linear land-disturbance such as municipal utility, building and facilities construction are regulated by the appropriate locality. Section 10.1-563D of VESCL requires electric, natural gas and telephone utility companies, interstate and intrastate natural gas pipeline companies to submit Erosion and Sediment Control (ESC) Specifications that will apply to linear land-disturbance to DCR for review and approval.
Linear projects regulated by DCR are:

1. Construction, installation, and maintenance of electric, natural gas, and telephone utility lines and pipelines.
2. Construction of railroad tracks, rights-of-way, bridges, buildings, and facilities
3. Access roads, staging areas, and borrow/spoil sites associated with a linear project

Exempt linear projects are:

1. Projects less than 10,000 square feet (2,500 square fee in Tidewater Region, generally east of Interstate 95)
2. Individual service connections
3. Underground public utility lines installed, repaired, or maintained on an existing hard-surfaced road, street, or sidewalk
4. Installation of fencing, sign posts, posts, or poles
5. Repairs to existing railroad tracks, rights-of way, bridges, and facilities
6. Purchasing time on existing lines (no land-disturbance)

II. Minimum Requirements for ESC Specifications Submittal

ESC Specifications explains and illustrates the erosion and sediment control measures to be used during linear, project-specific construction. The following information is required in the ESC Specifications Submittal:

1. Include ***Virginia Erosion and Sediment Control Handbook*** **(*Handbook*)** standard details and symbols that will be employed.
2. ESC practices not specified in the *Handbook*, such as trench plugs and directional drilling, shall describe in narrative format how the measures meet the 19 Minimum Standards. *(Ref. §4VAC50-30-50)*, and detailed as represented on construction plans (standard detail, symbol and notes)
3. Provide Project-Specific Information on all linear projects planned to be constructed in 2003. Include the following information:
   a. Project Name (or Number)

b. Project Location (including nearest major intersection)
c. On-site project manager name and contact information
d. Responsible Land Disturber name, certification number, and contact information (Section 10.1-563 and 10.1-566)
e. Project Description (including disturbed acreage estimate and projected start and finish dates)

4. Define the company's obligations to ensure self-inspection, reporting, training, certification, environmental protection, and safety
5. Information concerning projects not included in the ESC Specifications should be emailed to DCR at LinearProjects@dcr.state.va.us.

III. Variance Requests

Modifying or waiving any of the ESC regulations, including the 19 Minimum Standards, on a project-specific basis, requires companies to submit a written Variance Request to DCR for review and approval. A typical project that requires a Variance is projects that open more than 500 feet of trench at one time (Minimum Standard 16). The recommended protocol for submitting Variance Requests is as follows:

1. Provide a project-specific ESC plan. An ESC plan explains and illustrates the control measures to be used during project-specific construction and shall include soil, topographic information, drainage divides, ESC details, and ESC notes
2. Provide project-specific justification that the proposed ESC plan meets the intents of the 19 Minimum Standards.
2. Define the company's obligations to ensure self-inspection, reporting, training, environmental protection, and safety as required by DCR as a condition of approval
3. Present strategies for informing and educating contractors of the Variance requirements
4. Variance Requests should be emailed to DCR at LinearProjects@dcr.state.va.us well in advance of project start

Variance Requests included in the ESC Specifications should be confined to linear activity. For example, Minimum Standard 6 (Sediment traps and Basins) generally does not apply to linear projects, therefore a Variance is not needed.

IV. Compliance

DCR Regional Office staff periodically inspects linear projects covered under the ESC Specifications, and the Virginia Soil and Water Conservation Board may undertake enforcement action if a project is out of compliance. Linear companies are urged to periodically inspect their projects routines (in some cases, regular inspection is a condition of approval). DCR also recommends pre-construction conferences with contractors, sub-contractors, land-developers, consultants and right-of-way users to communicate clearly the approved ESC practices.

V. Additional Information

This document and the ***Virginia Erosion and Sediment Control Handbook*** **(*Handbook*)** is available at DCR's website, www.dcr.state.va.us/sw/e&s.htm. Questions regarding linear project land-disturbance may be directed to Kelly A. Ramsey at (804) 371-7440 or kramsey@dcr.state.va.us.

James S. Gilmore, III
Governor

John Paul Woodley, Jr.
Secretary of Natural Resources

David G. Brickley
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

217 Governor Street, 3rd Floor
TDD (804) 786-2121 Richmond, Virginia 23219 (804) 786-7951 FAX (804) 371-2674
http://www.state.va.us/~dcr/vahcr.html

January 16, 2002

Mr. John Dittmeier
Washington Metropolitan Area Transit Authority
1550 Wilson Blvd., Suite 300
Arlington, VA 22209

Re: Dulles Corridor Rapid Transit Project

Dear Mr. Dittmeier:

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biological and Conservation Data System (BCD) for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in our files, several rare plants, which are typically associated with prairie vegetation and inhabit semi-open diabase glades in Virginia, may occur at this location if suitable habitat is present. Diabase glades are characterized by historically fire-dominated grassland vegetation on relatively nutrient-rich soils underlain by Triassic bedrock. Diabase flatrock, a hard, dark-colored volcanic rock, is found primarily in northern Virginia counties and is located within the geologic formation known as the Triassic Basin. Where the bedrock is exposed, a distinctive community type of drought-tolerant plants occurs. Diabase flatrocks are extremely rare natural communities that are threatened by activities such as quarrying and road construction (Rawinski, 1995).

In Northern Virginia, diabase supports occurrences of several global and state rare plant species: earleaf foxglove (*Agalinis auriculata*, G2/S1/SOC/NS), white heath aster (*Aster ericoides*, G5/S2/NF/NS), blue-hearts (*Buchnera americana*, G3G4/S1/NF/NS), hairy beardtongue (*Penstemon hirsutus*, G4/S2/NF/NS), downy phlox (*Phlox pilosa*, G5T5/S2/NF/NS), stiff goldenrod (*Oligoneuron rigidum* var. *rigidum*, G5/S2/NF/NS), and marsh hedgenettle (*Stachys pilosa* var. *arenicola*, G5/S1/NF/NS). Please note that earleaf foxglove is currently tracked as a

species of concern by the United States Fish and Wildlife Service (USFWS); however this designation has no official legal status.

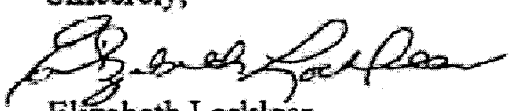
Due to the potential for this site to support populations of natural heritage resources, DCR recommends an inventory of suitable habitat in the study area. With the survey results we can more accurately evaluate potential impacts to natural heritage resources and offer specific protection recommendations for minimizing impacts to the documented resources.

DCR-Division of Natural Heritage biologists are qualified and available to conduct inventories for rare, threatened, and endangered species. Please contact J. Christopher Ludwig, Natural Heritage Inventory Manager, at (804) 371-6206 to discuss arrangements for field work. A list of other individuals who are qualified to conduct inventories may be obtained from the USFWS.

Any absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks other natural heritage resources. DCR's Biological and Conservation Data System is continuously revised. Please contact DCR for an update on this natural heritage information if a significant amount of time passes before it is utilized.

Should you have any questions or concerns, feel free to contact me at 804-692-0984. Thank you for the opportunity to comment on this project.

Sincerely,



Elizabeth Locklear
Locality Liaison

Literature Cited

Rawinski, T.J. 1995. Natural communities and ecosystems: Conservation priorities for the future. Unpublished report for DCR-DNH.

James S. Gilmore, III
Governor

John Paul Woodley, Jr.
Secretary of Natural Resources

David G. Brickley
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

203 Governor Street, Suite 326
TDD (804) 786-2121 Richmond, Virginia 23219-2010 (804) 786-2556 FAX (804) 371-7899

June 15, 2001

Ms. Meg Cederoth
BRW
1129 Twentieth Street
Washington, DC 20036

Dear Ms. Cederoth:

In response to your telephone request, I am providing the following information on Land and Water Conservation Fund (L&WCF) projects in Loudoun and Fairfax Counties:

LOUDOUN COUNTY

None

FAIRFAX COUNTY

Burke Lake Park
Potomac River Bend Acquisition
Burling Tract Acquisition
Riverview Park
Lake Fairfax Park
South Run District Park
Bryant Farm Park
Edsall/Providence Park
Dam site I Recreation Area
Braddock Park
Ellanor C. Lawrence Park

NOTE: If you determine your project will impact on any park please contact this office. A park could have a name change or not be included on the list above.

If you have any questions, please call me at (804) 786-2093. Thank you.

Sincerely,

Jim Guyton
Environmental Program Planner

JEG/br

James S. Gilmore, III
Governor

John Paul Woodley, Jr.
Secretary of Natural Resources

David G. Brickley
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

217 Governor Street, 3rd Floor
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http://www.state.va.us/~dcr/vaher.html

Leonard Alfredson 2/14/01
Dulles Corridor Transit Project
1550 Wilson Blvd, Suite 300
Arlington, VA 22209

1 Feb 2001

Re: Dulles Corridor Rapid Transit Project

Dear Mr. Alfredson:

The Department of Conservation and Recreation (DCR) has searched its Biological and Conservation Data System (BCD) for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

Based on a review of the topographic and soil maps, the project area may contain diabase glade habitat. Several rare plants typically associated with prairie vegetation inhabit semi-open diabase glades in Virginia. Diabase glades are characterized by historically fire-dominated grassland vegetation on relatively nutrient-rich soils underlain by Triassic bedrock. Diabase flatrock, a hard, dark-colored volcanic rock, is found primarily in northern Virginia counties and is located within the geologic formation known as the Triassic Basin. Where the bedrock is exposed, a distinctive community type of drought-tolerant plants occurs. Diabase flatrocks are extremely rare natural communities that are threatened by activities such as quarrying and road construction (Rawinski, 1995).

In Northern Virginia, diabase supports occurrences of several global and state rare plant species: earleaf foxglove (*Agalinis auriculata*, G2/S1/SOC/NS), white heath aster (*Aster ericoides*, G5/S2/NF/NS), blue-hearts (*Buchnera americana*, G3G4/S1/NF/NS), hairy beardtongue (*Penstemon hirsutus*, G4/S2/NF/NS), downy phlox (*Phlox pilosa*, G5T5/S2/NF/NS), stiff goldenrod (*Oligoneuron rigidum* var. *rigidum*, G5/S2/NF/NS), and marsh hedgenettle (*Stachys pilosa* var. *arenicola*, G5/S1/NF/NS). Please note that earleaf foxglove is currently tracked as a species of concern by the United States Fish and Wildlife Service (USFWS); however this designation has no official legal status.

DCR understands that the majority of the proposed facility will be constructed in the median and the remainder is in the highly developed Tysons Corner area. For this reason, DCR does not

anticipate that this project will adversely impact diabase glade habitat and associated rare plants.

The wood turtle (*Clemmys insculpta*, G4/S2/NF/LT) has also been documented in the project vicinity. The wood turtle inhabits forested floodplains and nearby fields, wet meadows, and farmlands (Mitchell, 1994). As this species overwinters on the bottoms of creeks and streams, a primary habitat requirement is the presence of water (Mitchell, 1994). Please note that the wood turtle is classified as threatened by the Virginia Department of Game and Inland Fisheries (VDGIF). To minimize adverse impacts to the wood turtle's aquatic habitat, DCR recommends the implementation of and strict adherence to erosion and sediment control measures during all phases of this project.

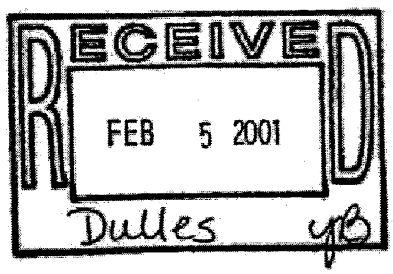
Under the Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the Department of Conservation and Recreation (DCR), DCR has the authority to report for VDACS on state-listed plant and insect species. The current activity will not affect any documented state-listed plants or insects.

Any absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. New and updated information is continually added to BCD. Please contact DCR for an update on this natural heritage information if a significant amount of time passes before it is utilized.

Should you have any questions or concerns, feel free to contact me at 804-692-0984. Thank you for the opportunity to comment on this project.

Sincerely,

Robbie Barbuto
Locality Liaison



Cc: Kim Marbain, USFWS
Ray Fernald, VDGIF

Literature Cited

Mitchell, J. C. 1994. Reptiles of Virginia. Smithsonian Institution Press, Washington. pp. 88-91.

Rawinski, T.J. 1995. Natural communities and ecosystems: Conservation priorities for the future. Unpublished report for DCR-DNH.

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JUL 31 2000

James S. Gilmore, III
Governor

John Paul Woodley, Jr.
Secretary of Natural Resources

David G. Brickley
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

203 Governor Street, Suite 326

TDD (804) 786-2121 Richmond, Virginia 23219-2010 (804) 786-2556 FAX (804) 371-7899

July 17, 2000

Mr. Len Alfredson, Project Manager 7/17/00
Washington Metropolitan Area Transit Authority
Dulles Corridor Rapid Transit Project
1550 Wilson Boulevard, Suite 300
Arlington, Virginia 22209

Re: Dulles Corridor Rapid Transit Project

Dear Mr. Alfredson:

The Department of Conservation and Recreation (DCR) has searched its Biological and Conservation Data System (BCD) for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

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the implementation of and strict adherence to erosion and sediment control measures during all phases of this project.

Any absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. New and updated information is continually added to BCD. Please contact DCR for an update on this natural heritage information if a significant amount of time passes before it is utilized.

From the information provided in the scoping packet, it is difficult to discern the "project authority" for this project, i.e., the Washington Metropolitan Area Transit Authority, or the Virginia Department of Rail and Public Transportation. Therefore, we assume that this project is a multi-jurisdictional local project or is being conducted by a state agency. In the event that this project is not conducted across multiple local jurisdictions or is not undertaken by a state agency, the applicant should contact DCR's Division of Soil and Water Conservation (DSWC) for further information.

In general, however for issues of soil and water conservation, all railroad construction projects that involve a land-disturbing activity of over 10,000 square feet must prepare a project-specific Erosion and Sediment Control (ESC) plan for review and approval by DCR's DSWC. An approved plan is required prior to initiation of any land-disturbing activity at the project site. All plans must be prepared in accordance with the Virginia Erosion & Sediment Control Handbook, Virginia Erosion & Sediment Control Law (VESCL) and Regulations (VESCR). ESC plans should be submitted directly to the DCR Watershed Office that serves the area where the project will be undertaken. *[Ref: VESCL §10.1-560, §10.1-563.A, §10.1-564; VESCR §4VAC50-30-30, VESCR §4VAC50-30-100]*

Similarly, all projects that involve a land clearing, soil movement, or construction activity of over one acre must prepare a project-specific Stormwater Management (SWM) plan for review and approval by DCR's DSWC. An approved plan is required prior to initiation of any regulated activities at the project site. However, please note that railroad and other linear development projects may be exempt from this requirement provided that (i) less than one acre of land will be disturbed per outfall or watershed, (ii) there will be insignificant increases in peak flow rates, and (iii) there are no existing or anticipated flooding or erosion problems downstream of the discharge point. The applicant may contact DSWC for assistance in determining whether a SWM plan is required for this project. Notwithstanding, plans must be prepared in accordance with the Virginia Stormwater Management Act (VSWMA) and Regulations (VSWMR). SWM plans should be submitted directly to the DCR Watershed Office that serves the area where the project will be undertaken. *[Ref: VSWMA §10.1-603.5 and §10.1-603.8.B.5; VSWMR §4VAC-3-20-210 - 245].*

Enclosed for use in directing project-specific plans and technical and regulatory inquiries to the appropriate DCR Watershed Office is a copy of the guidance document titled, *DCR/DSWC Urban Programs Information & Contacts.*

For your records, the proposed project is not anticipated to have any adverse impacts on existing or planned recreational facilities. Nor will it impact any streams on the National Park Service Nationwide Inventory, Final List of Rivers, potential Scenic Rivers or existing or potential State Scenic Byways.

Sincerely,

Derral Jones

Derral Jones
Planning Bureau Manager

/saw

Cc: William Hester, USFWS
Ray Fernald, VDGIF

Literature Cited

Mitchell, J. C. 1994. Reptiles of Virginia. Smithsonian Institution Press, Washington. pp. 88-91.

Rawinski, T.J. 1995. Natural communities and ecosystems: Conservation priorities for the future. Unpublished report for DCR-DNH.

Definition of Abbreviations Used on Natural Heritage Resource Lists of the Virginia Department of Conservation and Recreation

Natural Heritage Ranks

The following ranks are used by the Virginia Department of Conservation and Recreation to set protection priorities for natural heritage resources. Natural Heritage Resources, or "NHR's," are rare plant and animal species, rare and exemplary natural communities, and significant geologic features. The primary criterion for ranking NHR's is the number of populations or occurrences, i.e. the number of known distinct localities. Also of great importance is the number of individuals in existence at each locality or, if a highly mobile organism (e.g., sea turtles, many birds, and butterflies), the total number of individuals. Other considerations may include the quality of the occurrences, the number of protected occurrences, and threats. However, the emphasis remains on the number of populations or occurrences such that ranks will be an index of known biological rarity.

S1 Extremely rare; usually 5 or fewer populations or occurrences in the state, or may be a few remaining individuals, often especially vulnerable to extirpation.

S2 Very rare; usually between 5 and 20 populations or occurrences; or with many individuals in fewer occurrences; often susceptible to becoming extirpated.

S3 Rare to uncommon; usually between 20 and 100 populations or occurrences; may have fewer occurrences, but with a large number of individuals in some populations; may be susceptible to large-scale disturbances.

S4 Common; usually >100 populations or occurrences, but may be fewer with many large populations; may be restricted to only a portion of the state; usually not susceptible to immediate threats.

S5 Very common; demonstrably secure under present conditions.

SA Accidental in the state.

S#B Breeding status of an organism within the state.

SH Historically known from the state, but not verified for an extended period, usually > 15 years; this rank is used primarily when inventory has been attempted recently.

S#N Non-breeding status within the state. Usually applied to winter resident species.

SU Status uncertain, often because of low search effort or cryptic nature of the element.

SX Apparently extirpated from the state.

SZ Long distance migrant whose occurrences during migration are too irregular, transitory and/or dispersed to be reliably identified, mapped and protected.

Global ranks are similar, but refer to a species' rarity throughout its total range. Global ranks are denoted with a "G" followed by a character. Note that GA and GN are not used and GX means apparently extinct. A "Q" in a rank indicates that a taxonomic question concerning that species exists. Ranks for subspecies are denoted with a "T". The global and state ranks combined (e.g. G2/S1) give an instant grasp of a species' known rarity.

These ranks should not be interpreted as legal designations.

Federal Legal Status

The Division of Natural Heritage uses the standard abbreviations for Federal endangerment developed by the U.S. Fish and Wildlife Service, Division of Endangered Species and Habitat Conservation.

LE Listed Endangered - threatened with extinction throughout all or a significant portion of its range
LT Listed Threatened - likely to become endangered in the foreseeable future
PE Proposed Endangered
E(S/A) Treat as endangered because of similarity of appearance
PT Proposed Threatened
T(S/A) Treat as threatened because of similarity of appearance
C Candidate - enough information is available to propose for listing, but listing is Precluded by other pending proposals of higher priority
SOC Species of Concern -- species that merit special concern (not a regulatory category)
NF No federal legal status

State Legal Status

The Division of Natural Heritage uses similar abbreviations for State endangerment.

LE Listed Endangered
LT Listed Threatened
PE Proposed Endangered
PT Proposed Threatened
C Candidate
SC Special Concern -- animals that merit special concern according to VDGIF (not a regulatory category)
NS No state legal status

For information on the laws pertaining to threatened or endangered species, contact:
U.S. Fish and Wildlife Service for all FEDERALLY listed species
Department of Agriculture and Consumer Services Plant Protection Bureau for STATE listed plants and insects
Department of Game and Inland Fisheries for all other STATE listed animals
3/99

DCR/DSWC URBAN PROGRAMS INFORMATION & CONTACTS
Erosion and Sediment Control (ESC) and Stormwater Management (SWM) Programs

HOME PAGES
http://www.state.va.us/~dcr/sw/e&s.htm & http://www.state.va.us/~dcr/sw/stormwat.htm

TRAINING & CERTIFICATION HOME PAGE
http://www.state.va.us/~dcr/sw/estr&crt.htm

LINKS TO LOCALITIES
http://www.vipnet.org/vipnet/government/local-government.html

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Stormwater Management Program Manager Joseph G. Battista (804) 371-7492 fax 371-2630	**Erosion and Sediment Control Program Manager** Jacob A. Porter (804) 786-3997 fax 371-2630
Urban Programs Training and Certification Coordinator John T. Baranowski (804)371-7532 fax 786-1978	**Urban Programs Regulatory Coordinator** Michael C. Gerel (804) 371-7440 fax 786-1978

DCR WATERSHED OFFICES
Urban Program Compliance Engineers (UPCE) & Urban Program Engineers (UPE) Field Representatives

Shenandoah Watershed Office Manager - Charlie Wade Tamara Keeler (UPCE) John S. Minarcik (UPE) Lynn A. Snyder (UPCE-James West) Route 4, Box 99-J Staunton, VA 24401 (540) 332-9991 fax: 332-8956	**James Watershed Office** Manager - Michael Bowman Robert E. Cooper (UPE) Vacant (UPCE - James East) Vacant (UPCE - James Central) 3800 Stillman Parkway, Suite 102 Richmond, VA 23233 (804) 527-4484 fax: 527-4483	**Potomac Watershed Office** Manager - Mary Apostolico Douglas H. Carter, Jr. (UPCE) Jamie B. Lowery (UPE) 98 Alexandria Pike, Suite 33 Warrenton, VA 22186 (540) 347-6420 fax: 347-6423
Rappahannock Watershed Office Manager - Matthew Criblez Michael J. Lee (UPCE) Commonwealth Building, 2601Princess Anne St., Suite 101 Fredericksburg, VA 24401 (540) 899-4074 fax 899-4389	**York Watershed Office** Manager - Darryl Glover Kenny W. Harper (UPCE) Post Office Box 1425 Tappahannock, VA 22560 (804) 443-6752 fax: 443-4534	**Upper Tennessee & Big Sandy (UTBS) Watershed Office** Manager - Neal Kilgore Phyllis A. Hinch (UPCE) 252 W. Main St., Suite 3 Abingdon, VA 24210 (540) 676-5529 fax: 676-5527
Roanoke Watershed Office Manager - Tim Ott Clarence F. Huff (UPCE) 411 Boyd Street Chase City, VA 23924 (804) 372-2191/2192 fax: 372-4962	**New River Watershed Office** Manager - Charlotte Burnett Kacie Hodges (UPE) Vacant (UPCE) Post Office Box 1506 148 Broad Street Dublin, VA 24084 (540) 643-2590 fax: 643-2597	**Chowan & Albermarle Watersheds Office** Manager - Ernie Brown Vacant (UPE) Jeffrey T. Hancock (UPCE) 1548-A Holland Road Suffolk, VA 23434 (757) 925-2468 fax: 925-2388

COUNTY, CITY AND TOWN ADOPTED ESC PROGRAMS AND CORRESPONDING WATERSHED OFFICE RESPONSIBILITIES

ESC Program - COUNTIES

County	Watershed Office
Accomack	Chowan/Albermarle
Albemarle	James Central
Alleghany	Shen - James West
Amelia	James East
Amherst	James Central
Appomattox	James Central
Arlington	Potomac
Augusta	Shen - James West
Bath	Shen - James West
Bedford	Roanoke
Bland	New River
Botetourt	Shen - James West
Brunswick	Roanoke
Buchanan	UTBS
Buckingham	James Central
Campbell	James Central
Caroline	York
Carroll	New River
Charles City	York
Charlotte	Roanoke
Chesterfield	James East
Clarke	Shenandoah
Craig	Shen - James West
Culpeper	Rappahannock
Cumberland	James East
Dickenson	UTBS
Dinwiddie	Chowan/Albermarle
Essex	York
Fairfax	Potomac
Fauquier	Potomac
Floyd	New River
Fluvanna	James Central
Franklin	Roanoke
Frederick	Shenandoah
Giles	New River
Gloucester	York
Goochland	James East
Grayson	New River
Greene	Rappahannock
Greensville	Chowan/Albermarle
Halifax	Roanoke
Hanover	York
Henrico	James East
Henry	Roanoke
Highland	Shen – James West
Isle of Wight	Chowan/Albermarle
James City	York
King George	Rappahannock
King & Queen	York
King William	York
Lancaster	Rappahannock
Lee	UTBS
Loudoun	Potomac
Louisa	James Central
Lunenburg	Roanoke
Madison	Rappahannock
Mathews	York
Mecklenburg	Roanoke
Middlesex	York
Montgomery	New River
Nelson	James Central
New Kent	York
Northampton	Chowan/Albermarle
Northumberland	Rappahannock
Nottoway	James East
Orange	Rappahannock
Page	Shenandoah
Patrick	New River
Pittsylvania	Roanoke
Powhatan	James East
Prince Edward	James East
Prince George	James East
Prince William	Potomac
Pulaski	New River
Rappahannock	Rappahannock
Richmond	Rappahannock
Roanoke	Roanoke
Rockbridge	Shen - James West
Rockingham	Shenandoah
Russell	UTBS
Scott	UTBS
Shenandoah	Shenandoah
Smyth	UTBS
Southampton	Chowan/Albermarle
Spotsylvania	Rappahannock
Stafford	Rappahannock
Surry	Chowan/Albermarle
Sussex	Chowan/Albermarle
Tazewell	New River
Warren	Shenandoah
Washington	UTBS
Westmoreland	Rappahannock
Wise	UTBS
Wythe	New River
York	York

ESC Program - CITIES

City	Watershed Office	City	Watershed Office
Alexandria	Potomac	Manassas	Potomac
Bedford	Roanoke	Manassas Park	Potomac
Bristol	UTBS	Martinsville	Roanoke
Buena Vista	Shen – James West	Newport News	Chowan/Albermarle
Charlottesville	James Central	Norfolk	Chowan/Albermarle
Chesapeake	Chowan/Albermarle	Norton	UTBS
Clifton Forge	Shen – James West	Petersburg	Chowan/Albermarle
Colonial Heights	James East	Poquoson	York
Covington	Shen – James West	Portsmouth	Chowan/Albermarle
Danville	Roanoke	Radford	New River
Emporia	Chowan/Albermarle	Richmond	James East
Fairfax	Potomac	Roanoke	Roanoke
Falls Church	Potomac	Salem	Roañoke
Franklin	Chowan/Albermarle	Staunton	Shen - James West
Fredericksburg	Rappahannock	Suffolk	Chowan/Albermarle
Galax	New River	Virginia Beach	Chowan/Albermarle
Hampton	Chowan/Albermarle	Waynesboro	Shen - James West
Harrisonburg	Shenandoah	Williamsburg	York
Hopewell	James East	Winchester	Shenandoah
Lexington	Shen – James West		
Lynchburg	James Central		

ESC Program - TOWNS

Town	Watershed Office	Town	Watershed Office
Abingdon	UTBS	Haymarket	Potomac
Alta Vista	Roanoke	Herndon	Potomac
Ashland	York	Narrows	New River
Berryville	Shenandoah	Occoquan	Potomac
Blacksburg	New River	Pearisburg	New River
Bluefield	New River	Pulaski	New River
Bridgewater	Shenandoah	Scottsville	James Central
Cape Charles	Chowan/Albermarle	South Boston	Roanoke
Chase City	Roanoke	South Hill	Roanoke
Christiansburg	New River	Stephens City	Shenandoah
Culpeper	Rappahannock	Tappahannock	York
Dayton	Shenandoah	Vienna	Potomac
Dublin	New River	Warrenton	Potomac
Dumfries	Potomac	West Point	York
Farmville	James East	Woodstock	Shenandoah
		Wytheville	New River

Shenandoah Watershed Office
Manager - Charlie Wade
Tamara Keeler (UPCE)
John S. Mlnarcik (UPE)
Lynn A. Snyder (UPCE -James West)
Route 4, Box 99-J
Staunton, VA 24401
(540)332-9991
fax: 332-8956

# of localities	Locality	County, City or Town	Watershed Office
1	Harrisonburg	City	Shenandoah
2	Winchester	City	Shenandoah
3	Frederick	County	Shenandoah
4	Clarke	County	Shenandoah
5	Page	County	Shenandoah
6	Rockingham	County	Shenandoah
7	Shenandoah	County	Shenandoah
8	Warren	County	Shenandoah
9	Dayton	Town	Shenandoah
10	Bridgewater	Town	Shenandoah
11	Berryville	Town	Shenandoah
12	Woodstock	Town	Shenandoah
13	Stephens City	Town	Shenandoah

# of localities	Locality	County, City or Town	Watershed Office
1	Staunton	City	Shen - James West
2	Waynesboro	City	Shen - James West
3	Buena Vista	City	Shen - James West
4	Covington	City	Shen - James West
5	Lexington	City	Shen - James West
6	Clifton Forge	City	Shen - James West
7	Highland	County	Shen - James West
8	Craig	County	Shen - James West
9	Alleghany	County	Shen - James West
10	Augusta	County	Shen - James West
11	Bath	County	Shen - James West
12	Rockbridge	County	Shen - James West
13	Botetourt	County	Shen - James West

James Watershed Office
Manager - Michael Bowman
Robert E. Cooper (UPE)
VACANT (UPCE - James East)
VACANT (UPCE - James Central)
3800 Stillman Parkway, Suite 102
Richmond, VA 23233
(804)527-4484
fax:527-4483

# of localities	Locality	County, City or Town	Watershed Office
1	Lynchburg	City	James Central
2	Charlottesville	City	James Central
3	Amherst	County	James Central
4	Campbell	County	James Central
5	Appomattox	County	James Central
6	Buckingham	County	James Central
7	Cumberland	County	James Central
8	Albemarle	County	James Central
9	Nelson	County	James Central
10	Fluvanna	County	James Central
11	Louisa	County	James Central
12	Scottsville	Town	James Central

# of localities	Locality	County, City or Town	Watershed Office
1	Colonial Heights	City	James East
2	Richmond	City	James East
3	Hopewell	City	James East
4	Goochland	County	James East
5	Powhatan	County	James East
6	Chesterfield	County	James East
7	Amelia	County	James East
8	Henrico	County	James East
9	Nottoway	County	James East
10	Prince Edward	County	James East
11	Prince George	County	James East
12	Farmville	Town	James East

Potomac Watershed Office
Manager - Mary Apostolico
Douglas H. Carter, Jr. (UPCE)
Jamie B. Lowery (UPE)
98 Alexandria Pike, Suite 33
Warrenton, VA 22186
(540)347-6420
fax 347-6423

# of localities	Locality	County, City or Town	Watershed Office
1	Manassas	City	Potomac
2	Manassas Park	City	Potomac
3	Alexandria	City	Potomac
4	Falls Church	City	Potomac
5	Fairfax	City	Potomac
6	Fairfax	County	Potomac
7	Prince William	County	Potomac
8	Fauquier	County	Potomac
9	Arlington	County	Potomac
10	Loudoun	County	Potomac
11	Dumfries	Town	Potomac
12	Herndon	Town	Potomac
13	Vienna	Town	Potomac
14	Occoquan	Town	Potomac
15	Haymarket	Town	Potomac
16	Warrenton	Town	Potomac

Rappahannock Watershed Office
Manager - Matthew Criblez
Michael J. Lee (UPCE)
Commonwealth Building,
2601Princess Anne Street,
Suite 101
Fredericksburg, VA 24401
(540) 899-4074
fax 899-4389

# of localities	Locality	County, City or Town	Watershed Office
1	Fredericksburg	City	Rappahannock
2	Orange	County	Rappahannock
3	Stafford	County	Rappahannock
4	Rappahannock	County	Rappahannock
5	Richmond	County	Rappahannock
6	Culpeper	County	Rappahannock
7	Northumberland	County	Rappahannock
8	Westmoreland	County	Rappahannock
9	Spotsylvania	County	Rappahannock
10	Greene	County	Rappahannock
11	Lancaster	County	Rappahannock
12	Madison	County	Rappahannock
13	King George	County	Rappahannock
14	Culpeper	Town	Rappahannock

York Watershed Office
Manager - Darryl Glover
Kenny W. Harper (UPCE)
Post Office Box 1425
Tappahannock, VA 22560
(804) 443-6752
fax: 443-4534

# of localities	Locality	County, City or Town	Watershed Office
1	Williamsburg	City	York
2	Poquoson	City	York
3	York	County	York
4	Mathews	County	York
5	New Kent	County	York
6	Middlesex	County	York
7	Hanover	County	York
8	King William	County	York
9	King & Queen	County	York
10	James City	County	York
11	Gloucester	County	York
12	Caroline	County	York
13	Essex	County	York
14	Charles City	County	York
15	Ashland	Town	York
16	West Point	Town	York
17	Tappahannock	Town	York

Upper Tennessee & Big Sandy (UTBS) Watershed Office
Manager - Neal Kilgore
Phyllis A. Hinch (UPCE)
252 W. Main St., Suite 3
Abingdon, VA 24210
(540)676-5529
fax: 676-5527

# of localities	Locality	County, City or Town	Watershed Office
1	Norton	City	UTBS
2	Bristol	City	UTBS
3	Lee	County	UTBS
4	Buchanan	County	UTBS
5	Wise	County	UTBS
6	Russell	County	UTBS
7	Dickenson	County	UTBS
8	Washington	County	UTBS
9	Scott	County	UTBS
10	Smyth	County	UTBS
11	Abingdon	Town	UTBS

New River Watershed Office
Manager - Charlotte Burnett
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VACANT (UPCE)
Post Office Box 1506
401 E. Main Street
Dublin, VA 24084
(540)643-2590
fax: 643-2597

# of localities	Locality	County, City or Town	Watershed Office
1	Radford	City	New River
2	Galax	City	New River
3	Carroll	County	New River
4	Bland	County	New River
5	Floyd	County	New River
6	Grayson	County	New River
7	Montgomery	County	New River
8	Patrick	County	New River
9	Pulaski	County	New River
10	Tazewell	County	New River
11	Giles	County	New River
12	Wythe	County	New River
13	Pulaski	Town	New River
14	Bluefield	Town	New River
15	Christiansburg	Town	New River
16	Pearisburg	Town	New River
17	Narrows	Town	New River
18	Dublin	Town	New River
19	Wytheville	Town	New River
20	Blacksburg	Town	New River

Roanoke Watershed Office
Manager - Tim Ott
Clarence F. Huff (UPCE)
411 Boyd Street
Chase City, VA 23924
(804)372-2191/2192
fax: 372-4962

# of localities	Locality	County, City or Town	Watershed Office
1	Martinsville	City	Roanoke
2	Roanoke	City	Roanoke
3	Salem	City	Roanoke
4	Bedford	City	Roanoke
5	Danville	City	Roanoke
6	Pittsylvania	County	Roanoke
7	Henry	County	Roanoke
8	Roanoke	County	Roanoke
9	Mecklenburg	County	Roanoke
10	Lunenburg	County	Roanoke
11	Franklin	County	Roanoke
12	Brunswick	County	Roanoke
13	Charlotte	County	Roanoke
14	Halifax	County	Roanoke
15	Bedford	County	Roanoke
16	South Hill	Town	Roanoke
17	Chase City	Town	Roanoke
18	South Boston	Town	Roanoke
19	Alta Vista	Town	Roanoke

K.3.5 Commonwealth of Virginia, Department of Environmental Quality

- December 18, 2003
  - Participating agencies:
    - Department of Environmental Quality
    - Department of Agriculture and Consumer Services
    - Department of Conservation and Recreation
    - Marine Resources Commission
    - Department of Historic Resources
    - Chesapeake Bay Local Assistance Department
    - Northern Virginia Regional Commission
    - Loudoun County
    - Town of Leesburg
- October 28, 2002
- August 27, 2002
  - Participating agencies:
    - Department of Environmental Quality
    - Department of Conservation and Recreation
    - Department of Transportation
    - Marine Resources Commission
    - Department of Historic Resources
    - Department of Mines, Minerals, and Energy
    - Department of Forestry
    - Chesapeake Bay Local Assistance Department

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COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

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Robert G. Burnley
Director

(804) 698-4000
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December 18, 2003

Mr. Karl A. Rohrer, AICP
Project Manager
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard, Suite 300
Arlington, Virginia 22209

RE: Supplemental Draft Environmental Impact Statement for the Dulles Corridor Rapid Transit Project
DEQ-03-210F

Dear Mr. Rohrer:

The Commonwealth of Virginia has completed its review of the above document (hereinafter "SDEIS"), which is a National Environmental Policy Act ("NEPA") document prepared jointly by the Department of Rail and Public Transportation, the Washington Metropolitan Area Transit Authority, and the Federal Transit Administration. The Department of Environmental Quality is responsible for coordinating Virginia's review of federal environmental documents and responding to appropriate federal (and, in this case, state) officials on behalf of the Commonwealth. The following agencies, planning district commission, and localities participated in this review:

Department of Environmental Quality (hereinafter "DEQ")
Department of Agriculture and Consumer Services
Department of Conservation and Recreation
Marine Resources Commission
Department of Historic Resources
Chesapeake Bay Local Assistance Department
Northern Virginia Regional Commission
Loudoun County
Town of Leesburg

In addition, the following agencies and localities were invited to comment:

Department of Game and Inland Fisheries
Department of Health
Department of Transportation
Department of Forestry
Department of Aviation
Department of Rail and Public Transportation (proponent agency)
Arlington County
Fairfax County (indicated its intent to respond by the deadline)
City of Falls Church
Town of Herndon
Town of Vienna.

Project Description

The Federal Transit Administration, the Washington Metropolitan Area Transit Authority, and the Virginia Department of Rail and Public Transportation, with the cooperation of the Federal Aviation Administration, are proposing alternative transit improvements in the Dulles Corridor. This corridor runs from the East Falls Church Metrorail station in Fairfax County past Tyson's Corner to Dulles Airport and into Loudoun County.

The Draft EIS, published in the summer of 2002 (reviewed under DEQ-02-124F, comments mailed August 27, 2002), analyzed five alternatives (Supplemental Draft EIS, page 2-1, section 2.1):

- "No-Build," meaning the existing situation and planned projects through the year 2025;
- Bus Rapid Transit (BRT), meaning a bus-based system, with separate bus stops and stations, and three alignment options;
- Metrorail, meaning extension of the Metrorail system, and several alignment and service area options;
- BRT/Metrorail, meaning a combination of the two alternatives above; and
- Phased implementation, combining the foregoing three alternatives into a program of improvements implemented in stages (i.e., BRT, then BRT/Metrorail, then Metrorail).

The Supplemental Draft EIS (hereinafter "SDEIS") analyzes the following alternatives (page 2-3, section 2.2):

- The "baseline" or "no-build" alternative consists of the existing highway and transit infrastructure and services, and any that are committed for implementation by the year 2025.

- Metrorail Alternative: The Metrorail system would be extended from a point between the East and West Falls Church stations to State Route 772, by way of a number of track and station alignment options, and ancillary facilities would be included. There would be 11 new stations, bus routes feeding into stations, and regional routes running the length of the corridor.

- Proposed Locally Preferred Alternative: Facilities for the Locally Preferred Alternative (LPA) would be similar to those for the Metrorail Alternative. The differences would be in phasing and other aspects of operation and design.

Environmental Impacts and Mitigation

1. Natural Heritage Resources. The Department of Conservation and Recreation (DCR) has searched its Biotics Data System (formerly the Biological and Conservation Data Base) for occurrences of natural heritage resources in the project area. "Natural heritage resources" are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, significant geologic formations, and similar features of scientific interest. Natural heritage resources have been documented in the project area. However, due to the scope of project activity and the distance to the resources in question, DCR does not anticipate that the project, as proposed, would adversely affect natural heritage resources.

Under a memorandum of agreement between DCR and the Department of Agriculture and Consumer Services (VDACS), DCR represents VDACS in commenting on potential impacts of projects on state-listed plant and insect species. The proposed project will not affect any documented state-listed plants or insects. The Department of Agriculture and Consumer Services, which has jurisdiction over state-listed endangered and threatened plants and insects, confirms this statement.

DCR also reports that no state natural areas under its jurisdiction are in the project vicinity.

2. Air Quality. DEQ's Air Division reiterates its earlier guidance relative to open burning and fugitive dust emissions. The Division also continues to recommend restricting emissions of volatile organic compounds and oxides of nitrogen because the project will take place in an ozone non-attainment area and an emissions control area for volatile organic compounds and oxides of nitrogen, the precursors to atmospheric ozone.

3. Water Quality. DEQ's Water Division commends the project proponents for planning to construct rail lines primarily within the medians of existing roads, because this approach is a helpful strategy for the avoidance of impacts to surface waters, among other things. Other ways to minimize impacts include completely spanning wetlands and streams, and shifting the alignment.

(a) Stream and Wetland Impacts. Unavoidable stream and wetland impacts will require full compensatory mitigation, as explained in the SDEIS (pages 4-12 through 4-15, section 4.2.3), including permanent conversion from one wetland type to another of lesser value. Examples of avoidance and minimization include completely spanning wetlands and streams. DEQ's Water Division recommends strict adherence to erosion and sediment control practices and stormwater management requirements (see item 5, below), and effective monitoring of construction activities to ensure that erosion controls and stormwater management practices are adequately preventing sediment and pollution from entering adjacent surface waters. Adherence to state and local erosion and sediment control and stormwater management requirements (see item 5, below) will help minimize short-term water quality impacts from this project. See "Regulatory and Coordination Needs," item 1, below.

In general, DEQ recommends that stream and wetland impacts be avoided to the maximum extent practicable. For unavoidable impacts, DEQ encourages the following practices to minimize project impacts to wetlands and waterways:

- Operate machinery and construction vehicles outside of stream-beds and wetlands; use synthetic mats when in-stream work is unavoidable;
- Erosion and sedimentation controls should be designed in accordance with the most current edition of the *Virginia Erosion and Sediment Control Handbook*. These controls should be in place prior to clearing and grading, and maintained in good working order to minimize impacts to State waters. The controls should remain in place until the area is stabilized. (See also item 5, below.)
- Place heavy equipment, located in temporarily impacted wetland areas, on mats, geotextile fabric, or use other suitable measures to minimize soil disturbance, to the maximum extent practicable.
- Restore all temporarily disturbed wetland areas to pre-construction conditions and plant or seed with appropriate wetlands vegetation in accordance with the cover type (emergent, scrub-shrub, or forested). The project proponents should take all appropriate measures to promote re-vegetation of these areas. Stabilization and restoration efforts should occur immediately after the temporary disturbance of each wetland area instead of waiting until the entire project has been completed.
- Place all materials which are temporarily stockpiled in wetlands, designated for use for the immediate stabilization of wetlands, on mats, geotextile fabric in order to

prevent entry into State waters. These materials should be managed in a manner that prevents leachates from entering state waters and must be entirely removed within thirty days following completion of that construction activity. The disturbed areas should be returned to their original contours, stabilized within thirty days following removal of the stockpile, and restored to the original vegetated state.

- All non-impacted surface waters within the project or right-of-way limits that are within 50 feet of any clearing, grading, or filling activities should be clearly flagged or marked for the life of the construction activity within that area. The project proponents should notify all contractors that these marked areas are surface waters where no activities are to occur.
- Measures should be employed to prevent spills of fuels or lubricants into state waters.

Loudoun County indicates its support for the federal goal of no net loss to wetlands. The County will identify optimum receiving sites for wetland mitigation, with a priority given to each geographic Policy Area (see the County's Revised General Plan, Policy 23). Therefore, the County prefers that any wetland impacts from the proposed project be mitigated within the Suburban Policy Area. However, if a wetland mitigation bank is not available in that Area at the time the impacts are incurred, then County staff prefers that impacts in Loudoun County be mitigated at the Bull Run Wetland Bank (SDEIS, Figure 4.2-2, following page 4-12).

(b) Loudoun County Planning Considerations. In connection with the discussion of water resources and mitigation of water resource impacts (SDEIS, pages 4-3 and 4.4, section 4.2), Loudoun County points out that its adoption of the Revised 1993 Zoning Ordinance in 2003 included establishment of a River and Stream Corridor Overlay District, which implements many of the policies outlined in the Revised General Plan. The River and Stream Corridor Overlay District identifies resources of concern and planning considerations. River and Stream Corridor Resources include:

- rivers and streams draining 100 acres or more
- 100-year floodplains (major and minor)
- adjacent steep slopes (i.e., 25% or greater, starting within 50 feet of streams and floodplains, extending no farther than 100 feet beyond the originating stream or floodplain)
- a 50-foot Management Buffer surrounding floodplains and adjacent steep slopes
- wetlands, forests, historic and cultural resources, and archaeological sites that fall within the area of one or more of the above resources

In addition, a 300-foot no-build buffer or the River and Stream Corridor Overlay District, whichever is greater, will be applied to scenic rivers, the Potomac River, Bull Run, and

the protected shoreline of drinking water reservoirs (see the County's Revised General Plan, Policies 1, 8, and 11).

The SDEIS lists coordination with local jurisdictions on mitigation for non-conformity of any project within critical areas as an available option (page 4-12, section 4.2.3). The County staff considers such coordination to be a requirement for any element of a project affecting a River and Stream Corridor Overlay District. See "Regulatory and Coordination Needs," item 6, below.

4. Solid and Hazardous Waste Management. According to DEQ's Waste Division, solid and hazardous waste issues were addressed in the SDEIS. DEQ's Waste Division did a cursory review of its data files and did not find any additional contamination sites that might affect, or be affected by, the project.

Pollution prevention was not addressed in the SDEIS. DEQ encourages the proponents to implement pollution prevention principles, including the reduction of solid wastes at the source, re-use of materials, and recycling of waste materials. (See item 9, below, for additional guidance on pollution prevention.).

5. Erosion and Sediment Control; Stormwater Management. Federal agencies and their authorized agents conducting regulated land-disturbing activities on public and private lands in the Commonwealth of Virginia must comply with the Virginia Erosion and Sediment Control Law (*Virginia Code* section 10.1-567), the Virginia Stormwater Management Law (*Virginia Code* section 10.1-603.15), and other applicable federal non-point source pollution control mandates such as section 313 of the Clean Water Act and the federal consistency requirements of the Coastal Zone Management Act. Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, or other structures, soil/dredge spoil areas, or related land conversion activities that disturb 2,500 square feet or more (in Chesapeake Bay Preservation Areas, as defined; see Virginia's Chesapeake Bay Preservation Area Designation and Management Regulations, 9 VAC 10-20-10 et seq., specifically 9 VAC 10-20-70 through 10-20-105 or consult with the appropriate locality's planning department) are regulated by the Erosion and Sediment Control Law (*Virginia Code* section 10.1-567) and its implementing regulations. Similar activities that disturb one acre or more are regulated by the Stormwater Management Law (*Virginia Code* section 10.1-603.5) and its implementing regulations. Accordingly, the project proponents should prepare and implement Erosion and Sediment Control Plans and Stormwater Management Plans that comply with state law. The project proponents are ultimately responsible for achieving project compliance through oversight of on-site contractors, regular field inspection, prompt action against non-compliance, and/or other mechanisms consistent with agency policy. See "Regulatory and Coordination Needs," item 3, below.

Special attention should be given to post-construction stormwater quality management, according to the Northern Virginia Regional Commission. The project proponents must adhere to the post-development water quality requirements set out in the Virginia Stormwater Management Regulations (4 VAC 30-30 through 4 VAC 30-100). If these requirements are met, the proponents will thereby meet the requirement that state agency projects comply with local ordinances pursuant to the Chesapeake Bay Preservation Act (*Virginia Code* sections 10.1-2100 et seq.). The *Northern Virginia BMP Handbook* has calculation procedures for stormwater quality requirements; the proponents may obtain a copy through the Regional Commission's web site, www.novaregion.org.

The Regional Commission also recommends that the proponents explore opportunities, where possible, for retrofit of existing stormwater quantity facilities to stormwater quality facilities through new construction activities. The Regional Commission's *Guidebook for Maintaining BMPs in Northern Virginia* is also available from the website, or it can be obtained from the Commission without charge. See "Regulatory and Coordination Needs," item 3, below.

6. Historic Structures and Archaeological Resources. According to the SDEIS, the proposed Locally Preferred Alternative would not give rise to adverse effects upon architectural resources in the project area (see Table 3.5-2, page 3-34). The Department of Historic Resources, in a letter to the Virginia Department of Rail and Public Transportation dated November 19, 2003, indicated that it could not concur with this statement, because it had not reviewed the information that gives rise to the conclusion; the SDEIS cites "further analysis" as confirming a conclusion that views in the "peekaboo" sequence would be effectively mitigated (see SDEIS, page 3-33, section 3.5).

The "peekaboo" sequence refers to the repeated appearances of the Dulles Airport Terminal to motor vehicle drivers and passengers traveling west toward the Airport on the Dulles Access Highway. According to the Department of Rail and Public Transportation, the first (easternmost) of these views no longer exists because of intervening building construction (Holma/Ellis, 12/17/03). At a December 16 meeting involving the Department of Historic Resources (DHR) and project proponents, the proponents recommended defining the second such view (farthest east of the Airport of the remaining three views) as the eastern boundary of property potentially eligible for the National Register of Historic Places and the Virginia Landmarks Register. This boundary would be at the line where the first view of the Airport Terminal appears to the westbound driver. DHR is awaiting further analysis of this recommendation by the proponents. See "Regulatory and Coordination Needs," item 5, below.

DHR does agree with the proponents' suggestion to revise the Area of Potential Effect from 1000 feet on either side of the transit system centerline (and 1000 feet from

related construction, such as transit stations) to 600 hundred feet from the transit centerline and around transit stations (Holma/Ellis, 12/18/03).

Loudoun County points out that the SDEIS described the Area of Potential Effect as 200 feet beyond station footprints to allow for possible variation during construction (see Figures 3.5-1a and 3.5-1b, following page 3-28). The County should be contacted if variations in the proposed alignment will affect additional sites. In addition, the County should continue to be a consulting party as impact mitigation strategies are discussed. See "Regulatory and Coordination Needs," item 5, below.

7. Chesapeake Bay Preservation Areas. According to the Northern Virginia Regional Commission, Fairfax County and the Town of Herndon have enacted jurisdiction-wide Chesapeake Bay Resource Management Area (RMA) designations. This designation requires that all development result in a no-net-increase standard for phosphorus loadings, based on the jurisdiction's average imperviousness. In addition, since a Resource Management Area is one of two classifications of a Chesapeake Bay Preservation Area, the threshold for application of the Erosion and Sediment Control Plan is 2,500 square feet of land disturbance, rather than 10,000 square feet in areas not so designated. See item 5, above.

As the Chesapeake Bay Local Assistance Department indicated in reviewing the Draft EIS (its comments dated July 31, 2002, with our reply to the Draft EIS, dated August 27, 2002 (DEQ-02-124F, pages 7-8), road and railway projects are conditionally exempt from the requirements of the Chesapeake Bay Preservation Area Designation and Management Regulations (9 VAC 10-20-10 et seq.) provided such projects are constructed, operated, and maintained in accordance with the Virginia Erosion and Sediment Control Law and the Virginia Stormwater Management Act (or an equivalent local program). This conditional exemption also requires that road alignments and design prevent or otherwise minimize (i) encroachment in Resource Protection Areas, as defined in the Regulations, and (ii) adverse effects on water quality. Non-linear features of the project, such as parking lots and stations, are not exempt and must be consistent with the General Performance Criteria and the Development Criteria for Resource Protection Areas. (The General Performance Criteria and the Development Criteria are found in the Regulations, respectively, at 9 VAC 10-20-120 and 9 VAC 10-20-130.) During planning and design phases, site-specific surveys should be conducted to verify the presence or absence, and boundaries, of any Resource Protection Areas.

8. Recreation Facilities and Resources. In the judgment of the Department of Conservation and Recreation, the SDEIS does a thorough job of addressing the impacts of crossings of the Washington and Old Dominion (W&OD) Trail. It should be noted that a planned future greenway/trail in the area is not addressed in the SDEIS. That trail, the Fairfax Cross-Country Trail, is to connect Great Falls National Park with Fort

Belvoir. The transit corridor will cross this trail corridor; accordingly, the proponents should consider, and provide accommodation for, this trail in final plans. See "Regulatory and Coordination Needs," item 6, below.

9. Pollution Prevention. As we stated in our reply to the Draft EIS, dated August 27, 2002 (DEQ-02-124F, page 9, item 11), DEQ advocates that principles of pollution prevention be used in all construction projects as well as in facility operations. Effective siting, planning, and on-site Best Management Practices (BMPs) will help to ensure that environmental impacts are minimized. However, pollution prevention techniques also include decisions related to construction materials, design, and operational procedures that will facilitate the reduction of wastes at the source. We have several pollution prevention recommendations that may be helpful in constructing or operating this project:

- Consider development of an Environmental Management System (EMS). An effective EMS will ensure that the proposed facility is committed to minimizing its environmental impacts, setting environmental goals, and achieving improvements in its environmental performance. DEQ offers EMS development assistance and recognizes facilities with effective Environmental Management Systems through its Virginia Environmental Excellence Program.
- Consider designs, techniques, and technologies that will facilitate the re-circulation and re-use of waters used for cooling and steam generation. These techniques can save money by minimizing intake and treatment needs.
- Consider environmental attributes when purchasing materials. For example, the extent of recycled material content, toxicity level, and amount of packaging should be considered and can be specified in purchasing contracts.
- Consider contractors' commitments to the environment (such as an EMS) when choosing contractors. Specifications regarding raw materials and construction practices can be included in contract documents and requests for proposals.
- Choose sustainable materials and practices for infrastructure and building construction and design. These could include asphalt and concrete containing recycled materials, and integrated pest management in landscaping, among other things.
- Integrate pollution prevention techniques into facility maintenance and operation, to include the following: inventory control (record-keeping and centralized storage for hazardous materials), product substitution (use of non-toxic cleaners), and source reduction (fixing leaks, energy-efficient HVAC and equipment). Maintenance facilities should be designed with sufficient and suitable space to allow for effective inventory control and preventive maintenance.

DEQ's Office of Pollution Prevention provides free information and technical assistance relating to pollution prevention techniques and EMS. If interested, the project proponents may contact that Office (Tom Griffin, telephone (804) 698-4545).

10. Local and Regional Comments.

(a) Northern Virginia Regional Commission. See items 5 and 7, above.

(b) Loudoun County. Loudoun County has corresponded directly as well as with this Office regarding the SDEIS. The issues not reflected herein (see items 3 and 6, above, and "Regulatory and Coordination Needs," items 5 and 6, below) pertain to additional planning considerations and/or to corrections in the document; see the attached comments from the County (December 15, 2003 letter).

(c) Towns of Leesburg, Herndon, and Vienna. Leesburg indicates no comment.

Regulatory and Coordination Needs

1. Water Resources Permitting. A Virginia Water Protection Permit will be required for this project pursuant to 9 VAC 25-210-10 et seq. In addition, because it is likely to disturb one acre or more of land area, the project will require a Virginia Pollutant Discharge Elimination System (VPDES) Stormwater General Permit for Construction Activities. Depending on the timing of various phases of the project, it is likely that multiple permits will be required. For questions relating to either of these permit programs, the project proponents should contact DEQ's Water Division (Ellen Gilinsky, telephone (804) 698-4375) or its Northern Virginia Regional Office (John Bowden, telephone (703) 583-3880).

2. Subaqueous Lands. The Marine Resources Commission has permit jurisdiction over any encroachments in, on, or over any state-owned rivers, streams, or creeks. If any portion of the project involves any encroachments channelward of ordinary high water along natural rivers and streams, a permit may be required from the Commission.

This permit, along with the Virginia Water Protection Permit, is included in the Joint Federal-State Permit Application (JPA) process by which permit applicants may apply for Corps of Engineers, DEQ, and Marine Resources Commission water resources permits with one application document. JPA forms and instructions are available from the Marine Resources Commission, and the JPA should be submitted to the Commission to initiate permit processing. Questions on Marine Resources Commission permits, or on the JPA process, may be addressed to the Commission (Tony Watkinson, telephone (757) 247-2200).

3. Erosion and Sediment Control; Stormwater Management. The Department of Conservation and Recreation encourages the proponents to contact DCR's Potomac Watershed Office in Warrenton (telephone (540) 347-6420) to obtain plan development or implementation assistance so as to ensure project compliance during and after construction. In addition, the Northern Virginia Regional Commission offers a *Guidebook for Maintaining BMPs in Northern Virginia* from the Commission's website (www.novaregion.org) or in paper, without charge (James Van Zee, telephone (703) 642-0700).

4. Solid and Hazardous Waste Management. DEQ's Waste Division reiterates its guidance, given in response to the Draft EIS, concerning contaminated soils, lead-based paints, and asbestos removal (see our reply to the Draft EIS, dated August 27, 2002 (DEQ-02-124F), page 10, item 1). That guidance follows.

Soil suspected of contamination, and wastes that are generated, must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations, including but not limited to the Virginia Waste Management Act (*Virginia Code* sections 10.1-1400 et seq.), the Virginia Hazardous Waste Management Regulations (9 VAC 20-60 et seq.), and the Virginia Solid Waste Management Regulations (9 VAC 20-80 et seq.). (See the attached DEQ memo, Modena to Ellis, dated December 1, 2003 for additional citations.)

If the structures to be demolished as part of this project have not yet been checked for the presence of asbestos-containing materials or lead-based paint, the following guidance pertains in the event either of these substances is found.

(a) Asbestos Abatement. If asbestos-containing materials (ACM) are found, following their classification as friable or non-friable, all waste ACM shall be disposed of in accordance with the Virginia Solid Waste Management Regulations (9 VAC 20-80-640), and transported in accordance with the Virginia regulations governing Transportation of Hazardous Materials (9 VAC 20-110-10 et seq.). The project manager should contact the DEQ Waste Management Program (telephone (804) 698-4021) and the Department of Labor and Industry, Dr. Clarence Wheeling, telephone (804) 786-0574 for additional information.

(b) Lead-Based Paint. The project must comply with the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) regulations, and with the Virginia Lead-Based Paint Activities Rules and Regulations. For additional information regarding these requirements, the project manager should contact the Department of Professional and Occupational Regulation (Thomas Perry, telephone (804) 367-8595).

5. Historic Resources Coordination. To ensure proper coordination pursuant to Section 106 of the National Historic Preservation Act, the proponents should maintain contact with the Department of Historic Resources (Marc Holma, telephone (804) 367-2323, extension 112).

As mentioned above, Loudoun County (Marie Genovese, Planning Department, telephone (703) 777-0246) should be regarded as a consulting party for purposes of mitigation of impacts on cultural resources. The County requests that a copy of the Programmatic Agreement (see "Environmental Impacts and Mitigation," item 6, above) be sent to its Planning Department (Attn: Marie Genovese, 1 Harrison Street, S.E., 3rd Floor, P.O. Box 7000, Leesburg, 20177).

6. Loudoun County. Planning and environmental questions relative to Loudoun County (see "Environmental Impacts and Mitigation," items 3, 6, and 9(b), above) may be addressed to the Loudoun County Planning Department (Marie Genovese, telephone (703) 777-0246).

7. Federal Consistency under the Coastal Zone Management Act. Pursuant to the Coastal Zone Management Act of 1972, as amended, the applicant agency for federal licensing or permitting is required to certify the consistency of its activities affecting Virginia's coastal resources or coastal uses with the Virginia Coastal Resources Management Program (VCP) (see section 307(c)(1) of the Act and the Federal Consistency Regulations at 15 CFR Part 930, sub-part D, section 930.57). This involves an analysis of the activities in light of the Enforceable Policies of the VCP (first enclosure), and submission of a consistency certification reflecting that analysis and committing the applicant agency to comply with the Enforceable Policies. DEQ also recommends careful consideration of the Advisory Policies of the VCP (second enclosure). The federal consistency certification may be provided as part of the documentation concluding the NEPA process (in this case the Final EIS), or independently, depending on the proponent agencies' preference. Section 930.58 gives content requirements for the consistency certification. If you need clarification of these comments, please contact Charles Ellis of this Office at (804) 698-4488.

Thank you for the opportunity to review the SDEIS for this project.

Sincerely,

Ellie L. Irons
Program Manager
Office of Environmental Impact Review

Enclosures

cc: Keith R. Tignor, VDACS
Derral Jones, DCR
Thomas D. Modena, DEQ-Waste
Kotur S. Narasimhan, DEQ-Air
Ellen Gilinsky, DEQ-Water
John D. Bowden, DEQ-NVRO
Justin D. Worrell, MRC
Marc E. Holma, DHR
Catherine M. Harold, CBLAD
R. N. Harrington, VDA
James Van Zee, NVRC
Kirby M. Bowers, Loudoun County
Fred Selden, Fairfax County
Calvin Grow, Town of Leesburg
Mark Duceman, Town of Herndon
Ron Carlee, Arlington County
Daniel E. McKeever, City of Falls Church
John H. Schoeberlein, Town of Vienna
John M. Dittmaier, P.E., WMATA
David V. Grimes, VDOT
J. Michael Foreman, DOF
Alan D. Weber, VDH

COMMONWEALTH of VIRGINIA

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W. Tayloe Murphy, Jr.
Secretary of Natural Resources

Robert G. Burnley
Director

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Attachment 1

Enforceable Regulatory Programs comprising Virginia's Coastal Resources Management Program (VCP)

a. Fisheries Management - The program stresses the conservation and enhancement of finfish and shellfish resources and the promotion of commercial and recreational fisheries to maximize food production and recreational opportunities. This program is administered by the Marine Resources Commission (VMRC); Virginia Code §28.2-200 to §28.2-713 and the Department of Game and Inland Fisheries (DGIF); Virginia Code §29.1-100 to §29.1-570.

The State Tributyltin (TBT) Regulatory Program has been added to the Fisheries Management program. The General Assembly amended the Virginia Pesticide Use and Application Act as it related to the possession, sale, or use of marine antifoulant paints containing TBT. The use of TBT in boat paint constitutes a serious threat to important marine animal species. The TBT program monitors boating activities and boat painting activities to ensure compliance with TBT regulations promulgated pursuant to the amendment. The VMRC, DGIF, and Virginia Department of Agriculture Consumer Services (VDACS) share enforcement responsibilities; Virginia Code §3.1-249.59 to §3.1-249.62.

b. Subaqueous Lands Management - The management program for subaqueous lands establishes conditions for granting or denying permits to use state-owned bottomlands based on considerations of potential effects on marine and fisheries resources, tidal wetlands, adjacent or nearby properties, anticipated public and private benefits, and water quality standards established by the Department of Environmental Quality (DEQ). The program is administered by the Marine Resources Commission; Virginia Code §28.2-1200 to §28.2-1213.

c. Wetlands Management - The purpose of the wetlands management program is to preserve wetlands, prevent their despoliation, and accommodate economic development in a manner consistent with wetlands preservation.

(1) The tidal wetlands program is administered by the Marine Resources Commission; Virginia Code §28.2-1301 through §28.2-1320.

(2) The Virginia Water Protection Permit program administered by DEQ includes protection of wetlands --both tidal and non-tidal; Virginia Code §62.1-44.15:5 and Water Quality Certification pursuant to Section 401 of the Clean Water Act.

d. Dunes Management - Dune protection is carried out pursuant to The Coastal Primary Sand Dune Protection Act and is intended to prevent destruction or alteration of primary dunes. This program is administered by the Marine Resources Commission; Virginia Code §28.2-1400 through §28.2-1420.

e. Non-point Source Pollution Control – (1) Virginia's Erosion and Sediment Control Law requires soil-disturbing projects to be designed to reduce soil erosion and to decrease inputs of chemical nutrients and sediments to the Chesapeake Bay, its tributaries, and other rivers and waters of the Commonwealth. This program is administered by the Department of Conservation and Recreation; Virginia Code §10.1-560 et.seq.).

(2) Coastal Lands Management is a state-local cooperative program administered by the Chesapeake Bay Local Assistance Department and 84 localities in Tidewater (see i) Virginia; Virginia Code §10.1-2100 –10.1-2114 and 9 VAC10-20 et seq.

f. Point Source Pollution Control - The point source program is administered by the State Water Control Board (DEQ) pursuant to Virginia Code §62.1-44.15. Point source pollution control is accomplished through the implementation of:

(1) the National Pollutant Discharge Elimination System (NPDES) permit program established pursuant to Section 402 of the federal Clean Water Act and administered in Virginia as the Virginia Pollutant Discharge Elimination System (VPDES) permit program.

(2) The Virginia Water Protection Permit (VWPP) program administered by DEQ; Virginia Code §62.1-44.15:5 and Water Quality Certification pursuant to Section 401 of the Clean Water Act.

g. Shoreline Sanitation - The purpose of this program is to regulate the installation of septic tanks, set standards concerning soil types suitable for septic tanks, and specify minimum distances that tanks must be placed away from streams, rivers, and other waters of the Commonwealth. This program is administered by the Department of Health (Virginia Code §32.1-164 through §32.1-165).

h. Air Pollution Control - The program implements the federal Clean Air Act to provide a legally enforceable State Implementation Plan for the attainment and maintenance of the National Ambient Air Quality Standards. This program is administered by the State Air Pollution Control Board (Virginia Code §10-1.1300 through §10.1-1320).

(i) Coastal Lands Management is a state-local cooperative program administered by the Chesapeake Bay Local Assistance Department and 84 localities in Tidewater, Virginia established pursuant to the Chesapeake Bay Preservation Act; Virginia Code §10.1-2100 –10.1-2114 and Chesapeake Bay Preservation Area Designation and Management Regulations; Virginia Administrative Code 9 VAC10-20 et seq.

Attachment 2

Advisory Policies for Geographic Areas of Particular Concern

a. Coastal Natural Resource Areas - These areas are vital to estuarine and marine ecosystems and/or are of great importance to areas immediately inland of the shoreline. Such areas receive special attention from the Commonwealth because of their conservation, recreational, ecological, and aesthetic values. These areas are worthy of special consideration in any planning or resources management process and include the following resources:

a) Wetlands
b) Aquatic Spawning, Nursery, and Feeding Grounds
c) Coastal Primary Sand Dunes
d) Barrier Islands
e) Significant Wildlife Habitat Areas
f) Public Recreation Areas
g) Sand and Gravel Resources
h) Underwater Historic Sites.

b. Coastal Natural Hazard Areas - This policy covers areas vulnerable to continuing and severe erosion and areas susceptible to potential damage from wind, tidal, and storm related events including flooding. New buildings and other structures should be designed and sited to minimize the potential for property damage due to storms or shoreline erosion. The areas of concern are as follows:

i) Highly Erodible Areas
ii) Coastal High Hazard Areas, including flood plains.

c. Waterfront Development Areas - These areas are vital to the Commonwealth because of the limited number of areas suitable for waterfront activities. The areas of concern are as follows:

i) Commercial Ports
ii) Commercial Fishing Piers
iii) Community Waterfronts

Although the management of such areas is the responsibility of local government and some regional authorities, designation of these areas as Waterfront Development Areas of Particular Concern (APC) under the VCRMP is encouraged. Designation will allow the use of federal CZMA funds to be used to assist planning for such areas and the implementation of such plans. The VCRMP recognizes two broad classes of priority uses for waterfront development APC:

i) water access dependent activities;
ii) activities significantly enhanced by the waterfront location and complementary to other existing and/or planned activities in a given waterfront area.

Attachment 2 con't

Advisory Policies for Shorefront Access Planning and Protection

a. Virginia Public Beaches - Approximately 25 miles of public beaches are located in the cities, counties, and towns of Virginia exclusive of public beaches on state and federal land. These public shoreline areas will be maintained to allow public access to recreational resources.

b. Virginia Outdoors Plan - Planning for coastal access is provided by the Department of Conservation and Recreation in cooperation with other state and local government agencies. The Virginia Outdoors Plan (VOP), which is published by the Department, identifies recreational facilities in the Commonwealth that provide recreational access. The VOP also serves to identify future needs of the Commonwealth in relation to the provision of recreational opportunities and shoreline access. Prior to initiating any project, consideration should be given to the proximity of the project site to recreational resources identified in the VOP.

c. Parks, Natural Areas, and Wildlife Management Areas - Parks, Wildlife Management Areas, and Natural Areas are provided for the recreational pleasure of the citizens of the Commonwealth and the nation by local, state, and federal agencies. The recreational values of these areas should be protected and maintained.

d. Waterfront Recreational Land Acquisition - It is the policy of the Commonwealth to protect areas, properties, lands, or any estate or interest therein, of scenic beauty, recreational utility, historical interest, or unusual features which may be acquired, preserved, and maintained for the citizens of the Commonwealth.

e. Waterfront Recreational Facilities - This policy applies to the provision of boat ramps, public landings, and bridges which provide water access to the citizens of the Commonwealth. These facilities shall be designed, constructed, and maintained to provide points of water access when and where practicable.

f. Waterfront Historic Properties - The Commonwealth has a long history of settlement and development, and much of that history has involved both shorelines and near-shore areas. The protection and preservation of historic shorefront properties is primarily the responsibility of the Department of Historic Resources. Buildings, structures, and sites of historical, architectural, and/or archaeological interest are significant resources for the citizens of the Commonwealth. It is the policy of the Commonwealth and the VCRMP to enhance the protection of buildings, structures, and sites of historical, architectural, and archaeological significance from damage or destruction when practicable.

If you cannot meet the deadline, please notify CHARLIE ELLIS at 804/698-4488 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

REVIEW INSTRUCTIONS:

A. Please review the document carefully. If the proposal has been reviewed earlier (i.e. if the document is a federal Final EIS or a state supplement), please consider whether your earlier comments have been adequately addressed.

B. Prepare your agency's comments in a form which would be acceptable for responding directly to a project proponent agency.

C. Use your agency stationery or the space below for your comments. **IF YOU USE THE SPACE BELOW, THE FORM MUST BE SIGNED AND DATED.**

Please return your comments to:

MR. CHARLES H. ELLIS III
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL IMPACT REVIEW
629 EAST MAIN STREET, SIXTH FLOOR
RICHMOND, VA 23219
FAX #804/698-4319

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CHARLES H. ELLIS III
ENVIRONMENTAL PROGRAM PLANNER

COMMENTS

Statements in the project document concerning endangered species were reviewed and compared to available information. No additional comments are necessary in reference to endangered plant and insect species regarding this project.

(signed) (Keith R. Tignor) (date) December 8, 2003

(title) Endangered Species Coordinator

(agency) VDACS, Office of Plant and Pest Service

PROJECT # 03-210F

8/98

Tayloe Murphy, Jr.
retary of Natural
Resources



Joseph H. Maroon
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

203 Governor Street
Richmond, Virginia 23219-2010
TDD (804) 786-2121

MEMORANDUM

Date: 25 November 2003

To: Charles H. Ellis, III, Virginia Department of Environmental Quality

Derral Jones

From: Derral Jones, Planning Bureau Manager

Subject: DEQ#03-210F: Dulles Corridor Rapid Transit Project, Alternative and Construction Phasing

The Department of Conservation and Recreation (DCR) functions to preserve and protect the environment of the Commonwealth of Virginia and advocate the wise use of its scenic, cultural, recreation and natural heritage resources. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, state unique or exemplary natural communities, significant geologic formations and similar features of scientific interest.

DCR has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted maps. According to the information currently in our files, natural heritage resources have been documented in the project area. However, due to the scope of the activity and the distance to the resources, we do not anticipate that this project will adversely impact these natural heritage resources.

In addition, no State Natural Areas under DCR's jurisdiction are in the project vicinity

Under a Memorandum of Agreement between the Virginia Department of Agriculture and Consumer Services (VDACS) and the Virginia Department of Conservation and Recreation, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plants and insects. The current activity will not affect any documented state-listed plants or insects.

Any absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks other natural heritage resources. New and updated information is continually added to Biotics. Please contact DCR for an update on this natural heritage information if a significant amount of time passes before it is utilized.

Please note that federal agencies and their authorized agents conducting regulated land disturbing activities on private and public lands in the state must comply with the Virginia Erosion and Sediment Control Law and Regulations (VESCL&R), Virginia Stormwater Management Law and Regulations (VSWML&R), and other applicable federal non-point source pollution mandates (e.g., Clean Water Act-Section 313, Federal Consistency under the Coastal Zone Management Act). Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, or other structures, soil/dredge spoil areas, or related land conversion activities that disturb 2,500 square feet or more would be regulated by VESCL&R and those that disturb one acre or greater would be covered by VSWML&R. Accordingly, federal agencies should prepare and implement erosion and sediment control (ESC) and stormwater management (SWM) plans to ensure compliance with state law. The sponsoring federal agency is ultimately responsible for achieving project compliance through oversight of on site contractors, regular field inspection, prompt action against non-compliant sites, and/or other mechanisms consistent with agency policy. We highly encourage the sponsoring agency to contact DCR's Potomac Watershed Office (540-347-6420) to obtain plan development or implementation assistance to ensure project conformance during and after active construction. *[Reference: VESCL §10.1-567; VSWML §10.1-603.15]*

Regarding recreation facilities, this study does a thorough job of addressing the crossing impacts on the W & OD trail. We encourage continued consultation with the Northern Virginia Regional Park Authority regarding the W&OD trail. Please note that there is a future greenway/trail in the area that is not addressed in the document. As presented, the corridor will cross the proposed Fairfax Cross Country Trail which will connect the Great Falls National Park with Ft. Belvoir. Consideration and accommodation for this trail should be addressed in the final plans. We recommend coordination with the local trail and greenways representatives and the Fairfax County Park Authority.

Thank you for the opportunity to offer comments on this project.

RECEIVED

DEC 0 1 2003

DEQ-Office of Environmental Impact Review

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Secretary of Natural Resources

Robert G. Burnley
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MEMORANDUM

TO: Charles Ellis

FROM: Thomas Modena TDM

DATE: December 1, 2003

COPIES: Kevin Greene

SUBJECT: Revised Supplemental Draft Environmental Impact Statement
Dulles Corridor Rapid Transit Project

The Waste Division has reviewed the Revised Draft Environmental Impact Statement for the Federal Transit Administration's Dulles Corridor Rapid Transit Project. We have the following comments concerning the waste issues associated with this project.

Solid and hazardous waste issues and sites were addressed in the report. The central office of the Waste Division did a cursory review of its data files and did not find any additional sites that might impact this project.

Any soil that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations. Some of the applicable state laws and regulations are: Virginia Waste Management Act, Code of Virginia Section 10.1-1400 *et seq.*; Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC 20-60); Virginia Solid Waste Management Regulations (VSWMR) (9VAC 20-80); Virginia Regulations for the Transportation of Hazardous Materials (9VAC 20-110). Some of the applicable Federal laws and regulations are: the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Section 6901 *et seq.*, and the applicable regulations contained in Title 40 of the Code of Federal Regulations; and the U.S. Department of Transportation Rules for Transportation of Hazardous Materials, 49 CFR Parts 107, 171.1-172.558.

The report states that structures that will be demolished would be checked for the presence of asbestos-containing materials (ACM) or lead-based paint (LBP). If LBP or ACM

are found, in addition to the Federal waste-related regulations, State regulations 9VAC 20-80-640 for ACM and 9VAC 20-60-261 for LBP must be followed.

Finally, pollution prevention was not addressed in the report. VDEQ encourages all construction projects and facilities to implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated.

If you have any questions or need further information, please let me know.

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DEQ-Office of Environmental Impact Review

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR PROGRAM COORDINATION

ENVIRONMENTAL REVIEW COMMENTS APPLICABLE TO AIR QUALITY

O: Charles H. Ellis III

DEQ - OEIA PROJECT NUMBER: 03 – 210F

PROJECT TYPE: ☐ STATE EA / EIR / FONSI **X FEDERAL EA** / EIS ☐ SCC

☐ CONSISTENCY DETERMINATION/CERTIFICATION

PROJECT TITLE: DULLES CORRIDOR RAPID TRANSIT PROJECT

PROJECT SPONSOR: USDOT / FEDERAL TRANSIT ADMINISTATION / VDRPT / WMATA / FAA

PROJECT LOCATION:
X OZONE NON ATTAINMENT AREA
☐ OZONE MAINTENANCE AREA
X STATE VOLATILE ORGANIC COMPOUNDS & NITROGEN OXIDES EMISSION CONTROL AREA

REGULATORY REQUIREMENTSMAY BE APPLICABLE TO: **X CONSTRUCTION**
☐ OPERATION

STATE AIR POLLUTION CONTROL BOARD REGULATIONS THAT MAY APPLY:

1. ☐ 9 VAC 5-40-5200 C & 9 VAC 5-40-5220 E – STAGE I
2. ☐ 9 VAC 5-40-5200 C & 9 VAC 5-40-5220 F – STAGE II Vapor Recovery
3. ☐ 9 VAC 5-40-5490 et seq. – Asphalt Paving operations
   X 9 VAC 5-40-5600 et seq. – Open Burning
   X 9 VAC 5-50-60 et seq. Fugitive Dust Emissions
6. ☐ 9 VAC 5-50-130 et seq. - Odorous Emissions; Applicable to_____
7. ☐ 9 VAC 5-50-160 et seq. – Standards of Performance for Toxic Pollutants
8. ☐ 9 VAC 5-50-400 Subpart_____, Standards of Performance for New Stationary Sources, designates standards of performance for the_____
9. ☐ 9 VAC 5-80-10 et seq. of the regulations – Permits for Stationary Sources
10. ☐ 9 VAC 5-80-1700 et seq. Of the regulations – Major or Modified Sources located in PSD areas. This rule may be applicable to the _____
11. ☐ 9 VAC 5-80-2000 et seq. of the regulations – New and modified sources located in non-attainment areas
12. ☐ 9 VAC 5-80-800 et seq. Of the regulations – Operating Permits and exemptions. This rule may be applicable to _____

COMMENTS SPECIFIC TO THE PROJECT:

Earlier comment on this project to restrict the emissions of volatile organic compounds (VOC) and oxides of nitrogen (NOx) during construction phase is reiterated.

K. S. Narasimhan

(Kotur S. Narasimhan)
Office of Air Data Analysis

DATE: November 10, 2003

Memorandum

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER DIVISION
Larry G. Lawson, P.E., Director

To: Charles H. Ellis III
Environmental Program Planner

From: Ellen Gilinsky, Ph.D., PWS
VWP Permit Program Manager

Date: November 17, 2003

RECEIVED
NOV 17 2003
DEQ-Div. of Environmental Enhancement

Subject: Dulles Corridor Rapid Transit Project
USDOT/Federal Transit Administration/VDRPT/WMATA/FAA
Project Number 03-210F

On behalf of the DEQ-Water Division, we have reviewed the Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation regarding the proposed roadway improvement project in Fairfax and Loudoun Counties, Virginia. Site activities will include the extension of mass transit service through the Dulles corridor. Specifically, the Locally Preferred Alternative (LPA) includes extension of existing regional Metrorail system in Fairfax County and into eastern Loudoun County, including Tysons Corner and Washington Dulles International Airport.

The report states that the new rail lines will be primarily within the medians of the existing roads. We commend this surface water avoidance and impact minimization strategy. The full LPA is projected to impact up to 4.9 acres of wetlands and 245 linear feet of streams. Phase I has significantly less impacts to surface waters. A VWP Permit may be required. The project proponent should prepare and submit a Joint Permit Application to the VMRC for review and coordination by federal and state agencies. Please coordinate with the DEQ Central Office for final permit determination. Please continue to explore ways to further avoid and minimize impacts to surface waters as you enter the design phase of your project. Examples of avoidance and minimization efforts include completely spanning wetlands and streams to avoid impact and shifting the alignment to avoid or minimize surface water impacts. The selected alternative's unavoidable impacts to wetlands and streams will require full compensatory mitigation as explained in the report, including permanent conversion from one wetland type to another of lesser value. We recommend strict adherence to erosion and stormwater management practices and further encourage the project proponent to monitor construction activities to make certain that erosion and stormwater management practices are adequately preventing sediment and pollutant migration into adjacent surface waters. Provided all applicable permits are obtained, the project should be consistent with the VWP Program.

Ellis,Charles

From: Bowden,John
Sent: Tuesday, December 02, 2003 7:59 AM
To: Ellis,Charles
Subject: EIS #03-210F

NVROs comments regarding the EIS for the Dulles Corridor Rapid Transit Project submitted by USDOT/Federal Transit Administration are as follows:

1.The Dulles Corridor Rapid Transit project as presented proposes to impact 4.9 acres of wetlands and 245 linear feet of stream channel. The proposed impacts will require a permit in accordance with the 9 VAC 25-210-10 et seq. Virginia Water Protection Permit Program Regulation. Compensatory mitigation for all impacts to state waters will require review and approval by DEQ in accordance with 9 VAC 25-210-10 et seq. Virginia Water Protection Permit Program Regulation.

2. The report looks good with regard to water quality impacts. Do not see any mention of permitting for stormwater discharges or discussion of mitigation of stormwater from the rail lines once they are constructed an operating. Do they anticipate using oil/water separators where the cars are stored?

3. The project(s) as described will involve land disturbance / construction activities on large areas of land, primarily within the medians of the Dulles Connector Road, DIAAH, and Dulles Greenway. VPDES permit coverage for stormwater discharges associated with construction activity will be required. Depending on the timing and implementation of the various phases of the plan, it is likely that multiple permits will be needed. Land disturbance activities in excess of one acre require VPDES permit coverage for stormwater discharges. Conformance with state and local sediment and erosion control and stormwater management programs should minimize short term impacts to water quality.

4. The plan to construct the subject project, as described, appears to have adequately addressed potential air pollution impacts. It should be noted that this document references an earlier draft EIS with regard to the substantial details, but the general text provided satisfies the substantial requirements for fugitive dust control (the main issue from an air standpoint).

John D. Bowden
Deputy Regional Director
Department of Environmental Quality
Northern Virginia Regional Office
(703) 583-3880
jdbowden@deq.state.va.us

If you cannot meet the deadline, please notify CHARLIE ELLIS at 804/698-4488 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

REVIEW INSTRUCTIONS:

A. Please review the document carefully. If the proposal has been reviewed earlier (i.e. if the document is a federal Final EIS or a state supplement), please consider whether your earlier comments have been adequately addressed.

B. Prepare your agency's comments in a form which would be acceptable for responding directly to a project proponent agency.

C. Use your agency stationery or the space below for your comments. **IF YOU USE THE SPACE BELOW, THE FORM MUST BE SIGNED AND DATED.**

Please return your comments to:

MR.CHARLES H. ELLIS III
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL IMPACT REVIEW
629 EAST MAIN STREET, SIXTH FLOOR
RICHMOND, VA 23219
FAX #804/698-4319

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NOV 07 2003

DEQ-Office of Environmental Impact Review

Charles H. Ellis III

CHARLES H. ELLIS III
ENVIRONMENTAL PROGRAM PLANNER

COMMENTS

This will acknowledge receipt of your telefax transmittal letter with enclosures requesting Commission review of the above-referenced project.

Please be advised that the Marine Resources Commission pursuant to Section 28.2-1204 of the Code of Virginia has jurisdiction over any encroachments in, on, or over any State-owned rivers, streams, or creeks in the Commonwealth. Accordingly, if any portion of the subject projects involves any encroachments channelward of ordinary high water along natural rivers and streams, a permit may be required from our agency.

(signed) Jack D. Worrell (date) 11-6-03

(title) Environmental Engineer

(agency) Marine Resouces Commission

PROJECT # 03-210F **8/98**

If you cannot meet the deadline, please notify CHARLIE ELLIS at 804/698-4488 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

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C. Use your agency stationery or the space below for your comments. **IF YOU USE THE SPACE BELOW, THE FORM MUST BE SIGNED AND DATED.**

Please return your comments to:

MR. CHARLES H. ELLIS III
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL IMPACT REVIEW
629 EAST MAIN STREET, SIXTH FLOOR
RICHMOND, VA 23219
FAX #804/698-4319

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DEQ-Office of Environmental Impact Review

Charles H. Ellis III

CHARLES H. ELLIS III
ENVIRONMENTAL PROGRAM PLANNER

COMMENTS

Enclosed please find a copy of a recent review letter sent to Mr. Rohrer (DRPT) regarding the Dulles Corridor Rapid Transit Project. We request that DEQ require the applicant to continue consultation with DHR pursuant to Section 106 of the NHPA.

(signed) _____ (date) 24 Nov 03

(title) ARCHITECTURAL HISTORIAN

(agency) DHR

PROJECT # 03-210F 8/98

DHR # 2000-1061

COMMONWEALTH of VIRGINIA

Department of Historic Resources
2801 Kensington Avenue, Richmond, Virginia 23221

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

Kathleen S. Kilpatrick
Director

Tel: (804) 367-2323
Fax: (804) 367-2391
TDD: (804) 367-2386
www.dhr.state.va.us

November 19, 2003

Mr. Karl A. Rohrer
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard
Suite 300
Arlington, Virginia 22209

Re: Dulles Corridor Rapid Transit Project
Supplemental Draft Environmental Impact Statement (EIS)
Fairfax and Loudoun Counties
DHR File # 2000-1061

Dear Mr. Rohrer:

We have received your request for our review and comment on the Environmental Impact Statement (EIS) regarding the above referenced project. The document attempts to address the environmental affects that the proposed construction of the 23-mile high-capacity transit line will have to include those on historic properties. Please accept the following comments as our response to the current EIS.

The subject document attempts to address "the potential long-term and construction effects" of the Dulles Corridor Rapid Transit Project for the Local Preferred Alternative (LPA). The EIS evaluates the effects of the project on two archaeological sites (44FX2662 and 44FX2405) and an historic district (Hunter Mill Road Historic District) newly added for consideration since the last draft EIS. Additionally, the current EIS re-considers effects on the Washington Dulles International Airport, a property eligible for listing in the National Register of Historic Resources, and a House located at 22017 Shellhorn Road in Ryan.

The revised EIS asserts that there would be no adverse effect to architectural resources as a result of the LPA. We cannot concur with this statement. The project corridor crosses the boundary of the Hunter Mill Road Historic District. Despite the claim that "because the Hunter Mill Road Historic District is located within an existing transportation corridor, impacts to the district associated with this project would be minimal," you have not provided the Department of Historic Resources (DHR) sufficient information in order for us to agree with this statement. Similarly, the report cites "further analysis" confirming that the proposed LPA would not cause an adverse visual effect on the "peekaboo" sequence along the approach to Dulles Airport. We have not had the opportunity to review and comment on the aforementioned analysis. Therefore, we cannot agree that your assertion is correct. In fact, the issue of an appropriate National Register boundary for the airport is still an outstanding issue that must be settled before the discussion of effect can happen.

istrative Svcs.
ouse Avenue
g, VA 23803
l: (804) 863-1685
x: (804) 862-6196

Petersburg Office
19-B Bollingbrook Street
Petersburg, VA 23803
Tel: (804) 863-1620
Fax: (804) 863-1627

Portsmouth Office
612 Court Street, 3rd Floor
Portsmouth, VA 23704
Tel: (757) 396-6709
Fax: (757) 396-6712

Roanoke Office
1030 Penmar Avenue, SE
Roanoke, VA 24013
Tel: (540) 857-7585
Fax: (540) 857-7588

Winchester Office
107 N. Kent Street, Suite 203
Winchester, VA 22601
Tel: (540) 722-3427
Fax: (540) 722-7535

If you cannot meet the deadline, please notify CHARLIE ELLIS at 804/698-4488 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

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C. Use your agency stationery or the space below for your comments. **IF YOU USE THE SPACE BELOW, THE FORM MUST BE SIGNED AND DATED.**

Please return your comments to:

MR.CHARLES H. ELLIS III
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL IMPACT REVIEW
629 EAST MAIN STREET, SIXTH FLOOR
RICHMOND, VA 23219
FAX #804/698-4319

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DEQ-Office of Environmental Impact Review

Charles H. Ellis III

CHARLES H. ELLIS III
ENVIRONMENTAL PROGRAM PLANNER

COMMENTS

We have no additional comments beyond those we made on 7/31/02.

(signed) _____ (date) 12/2/03

(title) Chief, Environmental Engineering Div.

(agency) CBLAD

PROJECT # 03-210F

8/98

7535 Little River Turnpike, Suite 100
Annandale, Virginia 22003-2937
www.novaregion.org

Voice: 703-642-0700
Fax: 703-642-5077
TDD: 703-642-8061

Northern Virginia Regional Commission

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DEQ-Office of Environmental Impact Review

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Vice-Chairman
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Hon. Kristen C. Umstattd

Town of Purcellville
Hon. William T. Druhan, Jr.

Town of Vienna
Hon. Albert J. Boudreau

(as of February 26, 2003)

November 4, 2003

Mr. Karl Rohrer, Project Manager
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard, Suite 300
Arlington, VA 22209

Re: Dulles Corridor Rapid Transit Project Draft EIS

Dear Mr. Rohrer:

The Northern Virginia Regional Commission staff has reviewed the document described above and has the following comments.

Please be advised that Fairfax County and the Town of Herndon have enacted jurisdiction-wide Chesapeake Bay Resource Management Area (RMA) designation. This RMA designation requires that all development result in a no-net-increase standard for phosphorus loadings, based on the jurisdiction's average imperviousness.

Special attention should be given to post-construction stormwater quality management. The developing agency must adhere to the post-development water quality requirements set forth by the Virginia Stormwater Management Regulations (VR 215-02-00 Part IV and §2.3). Meeting the Virginia Stormwater Management Regulations should comply with the requirement that state agencies meet the local ordinances pursuant to the Virginia Chesapeake Bay Act.

Please refer to the *Northern Virginia BMP Handbook* for calculation procedures. A copy of the handbook is available on NVRC's website, www.novaregion.org.

We would also suggest that, where possible, opportunities for retrofit of existing stormwater quantity facilities to stormwater quality facilities through new construction activities should be explored. NVRC's *Guidebook for Maintaining BMPs in Northern Virginia* is available, without charge, should you need it, and can also be downloaded from our website, or call me if you would like to receive a copy to use as a reference.

A copy of this letter should be included with your submission to indicate that the review by this agency has been completed.

Your cooperation in the intergovernmental review process is appreciated.

Sincerely yours,

James Van Zee
Director, Regional Planning Services

If you cannot meet the deadline, please notify CHARLIE ELLIS at 804/698-4488 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

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C. Use your agency stationery or the space below for your comments. **IF YOU USE THE SPACE BELOW, THE FORM MUST BE SIGNED AND DATED.**

Please return your comments to:

MR.CHARLES H. ELLIS III
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL IMPACT REVIEW
629 EAST MAIN STREET, SIXTH FLOOR
RICHMOND, VA 23219
FAX #804/698-4319

Charles H. Ellis III

CHARLES H. ELLIS III
ENVIRONMENTAL PROGRAM PLANNER

COMMENTS

NO Comments

(signed) Calvin H Grow (date) 11/26/03

(title) Transportation Engr.

(agency) Town of Leesburg

PROJECT # 03-210F **8/98**

Loudoun County, Virginia
County Administration
1 Harrison Street, S.E., 5th Floor, P.O. Box 7000, Leesburg, VA 20177-7000
Telephone (703) 777-0200 • Fax (703) 777-0325

December 9, 2003

Mr. Charles H. Ellis III
Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, Sixth Floor
Richmond, VA 23219

Mr. Karl Rohrer, Project Manager
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard, Suite 300
Arlington, VA 22209

Re: Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation, Dulles Corridor Rapid Transit Project (Hearing No. 160, Docket R03-6)

Dear Mr. Ellis,

Thank you for the opportunity to comment on the above referenced project. The Revised Countywide Transportation Plan (CTP), adopted on July 23, 2001, identifies the Dulles Corridor Rapid Transit Project as one of the County's and Region's priority transportation projects (CTP, text, p. 2-3). Additionally, the County's Revised General Plan policies encourage transit-supportive development at planned transit nodes (Revised General Plan, pp. 6-22 to 6-27).

The County' s Bicycle and Pedestrian Mobility Master Plan (Bike/Ped Plan) was adopted on October 20, 2003. Please note that this document outlines policies establishing the need for high quality bicycle and pedestrian access to the future transit stations (Bike/Ped Plan, Transit and Demand Management Policies, p. 35). The County wishes to ensure that well designed bicycle and pedestrian access will be provided through the transit stations providing access to development on both sides of the Greenway. The County wishes to be a consulting party as the design program is further developed.

I have outlined by section and topic my comments below:

Section 1.3 Planning Context: Paragraph 2 notes the Countywide Transportation Plan this should be changed to the Revised Countywide Transportation Plan (2001).

Section 1.3 Planning Context: It should be noted that the Revised General Plan allows for up to 50 dwelling units per acre when rail transit and facilities are planned, scheduled, designed and fully funded to serve the area designated as a Transit-Oriented Development (TOD) (Revised General Plan, Policy 12c, p. 6-25). The TOD is located between the Loudoun County Parkway and Route 772 interchanges (Revised General Plan, text, p. 6-22). The transit node proposed for the Route 606 station is planned for a Transit-Related Employment Center (TREC), planned for concentrated employment use or Special Activity destination

(Revised General Plan, text, p. 6-22). Residential development is not permitted within the TREC due to the constraints of the Dulles Airport 65 Ldn, the Dulles North Transit Center, and the importance of preserving the natural environment (Revised General Plan, text, p. 6-22).

Section 1.3 Planning Context: The last sentence on page 1-7 should be edited to read "The *Loudoun County Revised Countywide Transportation Plan* also includes public support for transit services that would use the corridor, such as carpools, vanpools, bus and rail services, and other alternative modes, with specific funding support for bus services".

Section 2.2.4: Comparative Evaluation of Alternatives: County staff questions the evaluation of alternatives using a 2025 forecast horizon year. Results for the full LPA should use a broader forecast horizon year given that the full build LPA would be in operation by 2015. County staff does not feel that a 10 year forecast horizon provides an adequate description.

Section 3.1 Land Use: The total amount of development for Moorefield Station in this section is incorrect. Moorefield Station was approved for 10,750,000 square feet of non-residential development and 6,750 residential units.

Section 3.1.1.2.B. Proposed LPA Phase I: It should be noted that the Revised General Plan also supports the extension of rail facilities to the Dulles Airport (Revised General Plan, text, p. 4-8). Therefore, the proposed LPA Phase 1 is not consistent with the Revised General Plan because it would not provide rapid transit to Dulles International Airport and the Route 606 and Route 772 station areas.

Section 3.2.1.2.B. Proposed LPA Phase I: County staff asks that the first sentence on page 3-20 be clarified. "If the proposed LPA were not constructed in its entirety by 2025, neighborhoods located west of the Wiehle Avenue station area would not receive mobility benefits from access to Metrorail service during the proposed LPA Phase 1." Metrorail service is not planned to extend west of Wiehle Avenue as part of proposed LPA Phase 1.

Section 3.4 Visual and Aesthetic Conditions: This section states that a site plan has been approved for the Moorefield Station development. This statement is incorrect, the rezoning has been approved for Moorefield Station however, no site plans have been approved at this time.

Section 3.5 Cultural Resources: The County should continue to be a consulting party as impact mitigation strategies are discussed. Additionally, the Area of Potential Effect (APE) was defined as 200 feet beyond station footprints to allow for possible variation during construction. The County should be contacted if variations to the proposed alignment will impact additional sites.

Please forward a copy of the Programmatic Agreement from the State Historic Preservation Officer (SHPO) to:

Loudoun County Planning Department
c/o Marie Genovese
1 Harrison St., S.E., 3rd Floor
P.O. Box 7000
Leesburg, VA 20177-7000

Section 3.6.3 Mitigation: The document states that temporary construction impacts at the Moorefield Station recreation center and athletic fields will be mitigated, but does not provide any information as to how impacts will be mitigated.

Section 4.1.1.2A Proposed Full LPA: The total amount of development for Moorefield Station in this section is incorrect. Moorefield Station was approved for 10,750,000 square feet of non-residential development and 6,750 residential units.

Section 4.2 Water Resources: The County's Revised 1993 Zoning Ordinance was adopted on January 6, 2003 implementing many of the policies outlined in the Revised General Plan. The River and Stream Corridor Overlay District (RSCOD) was established with the revisions to the Zoning Ordinance (Section 4-2000). River and Stream Corridor Resources include:

a. "Rivers and streams draining 100 acres or more.
b. 100-year floodplains (including major and minor).
c. Adjacent steep slopes (slope 25 percent or greater, starting within 50 feet of streams and floodplains, extending no farther than 100 feet beyond the originating stream or floodplain).
d. 50-foot Management Buffer surrounding the floodplains and adjacent steep slopes.
e. Wetlands, forests, historic and cultural resources, and archaeological sites that fall within the area of one or more of the above elements" (Revised General Plan, Policy 2, p. 5-6).

Additionally, a 300-foot no-build buffer or the RSCOD, whichever is greater will be applied to scenic rivers, the Potomac River, the Bull Run, and the protected shoreline of drinking water reservoirs (Revised General Plan, Policies 1, 8, & 11, pp. 5-11 & 5-17). Please ensure that all the elements of the RSCOD have been taken into account when determining impacts to water resources.

Section 4.2.3 Mitigation: Coordination with local jurisdictions regarding mitigation for the nonconformity of any project elements within critical areas is listed as an available option. County staff considers this to be a requirement for any element of the project that impacts the RSCOD.

Section 4.2.3 Mitigation: The County supports the federal goal of no net loss to wetlands and will identify optimum receiving sites with a priority given to each geographic Policy Area (Revised General Plan, Policy 23, p. 5-8). Therefore, the County prefers any wetland impacts incurred in Loudoun County from the proposed project be mitigated within the Suburban Policy Area. However, if a wetland mitigation bank is not available within the Suburban Policy Area at the time the impacts are incurred County staff prefers that impacts to wetlands within Loudoun County be mitigated at the Bull Run Wetland Bank as shown on Figure 4.2-2.

Section 9.2.1.2B. Proposed LPA Phase 1: This section states that changes in land use under the proposed LPA and proposed LPA Phase 1 would be most dramatic in Loudoun County, where land use that is currently rural in nature would be converted to mixed-use suburban centers. It should be noted that the proposed alignment for the Dulles Corridor Rapid Transit Project is located in the

Suburban Policy Area as defined by the Revised General Plan and is planned for suburban-scale residential and non-residential development (Revised General Plan, Chapter 6).

County staff anticipates the Board of Supervisors to adopt a Resolution regarding the proposed project on December 15, 2003, at which time it will be forwarded to the Department of Rail and Public Transportation to be added to the public record.

If you have any questions regarding these comments please contact Marie Genovese, Planner in the Department of Planning at (703) 777-0246.

Sincerely,

Kirby M. Bowers
County Administrator

cc: Linda Neri, Deputy County Administrator
Julie Pastor, Planning Director
Sarah Coyle, Community Planning Division Manager
Mark Moszak, Environmental and Historic Programs Administrator
Marie Genovese, Community Planning

Atkinson, Mathew

rom: Kedzierski,Wendy [wmkedzierski@deq.state.va.us]
Sent: Monday, October 28, 2002 1:17 PM
To: dullescorridor@aol.com
Subject: Public Hearing Report

Mr. Corey W. Hill,

Thank you for addressing our comments regarding water quality and water permitting issues including impacts to wetlands and streams. We appreciate your thorough consideration of our comments. Please continue to investigate ways to reduce the project's impact on state waters. Please contact us with any questions and information on the development of your project.

Sincerely,
Wendy Kedzierski
Environmental Specialist
Virginia Department of Environmental Quality
Virginia Water Protection Permit Program
(804)698-4503
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August 27, 2002

Mr. Corey Hill
Northern Virginia Rail Manager
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard, Suite 300
Arlington, Virginia 22209

RE: Draft Environmental Impact Statement and Section 4(f) Evaluation,
Dulles Corridor Rapid Transit Project
DEQ-02-124F

Dear Mr. Hill:

The Commonwealth of Virginia has completed its review of the Draft Environmental Impact Statement (Draft EIS) described above. The Department of Environmental Quality is responsible for coordinating Virginia's review of federal environmental documents and responding to appropriate federal officials on behalf of the Commonwealth. The following agencies took part in this review:

Department of Environmental Quality
Department of Conservation and Recreation
Department of Transportation
Marine Resources Commission
Department of Historic Resources
Department of Mines, Minerals, and Energy
Department of Forestry
Chesapeake Bay Local Assistance Department.

In addition, the Department of Game and Inland Fisheries, Virginia Economic Development Partnership, the Northern Virginia Regional Commission, and Fairfax and Loudoun Counties were invited to comment.

Project Description

According to the Draft EIS, the Federal Transit Administration and the Washington Metropolitan Area Transit Authority, in cooperation with the Federal Aviation Administration, are joining the Department of Rail and Public Transportation in proposing alternative transit improvements in the Dulles Corridor. This corridor runs from the East Falls Church Metrorail station in Fairfax County past Tysons Corner to Dulles Airport and into Loudoun County. (Page S-1).

The "baseline" or "no-build" alternative consists of existing highway and transit infrastructure and services, and any that are committed for implementation by the year 2025 (Draft EIS, page 2-4, section 2.2). The four "build" alternatives are:

- "BRT" (bus rapid transit) Alternative: Buses, operated more like trains (separate stations, off-board ticketing, etc.) would connect the West Falls Church Metrorail station with Route 772 and the Dulles Greenway in Loudoun County, west of the Airport. The Draft EIS presents three alignment options. (Pages 2-14 through 2.19 and Figures 2.3-1a and 2.3-1b, section 2.3).

- Metrorail Alternative: The Metrorail system would be extended from a point between the East and West Falls Church stations to Route 772, by way of a number of track and station alignment options, and ancillary facilities would be included (Draft EIS, pages 2-32 through 2-58, section 2.3.2).

- BRT-Metrorail Alternative: The Metrorail system would be extended from a point between the East and West Falls Church stations to Tysons Corner, after which the bus rapid transit would operate to Route 772. Again, different alignments would be considered (Draft EIS, page 2-58, section 2.3.3.).

- Phased Implementation Alternative: Metrorail would be phased in throughout the corridor (West Falls Church metro station to Route 772) by first extending bus rapid transit, then replacing it with Metro to Tysons Corner and later replacing it to Route 772 (Draft EIS, page 2-14, section 2.3).

Environmental Impacts and Mitigation

The Commonwealth of Virginia has no objection to any of the "build" alternatives. It appears to us that any of the "build" alternatives would be preferable to the no-action alternative, given the widely acknowledged beneficial air quality impacts of improved mass transit, particularly in the Northern Virginia ozone non-attainment area.

1. Natural Heritage and Wildlife Resources. According to the Department of Conservation and Recreation (DCR), "natural heritage resources" are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geological formations. According to DCR files, several rare plants may occur in project locations if suitable habitat is present. These plants are typically associated with prairie vegetation and inhabit semi-open diabase glades in Virginia. Diabase glades are characterized by historically fire-dominated grassland vegetation on relatively nutrient-rich soils underlain by Triassic bedrock. Diabase flatrock, a hard, dark-colored volcanic rock, is found primarily in northern Virginia and located within the geologic formation known as the Triassic Basin. Where the bedrock is exposed, a distinctive community type of drought-tolerant plant occurs. Diabase flatrocks are extremely rare natural communities that are threatened by activities such as quarrying and road construction.

In Northern Virginia, diabase supports occurrences of several globally rare and state rare plant species (see the "Definition of Abbreviations" on pages 2 and 3 of the attached August 1, 2002 comments from DCR). These include:

earleaf foxglove (*Agalinis auriculata*)
white heat aster (*Aster ericoides*)
blue-hearts (*Buchnera americana*)
hairy beardtongue (*Penstemon hirsutus*)
downy phlox (*Phlox pilosa*)
stiff goldenrod (*Oligoneuron rigidum* var. *rigidum*)
marsh hedgenettle (*Stachys pilosa* var. *arenicola*).

The earleaf foxglove is currently tracked as a species of concern by the U.S. Fish and Wildlife Service; however, this designation has no legal status, according to DCR.

Because the project corridor has the potential to support populations of these natural heritage resources, DCR recommends an inventory of suitable habitat in the study area. With the survey results, DCR can more accurately evaluate potential resource impacts and recommend specific protection measures to minimize the impacts. In this regard, the Department of Conservation and Recreation's Division of Natural Heritage employs biologists who are qualified and available to conduct inventories for rare, threatened, and endangered species. We recommend that the project manager (Department of Rail and Public Transportation, the Washington Metropolitan Area Transit Authority, or other project management agency) contact the Division of Natural Heritage (Christopher Ludwig, Natural Heritage Inventory Manager, telephone (804) 371-6206) to discuss arrangements for field survey work.

The Department of Conservation and Recreation has not surveyed any sites within the project area (see Draft EIS, pages 4-77 through 4-81, section 4.5.3), but recommends doing so before September ends if possible. The Draft EIS concludes that there is no suitable habitat for rare diabase plants (page 4-81); this conclusion should be re-evaluated during the appropriate season.

The Department of Agriculture and Consumer Services, which is responsible for protection of state-listed plant and insect species, indicates that it has nothing to add to the discussion of rare, threatened, and endangered species (Draft EIS, pages 4-76 through 4-81, section 4.5).

Under Title 29.1 of the Code of Virginia, the Department of Game and Inland Fisheries (DGIF) is the primary wildlife and freshwater fish management agency in the Commonwealth. DGIF has full law enforcement and regulatory jurisdiction over all wildlife resources, inclusive of state and federally endangered or threatened species, but excluding listed insects. The agency maintains a comprehensive system of databases of wildlife resources that is available through the Agency's site at www.dgif.state.va.us, in the "Wildlife" section from the link to "Wildlife Information Online". DGIF determines likely impacts on fish and wildlife resources and habitats, and recommends appropriate measures to avoid, reduce or compensate for those impacts. For more information on the Wildlife Information Online Service, the project manager may contact Kathy Quindlen at (804) 367-9717.

2. Solid and Hazardous Waste Management. DEQ's Division of Waste Program coordination, Office of Remedial Programs (hereinafter "DEQ's Waste Division") did a cursory review of its data files and did not find any contamination sites that might affect, or be affected, by this project. The Draft EIS addressed hazardous and solid waste issues (pages 4-170 through 4-184, section 4.9).

The Draft EIS indicates that structures to be demolished have not been checked for the presence of asbestos-containing materials or for lead-based paint, but it indicates a commitment on the part of the project manager to follow applicable rules in these regards (page 4-184, section 4.9.5). See "Regulatory and Coordination Needs," item 1, below for more information.

DEQ encourages the project manager to reduce solid waste at the source, re-use materials, and recycle wastes to the maximum extent practicable. The Draft EIS did not address pollution prevention, according to DEQ's Waste Division; see item 11, below.

3. Air Quality. According to DEQ's Division of Air Program Coordination (hereinafter "DEQ's Air Division"), the project is in an ozone non-attainment area, which means that the project managers should take all precautions to limit the emissions of

volatile organic compounds (VOCs) and oxides of nitrogen (NO_x). Detailed modeling studies have established that none of the alternatives under consideration will significantly affect air quality. It appears to us that any of the "build" alternatives would be preferable to the no-action alternative, given the widely acknowledged beneficial air quality impacts of improved mass transit, particularly in the Northern Virginia ozone non-attainment area.

An additional precaution in ozone non-attainment areas, stemming from 9 VAC 5-40-5490 in the Regulations for the Control and Abatement of Air Pollution, is that there are some limitations on the use of "cut-back" asphalt (liquefied asphalt cement, blended with petroleum solvents) that may apply in the construction of the roads or paths associated with the project. The asphalt must be "emulsified" (predominantly cement and water with a small amount of emulsifying agent) except when specified circumstances apply. Moreover, there are time-of-year restrictions on its use during the months of April through October in VOC emission control areas.

During construction activities, fugitive dust must be kept at a minimum by using control methods outlined in 9 VAC 5-50-60 et seq. of the Regulations. These precautions include, but are not limited to, the following:

- Use, where possible, of water or chemicals for dust control;
- Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials;
- Covering of open equipment for conveying materials; and
- Prompt removal of spilled or tracked dirt or other materials from paved streets and removal of dried sediments resulting from soil erosion.

In addition, if project activities include the burning of construction or demolition material, this activity must meet the requirements under 9 VAC 5-40-5600 et seq. of the Regulations for open burning, and a permit may be required. The Regulations provide for, but do not require, the local adoption of a model ordinance concerning open burning; we recommend that the project managers contact Fairfax and Loudoun County officials to determine what local requirements, if any, exist. Some applicable provisions of the model regulation include, but are not limited to:

- All reasonable effort shall be made to minimize the amount of material burned, with the number and size of the debris piles;
- The material to be burned shall consist of brush, stumps and similar debris waste and clean burning demolition material;
- The burning shall be at least 500 feet from any occupied building unless the occupants have given prior permission, other than a building located on the property on which the burning is conducted;

- The burning shall be conducted at the greatest distance practicable from highways and air fields;
- The burning shall be attended at all times and conducted to ensure the best possible combustion with a minimum of smoke being produced;
- The burning shall not be allowed to smolder beyond the minimum period of time necessary for the destruction of the materials; and
- The burning shall be conducted only when the prevailing winds are away from any city, town or built-up area.

Heating units associated with new stations or other structures may require new source review permits or operating permits from DEQ. See "Regulatory and Coordination Needs," item 2, below.

4. Historic Structures and Archaeological Resources. The Department of Historic Resources indicates that it is working with project management agencies and their consultant on the identification of historic properties in the proposed corridor. The agencies involved will sign a Programmatic Agreement with the Department of Historic Resources which outlines procedures for the identification and evaluation of historic properties and plans for mitigation of effects upon properties listed on or eligible for the National Register of Historic Places. We encourage the agencies involved to continue coordinating with the Department of Historic Resources as this project evolves.

5. Water and Wetlands. According to DEQ's Division of Water Program Coordination, Office of Water Permits Support (hereinafter "DEQ's Water Division"), any of the "build alternatives" would affect surface waters and wetlands. The limitation of proposed construction to the median of existing roads, as much as practicable, will be helpful in avoiding and minimizing wetland and waterway impacts of the project; we encourage additional efforts in this regard as the project progresses. Examples of avoidance and minimization efforts include completely spanning wetlands to avoid impacts, and shifting the alignment of road or rail structures. Unavoidable impacts to wetlands and streams may require compensatory mitigation, as the Draft EIS explains (pages 4-54 through 4-58, section 4.2.6).

In general, DEQ recommends that stream and wetland impacts be avoided to the maximum extent practicable. For unavoidable impacts, DEQ encourages the following practices to minimize the impacts to wetlands and waterways:

- Operate machinery and construction vehicles outside of stream-beds and wetlands; use synthetic mats when in-stream work is unavoidable;
- Erosion and sedimentation controls should be designed in accordance with the most current edition of the Virginia Erosion and Sediment Control Handbook.

These controls should be in place prior to clearing and grading, and maintained in good working order to minimize impacts to State waters. The controls should remain in place until the area is stabilized. (See item 6, below.)

- Place heavy equipment, located in temporarily impacted wetland areas, on mats, geotextile fabric, or use other suitable measures to minimize soil disturbance, to the maximum extent practicable.
- Restore all temporarily disturbed wetland areas to pre-construction conditions and plant or seed with appropriate wetlands vegetation in accordance with the cover type (emergent, scrub-shrub, or forested). The project managers should take all appropriate measures to promote re-vegetation of these areas. Stabilization and restoration efforts should occur immediately after the temporary disturbance of each wetland area instead of waiting until the entire project has been completed.
- Place all materials which are temporarily stockpiled in wetlands, designated for use for the immediate stabilization of wetlands, on mats or geotextile fabric in order to prevent entry into State waters. These materials should be managed in a manner that prevents leachates from entering state waters and must be entirely removed within thirty days following completion of that construction activity. The disturbed areas should be returned to their original contours, stabilized within thirty days following removal of the stockpile, and restored to the original vegetated state.

The project may require a Virginia Water Protection Permit, and it is likely to require a Virginia Pollutant Discharge Elimination System (VPDES) Stormwater permit. See "Regulatory and Coordination Needs, item 3, below.

6. Erosion and Sediment Control; Stormwater Management. Executive Order 12088, "Federal Compliance with Pollution Control Standards and the Sykes Act," authorizes cooperation between state and federal agencies regarding the conservation of natural resources. Compliance with the state Erosion and Sediment Control and Stormwater Management programs through proper design and implementation is consistent with the mandate of these federal directives. Notwithstanding cooperation with the Department of Conservation and Recreation, federal agencies are responsible for ensuring compliance with the state program on regulated activities under their authority through separate agreements with contractors, training, field inspection, enforcement action, or other means that are consistent with agency policy and federal and state mandates.

7. Chesapeake Bay Preservation Act Compliance. Road and railway projects are conditionally exempt from the requirements of the Chesapeake Bay Preservation Area Designation and Management Regulations (9 VAC 10-20-10 et seq.) provided such

projects are constructed, operated, and maintained in accordance with the Virginia Erosion and Sediment Control Law and the Virginia Stormwater Management Act (or an equivalent local program). This conditional exemption also requires that road alignments and design prevent or otherwise minimize (i) encroachment in Resource Protection Areas, as defined in the Regulations, and (ii) adverse effects on water quality. Non-linear features of the project, such as parking lots and stations, are not exempt and must be consistent with the General Performance Criteria and the Development Criteria for Resource Protection Areas. (Both the General Performance Criteria and the Development Criteria are found in the Regulations.) During planning and design phases, site-specific surveys should be conducted to verify the presence or absence, and boundaries, of any Resource Protection Areas.

8. Recreation Resources. The Department of Conservation and Recreation has indicated that the proposed project will not affect any streams on the National Park Service Nationwide Inventory, Final List of Rivers, or existing or potential State Scenic Rivers. Nor will the project affect existing or potential State Scenic Byways.

9. Pesticides and Herbicides. If pesticides or herbicides must be used, their use should be strictly in accordance with manufacturers' recommendations. In addition, we recommend the use of the least toxic herbicides or pesticides effective for landscape maintenance. Products containing volatile organic compounds as their active ingredient should be avoided in order to protect air quality. For more information on this subject, please contact the Department of Agriculture and Consumer Services (telephone (804) 786-3501).

10. Forest and Tree Protection. According to the Department of Forestry, this project will not significantly affect forest lands of the Commonwealth.

In order to protect trees in project construction areas from the effects of this project, the trees should be marked and fenced at least to the dripline or the end of the root system, whichever extends farther from the tree stem. Marking should be done with highly visible ribbon so that equipment operators see the protected areas easily.

Parking and stacking of heavy equipment, construction materials, or soil stockpiles near trees can damage root systems by compacting the soil. Soil compaction, from weight or vibration, affects root growth, water and nutrient uptake, and gas exchange. If parking and stacking are unavoidable, temporary crossing bridges, or mats to minimize soil compaction and mechanical injury to plants, should be used. Soil stockpiles should be covered to prevent soil erosion and fugitive dust.

Questions on tree protection may be directed to the Department of Forestry (Mike Foreman, telephone (434) 977-6555).

11. Pollution Prevention. DEQ advocates that principles of pollution prevention be used in all construction projects as well as in facility operations. Effective siting, planning, and on-site Best Management Practices (BMPs) will help to ensure that environmental impacts are minimized. However, pollution prevention techniques also include decisions related to construction materials, design, and operational procedures that will facilitate the reduction of wastes at the source. We have several pollution prevention recommendations that may be helpful in constructing or operating this project:

- Consider development of an effective Environmental Management System (EMS). An effective EMS will ensure that the proposed facility is committed to minimizing its environmental impacts, setting environmental goals, and achieving improvements in its environmental performance. DEQ offers EMS development assistance and recognizes facilities with effective Environmental Management Systems through its Virginia Environmental Excellence Program.
- Consider environmental attributes when purchasing materials. For example, the extent of recycled material content, toxicity level, and amount of packaging should be considered and can be specified in purchasing contracts.
- Consider contractors' commitments to the environment (such as an EMS) when choosing contractors. Specifications regarding raw materials and construction practices can be included in contract documents and requests for proposals.
- Choose sustainable materials and practices for infrastructure and building construction and design. These could include asphalt and concrete containing recycled materials, and integrated pest management in landscaping, among other things.
- Integrate pollution prevention techniques into facility maintenance and operation, to include the following: inventory control (record-keeping and centralized storage for hazardous materials), product substitution (use of non-toxic cleaners), and source reduction (fixing leaks, energy-efficient HVAC and equipment). Maintenance facilities should be designed with sufficient and suitable space to allow for effective inventory control and preventive maintenance.

DEQ's Office of Pollution Prevention provides free information and technical assistance relating to pollution prevention techniques and EMS. If interested, the project manager may contact that Office (Tom Griffin, telephone (804) 698-4545).

12. Transportation Impacts. The Virginia Department of Transportation is of the opinion that any of the "build" alternatives described in the Draft EIS would be

preferable to the no-action alternative because of the beneficial impact of improved mass transit on congested areas in Northern Virginia, including Tysons Corner.

Regulatory and Coordination Needs

1. Solid and Hazardous Waste Management. Soil suspected of contamination, and wastes that are generated, must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations, including but not limited to the Virginia Waste Management Act (*Virginia Code* sections 10.1-1400 et seq.), the Virginia Hazardous Waste Management Regulations (9 VAC 20-60 et seq.), and the Virginia Solid Waste Management Regulations (9 VAC 20-80 et seq.). (See the attached comments from DEQ's Waste Division, Office of Remedial Programs.)

According to DEQ's Northern Virginia Regional Office, the Draft EIS mentions the identification of 34 contamination sites that were not identified in the Environmental Database Search results. We recommend that these sites be discussed with that Office (Charlie Forbes, Regional Permits Manager, telephone (703) 583-3850).

As mentioned above and in the Draft EIS, the structures to be demolished as part of this project have not yet been checked for the presence of asbestos-containing materials or lead-based paint. The following guidance pertains in the event either of these substances is found.

(a) Asbestos Abatement. If asbestos-containing materials (ACM) are found, following their classification as friable or non-friable, all waste ACM shall be disposed of in accordance with the Virginia Solid Waste Management Regulations (9 VAC 20-80-640), and transported in accordance with the Virginia regulations governing Transportation of Hazardous Materials (9 VAC 20-110-10 et seq.). The project manager should contact the DEQ Waste Management Program (telephone (804) 698-4021) and the Department of Labor and Industry, Dr. Clarence Wheeling, telephone (804) 786-0574 for additional information.

(b) Lead-Based Paint. The project must comply with the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) regulations, and with the Virginia Lead-Based Paint Activities Rules and Regulations. For additional information regarding these requirements, the project manager should contact the Department of Professional and Occupational Regulation (Thomas Perry, telephone (804) 367-8595).

2. Air Quality Regulation. As indicated above, heating units may require new source review or operating permits from DEQ. In addition, open burning activities may require an open burning permit. Questions on these matters, and inquiries about time-of-year restrictions on the use of cut-back asphalt, may be directed to DEQ's Northern

Virginia Regional Office (Terry Darton, Air Permits Manager, telephone (703) 583-3845).

3. Water Quality and Wetland Permitting. The Draft EIS addresses the need for obtaining Virginia Pollutant Discharge Elimination System (VPDES) Stormwater General Permits for construction activity that disturbs 5 or more acres of land (page 4-19, section 4.2.1). The project manager should be aware that the regulation on this subject is changing; sites that are between 1 and 5 acres will also be required to apply for coverage under this General Permit by March 10, 2003.

Stormwater management facilities are proposed along the route to handle storm flow from the system (Draft EIS, section 2, Figure 2.3-16). The project manager should work with DEQ to ensure that necessary VPDES permits are obtained for these facilities. If de-watering of the tunnels for the underground Metrorail stations is necessary, a VPDES permit might be necessary for discharges resulting from this activity.

Site-specific VPDES permits and/or VPDES Stormwater General Permits may also be needed for BRT stations and the Maintenance and Storage Facility contemplated under the BRT alternative.

Similarly, if the Metrorail alternative is selected, permits may be required for discharges from the Service and Inspection Yard. The Yard is to include a car wash and stormwater management facilities of its own. If flow from the car wash is discharged to the sanitary sewer, then an industrial user permit is likely to be required for the wastewater treatment plant accepting the flow.

The Draft EIS indicates that both VPDES and Virginia Water Protection Permits (VWPP) will be required for construction of the underground sections of the Metrorail, according to DEQ's Northern Virginia Regional Office. However, VWP permits will only be required if wetlands will be involved.

Questions on water permits may be addressed to DEQ's Northern Virginia Regional Office (Charlie Forbes, Regional Permits Manager, telephone (703) 583-3850).

4. Erosion Control; Stormwater Management. Questions relating to compliance with the Virginia Erosion and Sediment Control Law and the Virginia Stormwater Management Law may be addressed to the Department of Conservation and Recreation's Potomac Watershed Office (Mary Apostolico, telephone (540) 347-6420).

5. Subaqueous Bed Encroachment. Any encroachments in, on, or over state-owned subaqueous lands, along with the activities subject to water resource permitting identified in item 3 above, require the submission of a Joint Permit Application to the

Marine Resources Commission. The Commission acts as a clearinghouse for permit processing by itself, DEQ's Regional Offices, and the Army Corps of Engineers. Questions on the process, and on the Commission's permit jurisdiction, may be addressed to the Commission (Mark Eversole, telephone (757) 247-2200).

6. Federal Consistency under the Coastal Zone Management Act. Pursuant to the Coastal Zone Management Act of 1972, as amended, the lead federal agency is required to determine the consistency of its activities affecting Virginia's coastal resources or coastal uses with the Virginia Coastal Resources Management Program (VCP) (see section 307(c)(1) of the Act and 15 CFR Part 930, sub-part C, section 930.34). This involves an analysis of the activities in light of the Enforceable Programs of the VCP (first enclosure), and submission of a consistency determination reflecting that analysis and committing the federal agency to comply with the Enforceable Programs. This determination may be provided as part of the documentation concluding the NEPA process, or independently, depending on your agency's preference. Section 930.39 gives content requirements for the consistency determination. If you need clarification of these comments, please contact Charles Ellis at (804) 698-4488.

Thank you for the opportunity to review this Draft EIS. We look forward to reviewing the Final EIS for this project. Detailed comments of reviewing agencies are attached.

Sincerely,

Ellie L. Irons
Program Manager
Office of Environmental Impact Review

Enclosures
cc: (next page)

cc: Charles D. Forbes, DEQ-NVRO
Thomas D. Modena, DEQ-Waste
Thomas Wilcox, DGIF
Derral Jones, DCR
Keith R. Tignor, DACS
Susan E. Douglas, VDH
Kotur S. Narasimhan, DEQ-Air
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Mark Eversole, MRC
Angel N. Deem, VDOT
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Gerald P. Wilkes, DMME
Catherine M. Harold, CBLAD
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Attachment 1

Enforceable Regulatory Programs comprising Virginia's Coastal Resources Management Program (VCP)

a. Fisheries Management - The program stresses the conservation and enhancement of finfish and shellfish resources and the promotion of commercial and recreational fisheries to maximize food production and recreational opportunities. This program is administered by the Marine Resources Commission (VMRC); Virginia Code §28.2-200 to §28.2-713 and the Department of Game and Inland Fisheries (DGIF); Virginia Code §29.1-100 to §29.1-570.

The State Tributyltin (TBT) Regulatory Program has been added to the Fisheries Management program. The General Assembly amended the Virginia Pesticide Use and Application Act as it related to the possession, sale, or use of marine antifoulant paints containing TBT. The use of TBT in boat paint constitutes a serious threat to important marine animal species. The TBT program monitors boating activities and boat painting activities to ensure compliance with TBT regulations promulgated pursuant to the amendment. The VMRC, DGIF, and Virginia Department of Agriculture Consumer Services (VDACS) share enforcement responsibilities; Virginia Code §3.1-249.59 to §3.1-249.62.

b. Subaqueous Lands Management - The management program for subaqueous lands establishes conditions for granting or denying permits to use state-owned bottomlands based on considerations of potential effects on marine and fisheries resources, tidal wetlands, adjacent or nearby properties, anticipated public and private benefits, and water quality standards established by the Department of Environmental Quality (DEQ). The program is administered by the Marine Resources Commission; Virginia Code §28.2-1200 to §28.2-1213.

c. Wetlands Management - The purpose of the wetlands management program is to preserve wetlands, prevent their despoliation, and accommodate economic development in a manner consistent with wetlands preservation.

(1) The tidal wetlands program is administered by the Marine Resources Commission; Virginia Code §28.2-1301 through §28.2-1320.

(2) The Virginia Water Protection Permit program administered by DEQ includes protection of wetlands --both tidal and non-tidal; Virginia Code §62.1-44.15:5 and Water Quality Certification pursuant to Section 401 of the Clean Water Act.

d. Dunes Management - Dune protection is carried out pursuant to The Coastal Primary Sand Dune Protection Act and is intended to prevent destruction or alteration of primary dunes. This program is administered by the Marine Resources Commission; Virginia Code §28.2-1400 through §28.2-1420.

e. Non-point Source Pollution Control – (1) Virginia's Erosion and Sediment Control Law requires soil-disturbing projects to be designed to reduce soil erosion and to decrease inputs of chemical nutrients and sediments to the Chesapeake Bay, its tributaries, and other rivers and waters of the Commonwealth. This program is administered by the Department of Conservation and Recreation; Virginia Code §10.1-560 et.seq.).

(2) Coastal Lands Management is a state-local cooperative program administered by the Chesapeake Bay Local Assistance Department and 84 localities in Tidewater (see i) Virginia; Virginia Code §10.1-2100 –10.1-2114 and 9 VAC10-20 et seq.

f. Point Source Pollution Control - The point source program is administered by the State Water Control Board (DEQ) pursuant to Virginia Code §62.1-44.15. Point source pollution control is accomplished through the implementation of:

(1) the National Pollutant Discharge Elimination System (NPDES) permit program established pursuant to Section 402 of the federal Clean Water Act and administered in Virginia as the Virginia Pollutant Discharge Elimination System (VPDES) permit program.

(2) The Virginia Water Protection Permit (VWPP) program administered by DEQ; Virginia Code §62.1-44.15:5 and Water Quality Certification pursuant to Section 401 of the Clean Water Act.

g. Shoreline Sanitation - The purpose of this program is to regulate the installation of septic tanks, set standards concerning soil types suitable for septic tanks, and specify minimum distances that tanks must be placed away from streams, rivers, and other waters of the Commonwealth. This program is administered by the Department of Health (Virginia Code §32.1-164 through §32.1-165).

h. Air Pollution Control - The program implements the federal Clean Air Act to provide a legally enforceable State Implementation Plan for the attainment and maintenance of the National Ambient Air Quality Standards. This program is administered by the State Air Pollution Control Board (Virginia Code §10.1-1300 through §10.1- 1320).

(i) Coastal Lands Management is a state-local cooperative program administered by the Chesapeake Bay Local Assistance Department and 84 localities in Tidewater, Virginia established pursuant to the Chesapeake Bay Preservation Act; Virginia Code §10.1-2100 –10.1-2114 and Chesapeake Bay Preservation Area Designation and Management Regulations; Virginia Administrative Code 9 VAC10-20 et seq.

Attachment 2

Advisory Policies for Geographic Areas of Particular Concern

a. Coastal Natural Resource Areas - These areas are vital to estuarine and marine ecosystems and/or are of great importance to areas immediately inland of the shoreline. Such areas receive special attention from the Commonwealth because of their conservation, recreational, ecological, and aesthetic values. These areas are worthy of special consideration in any planning or resources management process and include the following resources:

a) Wetlands
b) Aquatic Spawning, Nursery, and Feeding Grounds
c) Coastal Primary Sand Dunes
d) Barrier Islands
e) Significant Wildlife Habitat Areas
f) Public Recreation Areas
g) Sand and Gravel Resources
h) Underwater Historic Sites.

b. Coastal Natural Hazard Areas - This policy covers areas vulnerable to continuing and severe erosion and areas susceptible to potential damage from wind, tidal, and storm related events including flooding. New buildings and other structures should be designed and sited to minimize the potential for property damage due to storms or shoreline erosion. The areas of concern are as follows:

i) Highly Erodible Areas
ii) Coastal High Hazard Areas, including flood plains.

c. Waterfront Development Areas - These areas are vital to the Commonwealth because of the limited number of areas suitable for waterfront activities. The areas of concern are as follows:

i) Commercial Ports
ii) Commercial Fishing Piers
iii) Community Waterfronts

Although the management of such areas is the responsibility of local government and some regional authorities, designation of these areas as Waterfront Development Areas of Particular Concern (APC) under the VCRMP is encouraged. Designation will allow the use of federal CZMA funds to be used to assist planning for such areas and the implementation of such plans. The VCRMP recognizes two broad classes of priority uses for waterfront development APC:

Attachment 2 con't

i) water access dependent activities;
ii) activities significantly enhanced by the waterfront location and complementary to other existing and/or planned activities in a given waterfront area.

Advisory Policies for Shorefront Access Planning and Protection

a. Virginia Public Beaches - Approximately 25 miles of public beaches are located in the cities, counties, and towns of Virginia exclusive of public beaches on state and federal land. These public shoreline areas will be maintained to allow public access to recreational resources.

b. Virginia Outdoors Plan - Planning for coastal access is provided by the Department of Conservation and Recreation in cooperation with other state and local government agencies. The Virginia Outdoors Plan (VOP), which is published by the Department, identifies recreational facilities in the Commonwealth that provide recreational access. The VOP also serves to identify future needs of the Commonwealth in relation to the provision of recreational opportunities and shoreline access. Prior to initiating any project, consideration should be given to the proximity of the project site to recreational resources identified in the VOP.

c. Parks, Natural Areas, and Wildlife Management Areas - Parks, Wildlife Management Areas, and Natural Areas are provided for the recreational pleasure of the citizens of the Commonwealth and the nation by local, state, and federal agencies. The recreational values of these areas should be protected and maintained.

d. Waterfront Recreational Land Acquisition - It is the policy of the Commonwealth to protect areas, properties, lands, or any estate or interest therein, of scenic beauty, recreational utility, historical interest, or unusual features which may be acquired, preserved, and maintained for the citizens of the Commonwealth.

e. Waterfront Recreational Facilities - This policy applies to the provision of boat ramps, public landings, and bridges which provide water access to the citizens of the Commonwealth. These facilities shall be designed, constructed, and maintained to provide points of water access when and where practicable.

f. Waterfront Historic Properties - The Commonwealth has a long history of settlement and development, and much of that history has involved both shorelines and near-shore areas. The protection and preservation of historic shorefront properties is primarily the responsibility of the Department of Historic Resources. Buildings, structures, and sites of historical, architectural, and/or archaeological interest are significant resources for the citizens of the Commonwealth. It is the policy of the

If you cannot meet the deadline, please notify CHARLIE ELLIS at 804/698-4488 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

REVIEW INSTRUCTIONS:

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B. Prepare your agency's comments in a form which would be acceptable for responding directly to a project proponent agency.

C. Use your agency stationery or the space below for your comments. **IF YOU USE THE SPACE BELOW, THE FORM MUST BE SIGNED AND DATED.**

Please return your comments to:

MR.CHARLES H. ELLIS III
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL IMPACT REVIEW
629 EAST MAIN STREET, SIXTH FLOOR
RICHMOND, VA 23219
FAX #804/698-4319

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AUG 08 2002
DEQ-Office of Environmental Impact Review

Charles H. Ellis III
Environmental Program Planner

COMMENTS

Statements in the project document concerning endangered species were reviewed and compared to available information. No additional comments are necessary in reference to endangered plant and insect species regarding this project.

(signed) (Keith R. Tignor) (date) August 5, 2002

(title) Endangered Species Coordinator

(agency) VDACS, Office of Plant and Pest Service

PROJECT # 02-124F

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

Joseph H. Maroon
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

203 Governor Street
Richmond, Virginia 23219-2010
TDD (804) 786-2121

MEMORANDUM

DATE: 1 August 2002

TO: Charles H. Ellis, III, Virginia Department of Environmental Quality

Derral Jones

FROM: Derral Jones, Planning Bureau Manager

SUBJECT: Draft Environmental Impact Statement and Section 4 (f) evaluation for the Dulles Rapid Transit Corridor

In January 2002, the Department of Conservation and Recreation (DCR) submitted comments on this project to the Washington Metropolitan Area Transit Authority. To reiterate those comments for your use : The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biological and Conservation Data System (BCD) for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in our files, several rare plants, which are typically associated with prairie vegetation and inhabit semi-open diabase glades in Virginia, may occur at this location if suitable habitat is present. Diabase glades are characterized by historically fire-dominated grassland vegetation on relatively nutrient-rich soils underlain by Triassic bedrock. Diabase flatrock, a hard, dark-colored volcanic rock, is found primarily in northern Virginia counties and is located within the geologic formation known as the Triassic Basin. Where the bedrock is exposed, a distinctive community type of drought-tolerant plants occurs. Diabase flatrocks are extremely rare natural communities that are threatened by activities such as quarrying and road construction (Rawinski, 1995).

In Northern Virginia, diabase supports occurrences of several global and state rare plant species: earleaf foxglove (*Agalinis auriculata*, G2/S1/SOC/NS), white heath aster (*Aster ericoides*, G5/S2/NF/NS), blue-hearts (*Buchnera americana*, G3G4/S1/NF/NS), hairy beardtongue (*Penstemon hirsutus*, G4/S2/NF/NS), downy phlox (*Phlox pilosa*, G5T5/S2/NF/NS), stiff goldenrod (*Oligoneuron rigidum* var. *rigidum*, G5/S2/NF/NS), and marsh hedgenettle (*Stachys pilosa* var. *arenicola*,

G5/S1/NF/NS). Please note that earleaf foxglove is currently tracked as a species of concern by the United States Fish and Wildlife Service (USFWS); however this designation has no official legal status.

Due to the potential for this site to support populations of natural heritage resources, DCR recommends an inventory of suitable habitat in the study area. With the survey results we can more accurately evaluate potential impacts to natural heritage resources and offer specific protection recommendations for minimizing impacts to the documented resources.

DCR-Division of Natural Heritage biologists are qualified and available to conduct inventories for rare, threatened, and endangered species. Please contact J. Christopher Ludwig, Natural Heritage Inventory Manager, at (804) 371-6206 to discuss arrangements for field work. A list of other individuals who are qualified to conduct inventories may be obtained from the USFWS.

Any absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks other natural heritage resources. DCR's Biological and Conservation Data System is continuously revised. Please contact DCR for an update on this natural heritage information if a significant amount of time passes before it is utilized."

The Draft Environmental Impact Statement, discusses some of these issues in 4.5.3: Existing Conditions, pp. 4-77 thru 4-81, and states on page 81, the indication of the "absence of suitable habitat for rare diabase plants". That should be re-evaluated with a survey during the appropriate season. DCR has not surveyed any sites within the project area, but recommends doing so either this month or during September, if possible. As stated above, DCR-Division of Natural Heritage biologists are qualified and available to conduct inventories for rare, threatened, and endangered species. Please contact J. Christopher Ludwig, Natural Heritage Inventory Manager, at (804) 371-6206 to discuss arrangements for field work.

Lastly, the proposed project is not anticipated to have any adverse impacts on existing or planned recreational facilities. Nor will it impact any streams on the National Park Service Nationwide Inventory, Final List of Rivers, potential Scenic Rivers or existing or potential State Scenic Byways. Please contact DCR for an update on this information if a significant amount of time passes before it is utilized.

Thank you for the opportunity to offer comments on this project.

Literature Cited

Rawinski, T.J. 1995. Natural communities and ecosystems: Conservation priorities for the future. Unpublished report for DCR-DNH.

Definition of Abbreviations Used on Natural Heritage Resource Lists of the Virginia Department of Conservation and Recreation

Natural Heritage Ranks

The following ranks are used by the Virginia Department of Conservation and Recreation to set protection priorities for natural heritage resources. Natural Heritage Resources, or "NHR's," are rare plant and animal species, rare and exemplary natural communities, and significant geologic features. The primary criterion for ranking NHR's is the number of populations or occurrences, i.e. the number of known distinct localities. Also of great importance is the number of individuals in existence at each locality or, if a highly mobile organism (e.g., sea turtles, many birds, and butterflies), the total number of individuals. Other considerations may include the quality of the occurrences, the number of

protected occurrences, and threats. However, the emphasis remains on the number of populations or occurrences such that ranks will be an index of known biological rarity.

S1 Extremely rare; usually 5 or fewer populations or occurrences in the state; or may be a few remaining individuals; often especially vulnerable to extirpation.

S2 Very rare; usually between 5 and 20 populations or occurrences; or with many individuals in fewer occurrences; often susceptible to becoming extirpated.

S3 Rare to uncommon; usually between 20 and 100 populations or occurrences; may have fewer occurrences, but with a large number of individuals in some populations; may be susceptible to large-scale disturbances.

S4 Common; usually >100 populations or occurrences, but may be fewer with many large populations; may be restricted to only a portion of the state; usually not susceptible to immediate threats.

S5 Very common; demonstrably secure under present conditions.

SA Accidental in the state.

S#B Breeding status of an organism within the state.

SH Historically known from the state, but not verified for an extended period, usually > 15 years; this rank is used primarily when inventory has been attempted recently.

S#N Non-breeding status within the state. Usually applied to winter resident species.

SU Status uncertain, often because of low search effort or cryptic nature of the element.

SX Apparently extirpated from the state.

SZ Long distance migrant whose occurrences during migration are too irregular, transitory and/or dispersed to be reliably identified, mapped and protected.

Global ranks are similar, but refer to a species' rarity throughout its total range. Global ranks are denoted with a "G" followed by a character. Note that GA and GN are not used and GX means apparently extinct. A "Q" in a rank indicates that a taxonomic question concerning that species exists. Ranks for subspecies are denoted with a "T". The global and state ranks combined (e.g. G2/S1) give an instant grasp of a species' known rarity.

These ranks should not be interpreted as legal designations.

Federal Legal Status

The Division of Natural Heritage uses the standard abbreviations for Federal endangerment developed by the U.S. Fish and Wildlife Service, Division of Endangered Species and Habitat Conservation.

LE	Listed Endangered - threatened with extinction throughout all or a significant portion of its range		
LT	Listed Threatened - likely to become endangered in the foreseeable future		
PE	Proposed Endangered	E(S/A)	Treat as endangered because of similarity of appearance
PT	Proposed Threatened	T(S/A)	Treat as threatened because of similarity of appearance
C	Candidate - enough information is available to propose for listing, but listing is precluded by other pending proposals of higher priority		
SOC	Species of Concern -- species that merit special concern (not a regulatory category)		
NF	No federal legal status		

State Legal Status

The Division of Natural Heritage uses similar abbreviations for State endangerment.

LE	Listed Endangered	PE	Proposed Endangered
LT	Listed Threatened	PT	Proposed Threatened
C	Candidate		
SC	Special Concern -- animals that merit special concern according to VDGIF (not a regulatory category)		
NS	No state legal status		

Conservation Site Ranks

A rank is a rating of the significance of the conservation site based on presence and number of natural heritage resources; on a scale of 1-5, 1 being most significant.

B1 - Outstanding significance
B2 - Very high significance
B3 - High significance
B4 - Moderate significance
B5 - of General Biodiversity significance

Site names ending in Habitat Zone are B5 sites on private lands.

For information on the laws pertaining to threatened or endangered species, contact: U.S. Fish and Wildlife Service for all FEDERALLY listed species Department of Agriculture and Consumer Services Plant Protection Bureau for STATE listed plants and insects; Department of Game and Inland Fisheries for all other STATE listed animals

If you cannot meet the deadline, please notify CHARLIE ELLIS at 804/698-4488 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

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DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL IMPACT REVIEW
629 EAST MAIN STREET, SIXTH FLOOR
RICHMOND, VA 23219
FAX #804/698-4319

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JUL 15 2002

DEQ-Office of Environmental Impact Review

Charles H. Ellis III
Environmental Program Planner

COMMENTS

The Virginia Dept of Health has no objection to the proposed project.

(signed) Susan E. Douglas (date) 7-11-02

(title) Field Services Engineer (acting)

(agency) Virginia Dept. of Health.

PROJECT # 02-124F

8/98

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 10009, Richmond, Virginia 23240
Fax (804) 698-4500 TDD (804) 698-4021
www.deq.state.va.us

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

Robert G. Burnley
Director

(804) 698-4000
1-800-592-5482

MEMORANDUM

TO: Charles Ellis

FROM: Thomas Modena TDM

DATE: July 29, 2002

COPIES: Kevin Greene

RECEIVED
AUG 1 - 2002
DEQ-Office of Environmental Impact Review

SUBJECT: Draft Environmental Impact Statement
Dulles Corridor Rapid Transit Project

The Office of Remedial Programs has reviewed the Federal Transit Administration's Dulles Corridor Rapid Transit Project Draft Environmental Impact Statement. We have the following comments concerning the waste issues associated with this project.

Hazardous and solid waste issues and sites were addressed in the report. The central office of the Waste Division did a cursory review of its data files and did not find any additional sites that might impact this project.

Since this project may involve construction, any soil that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations. Some of the applicable state laws and regulations are: Virginia Waste Management Act, Code of Virginia Section 10.1-1400 *et seq.*; Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC 20-60); Virginia Solid Waste Management Regulations (VSWMR) (9VAC 20-80); Virginia Regulations for the Transportation of Hazardous Materials (9VAC 20-110). Some of the applicable Federal laws and regulations are: the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Section 6901 *et seq.*, and the applicable regulations contained in Title 40 of the Code of Federal Regulations; and the U.S. Department of Transportation Rules for Transportation of Hazardous Materials, 49 CFR Parts 107, 171.1-172.558.

The report states that structures to be demolished not have been checked for the presence of asbestos-containing materials (ACM) or lead-based paint (LBP). They should be

checked and if LBP or ACM are found, in addition to the Federal waste-related regulations, State regulations 9VAC 20-80-640 for ACM and 9VAC 20-60-261 for LBP must be followed.

Finally, pollution prevention was not addressed in the report. VDEQ encourages all construction projects and facilities to implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated.

If you have any questions or need further information, please let me know.

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR PROGRAM COORDINATION

ENVIRONMENTAL REVIEW REPORT APPLICABLE TO AIR QUALITY

TO: Charles h. Ellis III

DEQ-OEIA PROJECT NUMBER: 02-124F

PROJECT TYPE: ☐ STATE EA/EIR/FONSI **X FEDERAL EAEIS** ☐ SCC

☐ CONSISTENCY DETERMINATION/CERTIFICATION

PROJECT TITLE: DULLES CORRIDOR RAPID TRANSIT PROJECT

PROJECT SPONSOR: USDOT/FEDERAL TRANSIT AUTHORITY/VA DEPT. OF RAIL & PUBLIC TRANSPORTATION/WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY/FEDERAL AVIATION ADMINISTRATION

PROJECT LOCATION:
X OZONE NON-ATTANMENT AREA
☐ OZONE MAINTENANCE AREA
X STATE VOLATILE ORGANIC COMPOUNDS & NITROGEN OXIDES EMISSION CONTROL AREA

REGULATORY REQUIREMENTSMAY BE APPLICABLE TO:
X CONSTRUCTION
X OPERATION

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STATE AIR POLLUTION CONTROL BOARD REGULATIONS THAT MAY APPLY:

1. ☐ 9 VAC 5-40-5200 C & 9 VAC 5-40-5220 E – STAGE I
2. ☐ 9 VAC 5-40-5200 C & 9 VAC 5-40-5220 F – STAGE II Vapor Recovery
3. X **9 VAC 5-40-5490 et seq. – Asphalt Paving operations**
4. X **9 VAC 5-40-5600 et seq. – Open Burning**
5. X **9 VAC 5-50-60 et seq. Fugitive Dust Emissions**
6. ☐ 9 VAC 5-50-130 et seq. - Odorous Emissions; Applicable to
7. ☐ 9 VAC 5-50-160 et seq. – Standards of Performance for Toxic Pollutants
8. ☐ 9 VAC 5-50-400 Subpart_____, Standards of Performance for New Stationary Sources, designates standards of performance for the
9. ☐ 9 VAC 5-80-10 et seq. of the regulations – Permits for Stationary Sources
10. ☐ 9 VAC 5-80-1700 et seq. Of the regulations – Major or Modified Sources located in PSD areas. This rule may be applicable to the
11. ☐ 9 VAC 5-80-2000 et seq. of the regulations – New and modified sources located in non-attainment areas
12. ☐ 9 VAC 5-80-800 et seq. Of the regulations – Operating Permits and exemptions. This rule may be applicable to

COMMENTS SPECIFIC TO THE PROJECT:

Results of detailed modeling studies have established that operation of any alternative considered has no significant effect on air quality. The project being in an ozone non-attainment area, all precautions are to be taken during the construction phase to restrict the emissions of volatile organic compounds (VOC) and oxides of nitrogen (NOx).

K. S. Narasimhan

(Kotur S. Narasimhan)
Office of Air Data Analysis

August 5, 2002

Review Instructions:

A. Please review the document carefully. If the proposal has been reviewed earlier (i.e. if the document is a federal Final EIS or a state supplement), please consider whether your earlier comments have been adequately addressed.

B. Prepare your agency's comments in a form which would be acceptable for responding directly to a project proponent agency.

C. Use your agency stationery or the space below for you comments. **If you use the space below, the form must be signed and dated.**

Please return your comments to:

Mr. Charles H. Ellis, III
Dept. of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, Sixth Floor
Richmond, VA 23219
Fax: (804) 698-4319

RECEIVED
JUL 19 2002
DEQ-Office of Environmental Impact Review

Charles H. Ellis, III
Environmental Program Planner

Comments:

VWPP – The Department of Environmental Quality (DEQ) Virginia Water Protection Permit Program has reviewed the DEIS for the Dulles Corridor Rapid Transit Project. We recognize the importance of this project. The scope of work includes the extension of mass transit service through the Dulles corridor. Thank you for the thorough report on potential impacts to state waters and for addressing efforts and requirements to avoid, minimize and compensate for the impacts.

The DEIS indicates all Build Alternatives will impact state waters, including wetlands. All attempts should be made to select the most feasible alternative that also avoids and minimizes potential direct and indirect impacts to wetlands and streams to the greatest extent practicable. We understand that impacts have been avoided and minimized by limiting proposed construction to the median of existing roadways as much as practicable. As the project progresses, please continue to investigate ways for additional avoidance and minimization of direct and indirect impacts to wetlands and streams to the greatest extent practicable. Examples of avoidance and minimization efforts include completely spanning wetlands to avoid impact and shifting the alignment to avoid or minimize wetland impacts. The selected alternative's unavoidable impacts to wetlands and streams will require full compensatory mitigation as explained in the DEIS.

This project may require a Virginia Water Protection Permit, which includes coordination of this project with the Virginia Marine Resources Commission, the Army Corps of Engineers and the DEQ through the Joint Permit Application process.

Appropriate design and construction measures should be employed to avoid and minimize impacts to state waters during construction. All applicable best management practices should be used to minimize potential impacts. Machinery should be kept out of waterway and wetlands when possible. Machinery that must be operated within wetland areas should be maintained on mats in order to prevent tire rutting. In general, DEQ encourages the use of erosion and sediment control measures, adherence to storm water management regulations, and careful construction practices to minimize temporary impacts to state waters during site construction activities.

VPDES/VPA: VPDES Storm water permits for construction activity will be necessary.

Name: Martin Ferguson Date: July 19, 2002
Signature:
Title:
Agency: DEQ - Water Permits Support

Project: 02-124F

If you cannot meet the deadline, please notify CHARLIE ELLIS at 804/698-4488 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

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629 EAST MAIN STREET, SIXTH FLOOR
RICHMOND, VA 23219
FAX #804/698-4319

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DEQ-Office of Environmental Impact Review

Charles H. Ellis III
Environmental Program Planner

COMMENTS

See attached E-mail

(signed) _____ (date) 8/5/02

(title) RPM-NVRO

(agency) DEQ

PROJECT # 02-124F

RECEIVED
AUG 09 2002
DEQ-Office of Environmental Impact Review

Forbes,Charles

To: Ellis,Charles
Subject: OEIR 02-124F - Dulles Rapid Transit Project Draft EIS

The purpose of this EM is to provide NRO review comments.

1) The Draft EIS addresses the need for obtaining Virginia Pollutant Discharge Elimination System (VPDES) construction permits for construction activity that disturbs five or more acres of land (Section 4.2). The Development Authority should be aware that the regulation is changing for the permitting of construction activities to include all sites that are between one and five acres of land. This regulation requires all construction sites that are one acre or more to apply for coverage by March 10, 2003.
2) Stormwater Management Facilities (Section 2, Figure 2.3-16) are proposed along the route to handle storm flow from the system. The Development Authority should coordinate with DEQ as the project progresses to insure that all necessary VPDES permits are obtained for the stormwater management facilities. If dewatering of the tunnels for the underground Metrorail stations is necessary, then a VPDES permit could be necessary for any discharges from this activity.
3) If the BRT alternative is selected, then the Development Authority should coordinate with DEQ to obtain any necessary general stormwater or site specific VPDES permits for the BRT stations and for the BRT Maintenance & Storage Facility.
4) The Draft EIS describes a Metrorail Service and Inspection Yard that will be needed if the Metrorail alternative is selected. This yard will include a car wash and stormwater management facilities. If this option is selected, then there will need to be coordination with DEQ to ensure that any necessary permits are obtained for the discharges from the Yard. If flow from the car wash is discharged to the sanitary sewer, then an industrial user permit will most likely be necessary with the wastewater treatment plant accepting the flow.
5) NRO is unable to assess whether the cost of obtaining and maintaining environmental permits is addressed in the Operations & Maintenance costs estimates. Permit application fees were raised as of July 1, 2002. Similarly, it is unclear if the possibility of paying for the cost of permit-driven sampling and analysis has been considered in estimates. Most VPDES permits require flow estimates and analysis for a variety of parameters, based on the activities conducted at a site and the reasonable potential for the discharge of pollutants.
6) The Draft EIS states that both VPDES and Virginia Water Protection Permits (VWPP) will be obtained for construction of the underground sections of the Metrorail. VWPP permits will only be required if wetlands will be involved.
7) Section 4.9 discusses field reconnaissance done in the study area and the identification of thirty-four (34) sites that were not identified in the Environmental Database Search results. Will these sites be discussed with DEQ?

In general, the document states in numerous sections that ***all*** necessary environmental permits will be obtained, which satisfies the thrust of NRO concerns. However, close coordination with the various federal, state, and local authorities will be key to ensuring that a project of this magnitude is completed with minimal environmental damage.

A copy of this EM and the requisite OEIR paperwork will follow shortly.

Regards

CDF

DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL IMPACT REVIEW
ENVIRONMENTAL REVIEW REQUEST FORM

JUL - 9 2002
ENVIRONMENTAL DIV.

DATE: July 3, 2002 PROJECT NUMBER (STATE/FEDERAL): 02-124F

PROJECT TITLE: Dulles Corridor Rapid Transit Project

PROJECT SPONSOR: USDOT/Federal Transit Authority/Va Dept. of Rail & Public Transportation/Washington Metropolitan Area Transit Authority/Federal Aviation Administration

TYPE OF DOCUMENT:
_____ Environmental Impact Report (State)
_____ Environmental Assessment (Federal)
X Environmental Impact Statement (Federal)
X Draft ____ Final ____ Supplemental
_____ Consistency Determination/Certification
_____ Other _____

ROUTING OF DOCUMENT:
_____ Enclosed
** Sent directly to you by sponsoring agency. Please call the agency's project contact (see attachment) if you have not received the document.

NOTES: _____

DOCUMENT REFERRED FOR COMMENT TO:

** Department of Game & Inland Fisheries
** Department of Agriculture & Consumer Services
** Department of Conservation & Recreation
** Department of Health
** DEQ-Tech. Asst/Waste
** DEQ-Air Data Analysis
** DEQ-Water Protection Program
** DEQ-Regional Office Northern
** Department of Transportation
** Marine Resources Commission

** Department of Historic Resources
** Department of Mines, Minerals, & Energy
____ Virginia Institute of Marine Science
** Department of Forestry
** Chesapeake Bay Local Asst
** Planning District Commission: Northern Va.
** Locality: Fairfax County Loudoun County
** Others: Va. Economic Development Partnership

DEADLINE FOR COMMENTS: AUGUST 6, 2002

If you cannot meet the deadline, please notify CHARLES ELLIS at 804/698-4488 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

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OFFICE OF ENVIRONMENTAL IMPACT REVIEW
629 EAST MAIN STREET, SIXTH FLOOR
RICHMOND, VA 23219
FAX #804/698-4319

Charles H. Ellis III
Environmental Program Planner

COMMENTS

No comment. (Our partner agency - DRPT participated in the document's preparation.)

(signed) Angel Deem (date) 7/11/02

(title) Env. Commitment Coordinator

(agency) VDOT

PROJECT # 02-124F

8/98

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FAX #804/698-4319

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All work to be performed in waters and tidal wetlands within the Commonwealth of Virginia requires the submission of a Joint Permit Application (JPA) to the Virginia Marine Resources Commission (VMRC). VMRC would then act as the clearing house, distributing copies of the application to state, local and federal agencies for review and comments.

The review and permitting process normally requires a minimum of 90 days, so it is advised to contact this agency early in the planning phase, to allow ample time for public notice and permitting.

Copies of the JPA are available on the internet, or by contacting this office.

(signed) _____ (date) 7-18-02

(title) Environmental Engineer

(agency) Marine Resources Commission

PROJECT # 02-124F

T-123 P.034/037 F-581
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JUL 19 2002
DEQ-Office of Environmental Impact Review

COMMONWEALTH of VIRGINIA

Department of Historic Resources
2801 Kensington Avenue, Richmond, Virginia 23221

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

Kathleen S. Kilpatrick
Director

Tel: (804) 367-2323
Fax: (804) 367-2391
TDD: (804) 367-2386
www.dhr.state.va.us

July 16, 2002

Mr. Charles Ellis
Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, Sixth Floor
Richmond, Virginia 23219

Re: Dulles Corridor Rapid Transit Project
DEQ Project Number 02-124F
DHR File Numbers 2000-1061

Dear Mr. Ellis:

Thank you for requesting our comments on the Dulles Corridor Rapid Transit Project. We are currently working with the FTA, USDOT, VDRPT, WMATA, the FAA, and their consultant, Parsons Engineering Science, Inc., on the identification of historic properties within the proposed transportation corridor. Currently, Parsons is drafting a Programmatic Agreement among the federal and state agencies and our department. This programmatic will outline the procedures to be followed in the identification and evaluation of historic properties as well as plan for the mitigation of effects to properties eligible for listing on the National Register of Historic Places. We encourage the federal and state agencies involved to continue coordinating with our office as the project evolves.

Thank you again for the opportunity to review and comment. If you have any questions or if we can be of any further assistance do not hesitate to contact me at (804) 367-2323 ext. 140 or lrichards@dhr.state.va.us.

Sincerely,

Lily A. Richards
Archaeologist and Historian

Administrative Svcs.
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tersburg, VA 23803
: (804) 863-1685
ax: (804) 862-6196

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Fax: (540) 722-7535

If you cannot meet the deadline, please notify CHARLIE ELLIS at 804/698-4488 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

REVIEW INSTRUCTIONS:

A. Please review the document carefully. If the proposal has been reviewed earlier (i.e. if the document is a federal Final EIS or a state supplement), please consider whether your earlier comments have been adequately addressed.

B. Prepare your agency's comments in a form which would be acceptable for responding directly to a project proponent agency.

C. Use your agency stationery or the space below for your comments. **IF YOU USE THE SPACE BELOW, THE FORM MUST BE SIGNED AND DATED.**

Please return your comments to:

MR.CHARLES H. ELLIS III
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL IMPACT REVIEW
629 EAST MAIN STREET, SIXTH FLOOR
RICHMOND, VA 23219
FAX #804/698-4319

RECEIVED
JUL 17 2002
DEQ-Office of Environmental Impact Review

Charles H. Ellis III
Environmental Program Planner

COMMENTS

= NO COMMENTS =

(signed) Gerald P. Williams (date) 7/17/02

(title) GEOLOGIST SENIOR

(agency) DMME / DMR

PROJECT # 02-124F

RECEIVED
AUG 0 1 2002
DEQ-Office of Environmental Impact Review

COMMONWEALTH of VIRGINIA

CHESAPEAKE BAY LOCAL ASSISTANCE DEPARTMENT

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

James Monroe Building
101 North 14th Street, 17th Floor
Richmond, Virginia 23219
FAX: (804) 225-3447

C. Scott Crafton
Acting Executive Director

(804) 225-3440
1-800-243-7229 Voice/TDD

July 31, 2002

Mr. Charles H. Ellis, III
DEQ Office of Environmental Impact Review
629 East Main Street, Sixth Floor
Richmond, VA 23219

RE: Dulles Corridor Rapid Transit Project
CBLAD Project Review No.: SSPR-VDOT-05-02

Dear Mr. Ellis:

As you requested, we have reviewed the Draft Environmental Impact Statement for the proposed Dulles Corridor Rapid Transit Project. During the siting and design phases of the project the following should be taken into consideration. Roadway and railroad projects are conditionally exempt from the requirements of the Chesapeake Bay Preservation Area Designation and Management Regulations (Regulations) provided they are constructed, operated and maintained in accordance with the Erosion and Sediment Control Law and the Virginia Stormwater Management Act (or equivalent local program). This conditional exemption also requires that roadway alignments and design be optimized to prevent or otherwise minimize (i) encroachment in the Resource Protection Area and (ii) adverse effects on water quality. Nonlinear features of the project, such as parking lots and stations, are not exempt and are required to be consistent with the General Performance Criteria and the Development Criteria for Resource Protection Areas of the Regulations. During the planning and design phases, site-specific surveys should be conducted to verify the presence/absence and boundaries of any Resource Protection Areas.

We appreciate the opportunity to provide our comments on this project. Please do not hesitate to contact us at 1-800-CHESBAY should you have any questions.

Sincerely,

Catherine M. Harold
Environmental Engineer

Shawn E. Smith
Principal Environmental Planner

Cc: Martha H. Little, CBLAD
Scott Crafton, CBLAD

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If you cannot meet the deadline, please notify CHARLIE ELLIS at 804/698-4488 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

REVIEW INSTRUCTIONS:

A. Please review the document carefully. If the proposal has been reviewed earlier (i.e. if the document is a federal Final EIS or a state supplement), please consider whether your earlier comments have been adequately addressed.

B. Prepare your agency's comments in a form which would be acceptable for responding directly to a project proponent agency.

C. Use your agency stationery or the space below for your comments. **IF YOU USE THE SPACE BELOW, THE FORM MUST BE SIGNED AND DATED.**

Please return your comments to:

MR. CHARLES H. ELLIS III
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL IMPACT REVIEW
629 EAST MAIN STREET, SIXTH FLOOR
RICHMOND, VA 23219
FAX #804/698-4319

RECEIVED

AUG 0 8 2002

DEQ-Office of Environmental Impact Review

Charles H. Ellis III
Environmental Program Planner

COMMENTS

The proposed work does not significantly affect forest lands of the Commonwealth.

(signed) J M Foreman (date) 8-4-02

(title) Forest Mgt.

(agency) DOF

PROJECT # 02-124F

8/98

K.3.6 Commonwealth of Virginia, Department of Historic Resources

- May 27, 2004
- May 19, 2004
- November 19, 2003
- October 29, 2002

COMMONWEALTH of VIRGINIA

Department of Historic Resources
2801 Kensington Avenue, Richmond, Virginia 23221

w. Tayloe Murphy, Jr. *Secretary of Natural Resources*

Kathleen s. Kilpatrick *Director*

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www.dhr.state.va.us

May 27, 2004

Mr **.Karl A. Rohrer**
Department of Rail **and Public Transportation 3900**
Jennantown Road, Suite 300
Fairfax, V A **22030**

Re **Dulles Corridor Rapid Transit Project**
DHR File # 2000-1061

Dear Mr **.Rohrer:**

We have received for review a copy of the report *Identification and Evaluation Report - Archaeology* {2004) which discusses the archaeological investigation of the project area as conducted by Gray & Pape. We are pleased to inform you that the report meets the Secretary of the Interior's *Standards and Guidelines for the Documentation of Archaeological Sites* (48 FR 44734-44742). However, the format of this report does not conform to our Department's *Survey Guidelines* (revised 200 1). We ask that a report conforming to these standards be forwarded to our office at your earliest convenience. A copy of our Guidelines may be obtained by accessing our website at
h ://state.vi net.or dhr/arch DHR/archaeo index.htm.

Survey of the project area resulted in the identification of nine isolated locations. No archaeological sites were identified as a result of this survey. Although several sites have been previously identified within or adjacent to the Area of Potential Effect, no evidence of any such site was identified during this survey. The consultant indicates that modem construction, land use, and inundation rendered much of the project area unlikely to contain intact cultural deposits. Based upon the information provided, therefore, we concur with the recommendation that no archaeological properties will be affected by this project as currently planned.

If you have any questions about the Section 106 review process or our comments, please call me at (804) 367-2323, Ext. 140.

Sincerely,,

~~ **Jom\na Wilson, Archaeologist**
("Offibe of Review **and Compliance**

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Director

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www.dhr.state.va.us

May 19, 2004

Mr .Karl A. Rohrer
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard
Suite 300
Arlington, Virginia 22209

Re: Dulles Corridor Rapid Transit Project
Supplemental Draft Environmental Impact Statement (EIS)
Fairfax and Loudoun Counties
DHR File # 2000-1061

Dear Mr .Rohrer:

We have received the "Identification and Evaluation Report-Historic Architecture" for our review and comment regarding the above referenced project. The report records the results of the architectural survey for the length of the 23.1-mile project corridor. The Area of Potential Effect (APE) for architectural properties extends to 600 feet on either side of the centerlineand included all buildings fifty years old or older.

The project consultants identified and recorded a total of 83 previously undocumented architectural properties within the APE. These newly recorded properties consist of 82 individual resources and 1 potential district. Additionally, Washington Dulles International Airport Historic District, a resource previously determined eligible for listing in the National Register of Historic Places, is also located in the project APE. The project consultants only recommend one other property as potentially worthy of National Register listing. This is the multi-family dwelling at 6714-6716 Osborn Street (DHR Survey No.029-5395). It is recommended as eligible under Criterion A (as a representative of rental housing at a more moderate scale) and Criterion C (for its architectural merit).

We concur with your evaluation of those properties recommended as not eligible for listing in the National Register. The building stoc~ represented in the project survey is largely of undistinguished design without any association to a known historic event or significant individual.

We disagree, however, with your assertion that the multi-family dwelling at 6114-6116 Osbom Street is worthy of National Register listing. Although a more substantial and architecturally interesting building than others included in the project survey, the Colonial Revival residence is less impressive when compared to others of its type. Additionally, the loss of its original windows represents a significant diminishment of its historic integrity .For these reasons we do not believe that 6114-6116 Osbom Street is eligible for the National Register.

We reiterate the National Register eligibility of Washington Dulles International Airport Historic District under Criteria A, B, and C. We also restate our concurrence expressed in our March 4, 2004 letter that the eastern boundary for the historic district should be established approximately 300 feet east of the Fairfax/Loudoun County line. This boundary location would preserve the "peek-a-boo" sequence that is essential to the Saarinen design.

We concur with the project consultants that the LPA's location within the boundary of the historic district and its interference with the three remaining "peek-a-boo" sequences of the original Saarinen design constitute an adverse effect on the National Register-eligible Washington Dulles International Airport Historic District. It is our understanding that the Department of Rail and Public Transportation (DRPT) and the Washington Metropolitan Area Transit Authority (WMA T A) continue to refme the project design. As this process progresses, we request that you continue to consult with DHR regarding this undertaking. If DRPT and WMATA find that the adverse affect cannot be avoided, then it will become necessary to develop a Memorandum of Agreement (MOA) for the project.

If you have any questions about the Section 106 review process or our comments, please call me at (804) 367-2323, Ext. 114.

Sincerely,

Marc Holma, , **Archk'ctural Historian Office of Review and Compliance**

Cc: **Mr. Charles H. Ellis, ill, DEQ Mr. William Lebegem,** MW AA

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21,146

COMMONWEALTH of VIRGINIA

Department of Historic Resources

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

2801 Kensington Avenue, Richmond, Virginia 23221

Kathleen S. Kilpatrick
Director

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www.dhr.state.va.us

November 19, 2003

Mr. Karl A. Rohrer
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard
Suite 300
Arlington, Virginia 22209

Re: Dulles Corridor Rapid Transit Project
Supplemental Draft Environmental Impact Statement (EIS)
Fairfax and Loudoun Counties
DHR File # 2000-1061

Dear Mr. Rohrer:

We have received your request for our review and comment on the Environmental Impact Statement (EIS) regarding the above referenced project. The document attempts to address the environmental affects that the proposed construction of the 23-mile high-capacity transit line will have to include those on historic properties. Please accept the following comments as our response to the current EIS.

The subject document attempts to address "the potential long-term and construction effects" of the Dulles Corridor Rapid Transit Project for the Local Preferred Alternative (LPA). The EIS evaluates the effects of the project on two archaeological sites (44FX2662 and 44FX2405) and an historic district (Hunter Mill Road Historic District) newly added for consideration since the last draft EIS. Additionally, the current EIS re-considers effects on the Washington Dulles International Airport, a property eligible for listing in the National Register of Historic Resources, and a House located at 22017 Shellhorn Road in Ryan.

The revised EIS asserts that there would be no adverse effect to architectural resources as a result of the LPA. We cannot concur with this statement. The project corridor crosses the boundary of the Hunter Mill Road Historic District. Despite the claim that "because the Hunter Mill Road Historic District is located within an existing transportation corridor, impacts to the district associated with this project would be minimal," you have not provided the Department of Historic Resources (DHR) sufficient information in order for us to agree with this statement. Similarly, the report cites "further analysis" confirming that the proposed LPA would not cause an adverse visual effect on the "peekaboo" sequence along the approach to Dulles Airport. We have not had the opportunity to review and comment on the aforementioned analysis. Therefore, we cannot agree that your assertion is correct. In fact, the issue of an appropriate National Register boundary for the airport is still an outstanding issue that must be settled before the discussion of effect can happen.

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Fax: (540) 722-7535

We welcome the opportunity to discuss this project further at our next scheduled Section 106 meeting on December 16, 2003. At that meeting we will also continue our dialogue regarding the development of a Programmatic Agreement (PA) for the undertaking. We request that you continue to consult with DHR through the Section 106 process on this undertaking.

If you have any questions about the Section 106 review process or our comments, please call me at (804) 367-2323, Ext. 114.

Sincerely,

Marc Holma, Architectural Historian
Office of Review and Compliance

2002

17.415

2039

COMMONWEALTH of VIRGINIA

Department of Historic Resources
2801 Kensington Avenue, Richmond, Virginia 23221

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Secretary of Natural Resources

Kathleen S. Kilpatrick
Director

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www.dhr.state.va.us

October 29, 2002

Mr. Corey W. Hill
Northern Virginia Regional Manager
VDRPT
1550 Wilson Boulevard, Suite 300
Arlington, Virginia 22209

Re: Dulles Corridor Rapid Transit Project
DHR File Numbers 2000-1061

Dear Mr. Hill:

Thank you for providing our department with a copy of the Dulles Rapid Transit Project Public Hearings Report. We would like to reiterate that we look forward to working with your department, along with the federal agencies involved, in the successful completion of the Section 106 process for this project.

To date, the Section 106 process has not yet been initiated. Other than an initial meeting held on February 28, 2001, we have received no information regarding NHPA compliance. It is our understanding that the identification of previously identified historic properties is well under way and that the consultant will begin the identification of previously unidentified properties in the near future. Please bear in mind that the VDRPT and FTA will need SHPO concurrence on all eligibility and effect determinations.

Thank you again for the opportunity to review and comment on the referenced document. If you have any questions or if we can be of any further assistance do not hesitate to contact me at (804) 367-2323 ext. 140, lrichards@dhr.state.va.us or Marc Holma at ext. 114, mholma@dhr.state.va.us.

Sincerely,

Lily A. Richards
Archaeologist and Historian, Office of Review and Compliance

C. Henry Ward, Parsons

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K.3.7 Commonwealth of Virginia, Department of Mines, Minerals, and Energy

- October 28, 2002

Atkinson, Mathew

From: Wilkes, Gerald [gwilkes@geology.state.va.us]
Sent: Monday, October 28, 2002 11:30 AM
To: 'dullescorridor@aol.com'
Subject: Public Hearing Report, Dullus Corridor RT Project

To whom it may concern:

The Virginia Department of Mines, Minerals, and Energy has determined that the proposed project will have no impact on the geology or mineral resources of the site.
Please contact us if you require further information.

Gerald Wilkes
geologist senior, SERP, DMME

K.3.8 Commonwealth of Virginia, Department of Transportation

- February 25, 2004
- December 23, 2003
- October 28, 2002
- August 27, 2002
- August 4, 2002
- July 2, 1999
- December 7, 1999

Atkinson, Mathew

From: Rohrer, Karl [Karl.Rohrer@drpt.virginia.gov]
Sent: Wednesday, February 25, 2004 5:48 PM
To: Atkinson, Mathew
Cc: Dittmeier, John
Subject: FW: Comments on February 2004 DCRTP Public Hearings Report on SDEIS - Docket No. R03-6
Importance: High

510 9162

Matt:

Please enter the following as a Public Hearing Report comment letter

KR

-----Original Message-----
From: Allahdoust, Fatemeh
Sent: Wednesday, February 25, 2004 5:44 PM
To: Rohrer, Karl; Jdittmeier (E-mail)
Subject: FW: Comments on February 2004 DCRTP Public Hearings Report on SDEIS - Docket No. R03-6
Importance: High

The Northern Virginia District Office of the Virginia Department of Transportation (VDOT) has reviewed the February 2004 *Public Hearings Report* (PHR) for the Supplemental Draft Environmental Impact Statement (EIS) and General Plans for the Dulles Corridor Rapid Transit Project (Docket Number R03-6). Thank you for the Project Team's responses to our comments on the October 2003 Supplemental Draft EIS package.

VDOT reaffirms its full support for the State's identification of this project as a high priority project for the region. We present to you the following comments and suggestions and look forward to continued coordination with the Project Team, with the common goal of improved overall transportation in the region. Our comments are as follows:

- **Mitigation Measures** - In the PHR, the Project Team states that proposed mitigation measures are not part of the Project capital cost[1]. However, on p. 129 of the PHR[2], the Project Team states that costs for mitigation of project impacts (noise, visual and traffic) *are* included as part of the Project's capital costs. Please clarify what mitigation measures are not included as part of the Project's capital cost and the reason for that decision. As mentioned in previous comments, VDOT believes that the traffic mitigation measures listed in the Supplemental Draft EIS do not fully address the future impact of this project on the existing transportation system. All Project-related impacts should be addressed, mitigated, and included in the Project's capital costs.

- **Noise Abatement** - In the PHR, it is stated that the noise methodology for this project followed FTA guidelines appropriate to transit projects[3]. In light of the current Council of Environmental Quality's (CEQ's) NEPA regulations[4], the project must include a comparative analysis of all alternatives (including the No Build Alternative). Therefore, VDOT interprets that any and all environmental impacts (including noise) will be addressed as part of the project and conform with

CEQ's current requirements.

- **Station Access** - VDOT looks forward to continued coordination by the Project Team in determining how to provide complete station access during preliminary engineering. VDOT recommends that the Project consider improving pedestrian and bicycle connections in the general vicinity (within 1 mile radius) of the proposed Station locations. VDOT looks forward to continued coordination on issues of station access - including bicycle/pedestrian, taxi, bus, park and ride, kiss and ride, etc.[5]

Please reference the possible future profile of Route 7 that would conflict with the relocation of the Tysons Central 7 Station entrance[6] and specifically describe the conflict. It should be noted that any future roadway improvements envisioned in Tysons Corner are based on the Fairfax County Comprehensive Plan 2000 and were applied in VDOT's Transportation Collocation Study 2003. The design shown in the Collocation Study is just one possible future option for Route 7 in the vicinity of Tysons Central 7 and no profiles for this design have been published by VDOT. Further analysis is required to determine if moving the station entrance to the middle or west side is feasible.

- **Station Access by Other Modes** - WMATA has listed bicycle and pedestrian accessible routes as the lowest priority for access and proximity to a station[7]. VDOT recommends that in areas where no commuter parking is proposed, such as in Tysons Corner, these modes of transportation (bicycle and pedestrian) should be given a higher priority.

- **Final EIS** - VDOT understands that an updated traffic analysis will be performed during the Final EIS[8] and looks forward to working with the Project team during this critical stage to determine adequate mitigation measures for the project. This traffic analysis should address impacts on the existing transportation system in general. Impacts will likely be far-reaching and not just limited to the immediate vicinities of the rail stations.

- **Preliminary Engineering** - As indicated by the Project Team in the PHR and particularly in view of new federal requirements regarding maintenance of traffic for every phase of construction, VDOT looks forward to being part of the future business advisory team during preliminary engineering[9] to discuss and minimize construction effects and maintenance of traffic in Tysons Corner and possibly elsewhere within the project limits (i.e., Beltway/Route 123 interchange, Reston).

The PHR indicates that congestion management will be addressed during preliminary engineering.[10] VDOT anticipates coordination by the Project Team on a congestion management plan during this phase of the project.

- **Revised General Plans** - VDOT is aware of the revisions proposed for the General Plans (PHR, A2). VDOT fully supports continuing, with full participation of transportation staff from Fairfax and Loudoun Counties as well as MWAA and TRIP II, a combined coordination effort with the DCRTP team to insure that the proposed rail alignments and station locations do not preclude potential future roadway improvements.

Thank you again for this opportunity for VDOT to provide comments and participate in this important project.

---

[1] *"The Final EIS process will identify the needed mitigation measures. These improvements will be programmed by DRPT or VDOT to complete construction by the dates identified in the Supplemental Draft EIS."* (PHR, p. 86)

"The recommended improvements are not proposed as part of the Project. These improvements would be the responsibility of VDOT and the Project Team has shared your comment with them." (PHR, p. 87)

"The timing of mitigation improvements... VDOT may expedite any improvements if needed to address current traffic problems prior to completion of the project." (PHR, p. 88)

"The pedestrian circulation system identified by commenter noted would be the responsibility of local governments and/or the Commonwealth of Virginia, and would not be part of the Dulles Corridor Rapid Transit Project." (PHR, p. 112)

[2] *"Mitigation measures will become more detailed during the assessment of the LPA in the Final EIS and receive commitments in the Record of Decision. Costs for mitigation of project impacts (including mitigation measures for noise, visual and traffic impacts) are included as part of the Project's capital costs."* (PHR, p. 129)

[3] *" The Dulles Corridor Rapid Transit Project followed FTA noise and vibration methodology appropriate to transit projects. This methodology does not require an assessment of the future No Build noise condition."* (PHR, p. 81)

[4] 40 CFR 1502.14 (Alternatives including proposed action) and 40 CFR 1502.16 (Environmental consequences)

[5] *"...In coordination with VDOT, Fairfax County, Loudoun Count and the Town of Herndon, a determination of the needed improvements will be made for station access beyond the station site plan, as well as the degree that the Project will fund such improvements, and their ownership and maintenance..."* (PHR, p. 111)

[6] *"...Relocation of the Tysons Central 7 Station entrance would result in conflicts with existing development, and with possible future profiles of Route 7 envisioned by VDOT..."* (PHR, p. 146)

[7] *"...WMATA has established a ranking (in descending order) of priorities for access and proximity to a station: pedestrian and bicycle/accessible route..."* (PHR, p. A12)

[8] *"The Final EIS process will identify the needed mitigation measures. These improvements will be programmed by DRPT or VDOT to complete construction by the dates identifies in the Supplemental Draft EIS."* (PHR, p. 86)

"The mitigation measures presented in Table 6.2-7 in Section 6.2.3 are based on the mitigation measures presented in Table 6.2-6 in the Draft EIS. As noted in the Draft EIS, a more detailed discussion of the recommended mitigation and its effects can be found in the Traffic Analysis and Station Access Study (June 2002). A new, detailed traffic analysis will be conducted for the Final

EIS. Mitigation measures will be further developed and revised as necessary. Information presented in the Final EIS document will clearly identify those measures that will be implements as part of the Dulles Corridor project and those that will be implemented by others." (PHR, p. 87)

"...Additional analysis of traffic effects for both the proposed LPA and LPA Phase 1 will be conducted as part of the development of the Final EIS. Mitigation measures for anticipated effects will be identified. The effects at Wiehle Avenue Station under LPA Phase 1 will be an important consideration in the analysis." (PHR, p. 90)

"...Additional analysis of traffic effects for both the LPA and LPA Phase 1 will be conducted as part of the development of the Final EIS. Mitigation measures for anticipated effects will be identified. The effects at Wiehle Avenue Station under LPA Phase 1 will be addressed in this analysis." (PHR, p. 91)

"DRPT, as the project sponsor, will be the contracting authority for the project's implementation and the recipient of Federal and non-federal funds. It will acquire right-of-way, apply for environmental permits and bear responsibility for mitigation commitments..." (PHR, p. 161)

"Several roadway mitigation measures are proposed plus other intersection improvements that will be studied as part of the Final EIS... the Project will invest in measures to mitigate the effects of the additional traffic..." (PHR, A7)

[9] *"Specific to Tysons Corner, the Project Team will develop and administer a business advisory team to provide a forum for affected businesses and communities to participate in the implementation of the Project, particularly the mitigation of the construction effects and maintenance of traffic in Tysons Corner... during the preliminary engineering phase."* (PHR, p. A11)

[10] *"Congestion Management measures will be further refined during preliminary engineering."* (PHR, p. 91)

Fatemeh [illegible] Allahdoust
Senior Transportation Planning Engineer
VDOT-NOVA Transportation Planning Section
[illegible] Nation Parkway
Chantilly, Virginia 20151-[illegible]

E-mail: fatemeh.allahdoust@virginiadot.org
Phone: (703) 383-2221 Fax: (703) 383-2240

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21,349

From: Dittmeier, John

Sent: Tuesday, December 23, 2003 4:48 PM

To: Terri Morrell; Travesky@aol.com; Atkinson, Mathew; Gonzalez, Oscar (CTC)

Cc: Sheldon, John; Mendes, Diana; Hong, Ik (Redirected); Neil E. Nott

Subject: Fwd: Dulles Corridor Rapid Transit Project - SupplementalDraft Environmental Impact Statement, October 2

Here is VDOT's public hearing statement for CTC incorporation into the database.

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>>> "Allahdoust, Fatemeh" <Fatemeh.Allahdoust@VirginiaDOT.org> 12/23/03 4:43:40 PM >>>
Northern Virginia District Office of VDOT, in coordination with other appropriate VDOT sections, has reviewed of Dulles Corridor Rapid Transit Project, Supplemental Draft Environmental Impact Statement, Volumes I & II dated October 2003 documents transmitted to the District Office on October 29, 2003. The attached file (DCRTP_SDEIS) contains majority of our comments; however, additional comments may be sent to you by or before the end of the public comment period, December 29, 2003.

<<DCRTP_SDEIS_COMMENTS4.doc>>

VDOT acknowledges and reaffirms its full support for the State's identification of this project as one of the high priority projects for the region. We look forward to continuation of our very successful and well coordinated efforts in improving transportation in Northern Virginia.

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Document Comments

Document: Supplemental Draft Environmental Impact Statement -- Dulles Corridor Rapid Transit Project (Virginia Department of Rail and Public Transportation)
Date of Document: October 29, 2003
Date of Comments: December 23, 2003

Page	para.	Line	Comment
S-3; 1-2	3	2-11	*"FTA is considering only the first phase of construction for New Starts funding from the anticipated six-year reauthorization of the New Starts program. FTA may consider the proposed subsequent phase for FTA funding in the future, but has made no commitment to do so. Furthermore, FTA has determined that the first phase now being considered for funding has independent utility even if the subsequent phase is never built. (The first phase serves the high employment area of Tysons Corner.) Therefore, FTA will make a decision on the funding of the first phase without regard to possible future phases."* If construction of Phase 2 is delayed, how will the Project address outstanding Phase 1 issues that will become prolonged and more critical as a result of this delay?
S-11	3		*"Continue refinement of the proposed LPA through coordination with local communities to address outstanding issues related to project design, mitigation, funding, and implementation."* VDOT looks forward to continued coordination with the Project to address these issues.
S-13, 2-20	Table 2.2-2		*Transportation Effects – Number of intersections requiring mitigation as a result of the project.* This table indicates that the number of intersections at LOS F (am or pm) does not change from existing conditions, or gets worse. This information is not shown for the "LPA Phase 1 Opening Year" cell – please include. Also, please include the specific intersections (as listed in traffic mitigation section of SDEIS) and the proposed mitigation measures to address the traffic impacts at these intersections as a result of this project.
2-22	3	8	*"Parking at Tysons West Station would be reduced to 500 spaces and be constructed as part of a joint development project. The specific location and design of the park-and-ride facility is not known at this time, but the anticipated cost of the facility is assumed as part of the Dulles Corridor Rapid Transit Project.* Vehicles accessing the stations would use local roads." Please explain how the traffic impacts of the proposed future 500 space park-and-ride facility and station access will be addressed.
3-18	Table 3.2-1		*Summary of Long-Term Effects to Neighborhoods and Community Facilities.* This table indicates that there is "no change" in effects of T6/Y15 vs. the Full LPA. This section of the report needs to address how increased traffic volume, traffic congestion, and spillover parking will be handled by the Project.
3-20	6	5	*"Proposed mitigation strategies for traffic impacts at Wiehle Avenue include adding turn lanes at intersections, parking management techniques, preferential treatment for rideshares, financial/time incentives, and information and marketing campaigns."* Adding turn lanes at intersections does not seem adequate to address the traffic impacts that will occur as a result of the interim terminal station located at Wiehle Avenue. Also, please provide background analysis as to how these proposed mitigation measures were determined, and identify roadway improvements that would fully address the traffic impacts.

3-38	Table 3.6-1		Effects to Parklands and Recreation – Although there is "no change" in effects from the DEIS, this table indicates that there may be possible impacts to future trails from Tysons East Station, Tysons Central 7 Station, Tysons 7 Station, Tysons Central 123 Station, and Wiehle Avenue Station. Please indicate actions the Project will take to address these possible impacts. It is important to provide non motorized facilities for transit riders to access these stations, particularly in Tysons Corner.
3-45	1	1	*"Increased vehicle traffic at Wiehle Avenue Station may impact future trails proposed in Fairfax County's Countywide Trails Plan (June 2002)."* Please indicate actions the Project will take to address these possible impacts.
6-16	4	2	*"The implementation of the proposed LPA, and, specifically the provision or expansion of park-and-ride and Kiss & Ride facilities, would result in increased traffic on local roadways around stations."* Please indicate in the Final EIS the measures required to mitigate traffic impacts on local roadways around stations and identify which measures will be completed by the Project and which measures will not be part of the Project.
6-18	6	1	*"...the reduction in parking capacity at this station (Tysons West) would result in a considerable decrease in project-related trips at the Tysons West Station for all years. However, this reduction would not necessarily result in significant improvements to traffic impacts, over those presented in the Draft EIS for the Metrorail Alternative (T6/Y15), since the background traffic volumes would remain extremely heavy near the station area..."* Eliminating the formerly proposed large parking structure will result in less impact to the local road network from vehicles anticipated to use the parking structure, than that identified in the DEIS. However, the smaller parking facility will generate additional conflicting (left turn) movements.
6-19	4	1	*"Based on the mode of arrival data presented in Table 6.2-3, the 2025 park-and-ride person-trips that would be generated at the* [Wiehle Avenue] *station under the proposed LPA and proposed LPA Phase 1 are expected to change minimally compared to the Metrorail Alternative. Therefore, it can be assumed that the general traffic impacts expected in the vicinity of the station area would be similar to those documented in the Draft EIS for the Metrorail Alternative T6/Y15)."* During the period when the Wiehle Avenue Station operates as the interim terminus of the LPA Phase 1, traffic patterns will differ substantially from those that can be anticipated when this station becomes an intermediate station. It can be anticipated that more riders will access the transit system at this location, since this will be the most convenient rail access option for potential riders to the west of Wiehle Avenue.
6-19	5	5	*"...traffic volumes generated at the station would increase significantly during the peak hour at the Wiehle Avenue Station entrance for the proposed LPA Phase 1. As a result, levels of service and delay are expected to deteriorate at this station entrance in 2009 and in future years if the full LPA is not constructed. Furthermore, the excessive delay may cause extensive queuing thus making movements from the westbound Dulles Toll Road ramp to the northbound Wiehle Avenue approach difficult."* Since FTA is only considering funding for Phase 1 at this time, please indicate the measures the Project will take to minimize level of service degradation at the station entrance and its vicinity as a result of the Wiehle Avenue Station being the interim terminal station. For example, indicate how the Project will address the possibility of extensive queuing from the eastbound DTR ramp to northbound Wiehle Avenue in the AM and possibly the opposite movement in the PM.
-19	5	8	In the sentence *"...extensive queuing thus making the westbound...,"* the word westbound may be incorrect. Queuing is expected on the eastbound ramp. (see above)

6-19	5	9	*"...the movement from the toll road ramp to Wiehle Ave approach is difficult."* Please investigate bus routing plans that will reduce the impacts on the toll road ramps. An alternative to alleviate traffic congestion associated with the end of the line station for Phase 1 could be to build a direct access ramp to the station to route traffic from the eastbound toll road off-ramp to the station.
6-19	5	9-10	*"The additional traffic entering the station via Isaac Newton Drive would have negligible effect on traffic operations."* Traffic balances itself out and when the traffic is congested on the Wiehle Avenue corridor and the toll road ramps, drivers will use Sunset Hills Road. Therefore, a possible approach to balancing traffic may be to build a right turn only lane on Sunset Hills Road at the entrance to the station.
6-20	4	1	*"With the design modifications, the effects of the proposed LPA would be similar to those presented for the Metrorail Alternative (T6/Y15) in the Draft EIS. However, if the full LPA is not constructed, 2,450 parking spaces would be constructed at the* [Herndon-Monroe] *station by 2025 to accommodate increased demand for transit services in the corridor."* Since FTA is only considering funding Phase I at this time, it is unclear when the need for these spaces would be determined. Please clarify.
6-21	2	1	*"Based on the mode of arrival data presented in Table 6.2-5, the project related traffic effects of the proposed LPA and proposed LPA Phase 1 are anticipated to be significantly less than those presented in the Draft EIS for the Metrorail Alternative (T6/Y15), due to a reduction in parking capacity at the Route 606 Station. However, this reduction would not necessarily result in significant improvements to traffic impacts, over those presented in the Draft EIS for the Metrorail Alternative T6/Y15), since the background traffic volumes would remain extremely heavy near the station area."* Please explain the rationale for reducing parking capacity at this location and consequently, the impacts to roads and other parking facilities along the line.
6-22			The proposed mitigation measures should include parking areas for cabs and drop off and pickup areas for the passengers in the Tysons Corner stations where there are no provisions for kiss and ride lots. If the Project is relying substantially on foot access to the stations, this should be noted.
6-22	6.2.3		The proposed traffic mitigation measures listed do not fully address the impacts on the existing transportation system. Please provide technical analyses that validate and document the completeness of this list.
6-24	5		The Supplemental DEIS states that the implementation of the design changes to the proposed LPA would have no additional effects on the existing and planned bicycle and pedestrian facilities in the Dulles Corridor. Although there would be no additional effects, please indicate how the Project will provide adequate bicycle and pedestrian access to the stations.
6-25	4	10	*"These modifications would require taking some of the I-66 right-of-way."* Please ensure that these plans and agreements are well-coordinated with VDOT, so that current roadway operations and potential future improvements to I-66 are not affected.
6-25			This chapter should include a commitment to develop and implement a Congestion Management Program to operate during the construction of this project, especially in the Tysons Corner and Wiehle Avenue areas.
6-26	2	4	The sentence states that *"Cut-and-cover construction would require lane closures that would disrupt traffic to a considerable extent."* Revise the sentence to read "...off-peak lane closures..."
6-26	3	3	Change the sentence to read "...off-peak lane closures..."
6-26	3		This paragraph mentions the requirement of temporary lane closures. VDOT looks forward to working with the Project on a Congestion Management Program and Maintenance of Traffic Plan.

6-26	3	4	Change the sentence to read "…off-peak lane closures…"
6-27	1	4	*"Those improvements that would occur on the I-66 right-of-way acquired from the Virginia Department of Transportation (VDOT) would not affect current roadway operations or planned roadway improvements."* Please ensure that these plans and agreements are well-coordinated with VDOT, so that current roadway operations and potential future improvements to I-66 are not affected.
10-5	1	1	*"Once the proposed LPA is selected and prior to circulating the Final EIS, every reasonable effort will be made to resolve interagency issues related to the proposed action. If significant issues remain unresolved, these issues, and the consultations and efforts made to resolve the issues, will be documented in the Final EIS."* VDOT looks forward to continued work on these unresolved issues, as well as a Project commitment for mitigation of traffic impacts (maintenance of traffic) and congestion management during construction, and identification and implementation of overall measures to minimize level of service degradation on local roadways.
10-5	3		VDOT looks forward to continued coordination regarding permitting requirements and possible development of a master agreement between VDRPT and VDOT.
			Regarding the potential establishment of an eastern boundary of the Dulles International Airport Historic District, any decision/actions that would lead to minimization of harm to the district should not preclude (or should take into account) any future surface transportation improvements on the DTR/DAAR (Sections 3.5 & 7) for the entire length of the Project.
			The document should reference Fairfax County's development of a watershed management plan for the Difficult Run watershed (Section 4.2)
			The SDEIS does not provide a noise assessment for the No-Build Alternative. (Section 4.7).

Atkinson, Mathew

From: Allahdoust, Fatemeh [Fatemeh.Allahdoust@VirginiaDOT.org]
Sent: Monday, October 28, 2002 3:58 PM
To: 'dullescorridor@aol.com'; Hill, Corey W.; Dittmeier, John
Cc: Lal, Tarsem
Subject: Comments on October 2002, DCRTP Public Hearings Report on DEIS- Docket No. R02-1

Importance: High

Mr. Corey W. Hill
Northern Virginia Regional Manager
Virginia Department of Rail and Public Transportation

The Northern Virginia District Office of the Virginia Department of Transportation (VDOT) has reviewed the October 2002 Public Hearings Report (PHR) for the Draft Environmental Impact Statement and General Plans for the Dulles Corridor Rapid Transit Project (Docket Number R02-1). Thank you for the Dulles Corridor Rapid Transit Project (DCRTP) Team's responses to our comments on the June 2002 DCRTP DEIS package. VDOT reaffirms its full support for the State's identification of this project as a high priority project for the region. We present to you the following comments and suggestions and look forward to continued coordination with the DCRTP Team, with the common goal of improved overall transportation in the region.

Mobility - The DCRTP Team concludes that "each of the rapid transit alternatives will help to increase overall mobility in the corridor, the counties, and the region..." and will "increase overall transportation capacity and person throughput in the corridor." (p. 42) and states that the DCRT "Project would not resolve traffic gridlock, however, it would provide an alternative to driving the automobile." (p. 271).

To maximize overall mobility, it is critical that the current capacity of the road network be at least maintained and that careful consideration be given by the Team, VDOT and the counties to not precluding any potential future road improvements. We agree with the need for the Team to continue detailed coordination with VDOT, Metropolitan Washington Airports Authority (MWAA) and the counties, to insure that the proposed rail line and the road network collocate as follows:

a. Maintenance of Traffic -The PHR indicates that "As stated on page 6-62 of the Draft EIS, maintenance of traffic plans would be developed for all construction activities that would impact regional and local roadways." To the extent possible, all construction requiring lane closures would be done at night, on weekends, or in the off-peak period." (p. 330). VDOT looks forward to working with the Team and reviewing the Project's Maintenance of Traffic Plans in detail. In general, the number of lanes along corridors can not be reduced during construction except during nights or weekends. Congestion Mitigation Plans will need to be developed and coordinated with VDOT to insure project constructibility.

b. Current capacity of existing road network - VDOT understands that the DCRT Project will replace existing roadway capacity where this is affected by the Project, by relocating or otherwise modifying road elements where necessary, in consultation and coordination with VDOT and the counties.

c. Potential future road improvements - VDOT fully supports continuing, with full participation of transportation staff from Fairfax and Loudoun Counties as well as MWAA, a combined coordination effort with the DCRTP Team to insure that rail and highway elements can collocate now and not to preclude potential future road improvements. With respect to

possible future road improvements, it should again be noted that, where the DEIS and the PHR mention or list planned roadway improvements, specific citations to the official document(s) should be made: the approved Six Year Program, the Transportation Improvement Program (TIP), the Constrained Long Range Plan (CLRP), and the County Comprehensive Plans. Please refrain from using general comments about "VDOT is planning to construct/widen, etc" that may be based on concepts developed in coordination with County staff, based on Comprehensive Plans, but lack programming or funding commitments from any agency or entity at this time. Such statements may give the false impression of imminent, approved or funded projects (e.g. pages 266, 270).

Utilities - Consideration should be given in the early stages to "utility corridors" when utility relocations are required for the DCRT project. Future impacts and costs will be reduced if the utilities are not required to be relocated again as any planned improvement in the areas is initiated.

Programming of Improvements by VDOT - Reference has been made in the he June 2002 DEIS and Section 4(f) Evaluation report, "Table 6.2-6: Summary of Traffic Issues and Proposed Mitigation Measures" and identifies VDOT as the "responsible agency", (Volume I, on pg. 6.34-5). Naming VDOT as the responsible agency needs to deleted; the measures identified are mitigation measures for features / impacts of the DCRT Project, as indicated on page 6-32: "...but merely improvements that could be employed at each intersection to alleviate future traffic impact from the project" and their costs are part of that Project. These mitigation measures are not projects that VDOT has programmed or funded. When requested, VDOT will evaluate the proposed mitigation measures, in conjunction with the Congestion Mitigation Plans (which will include further analysis of required improvements, their impacts, feasibility and cost estimates).

Transit-related development - The DCRT Team includes several statements about the transit-related development, consequent increased traffic and need for careful and timely decisions to mitigate impacts. DCRT team responses and PHR page references are included below:

- "Overall, though the transit-related growth associated with mass transit implementation will result in increased development and increased traffic congestion in station areas, this change is consistent with local goals and comprehensive plans." (p. 43)
- "Actual implementation of transit-oriented development and the timing and increase in densities is under the jurisdiction of the local government in the area, so any mitigation needed to support the increase in densities is also under the jurisdiction of the local government, and they have included measures in their land use regulations." (p. 275, 384, etc.)

VDOT looks forward to continued coordination with the counties on decisions about the impact of proposed developments per their Comprehensive Plans and any related future roadway improvements. Collectively, our detailed review of individual transit-development applications will be critical as the counties work to seek balance between level of development, mitigation measures and timing of future roadway improvements.

Coordination required before April 2003 Final EIS submission to FTA - The DCRT Team has stated that, should there be changes to the Project as the result of the determination of mitigation measures and of continuing coordination, the Team will seek approval of amendment to the General Plans. Following is a sampling of the issues that we see will need detailed coordination with VDOT, MWAA and the appropriate County staff:

- Maintenance of Traffic during construction (including Congestion Management Plans).

- Design and programming (including more in depth assessment of traffic volumes and patterns, access, constructibility) of related roadway improvements. An example is the proposed Route 7/Tyco Road 2,000 car parking facility.

- Assessment of impact and planning for mitigation and/or possible future improvements at various locations in Tysons, Reston, Herndon, Dulles National Airport and Eastern Loudoun County.

- On-street feeder bus bays for Tysons Central A, B and C stations (p. 274).

Thank you again for this opportunity for VDOT to provide comments and participate in this important project. Please let me know if I can be of further assistance.

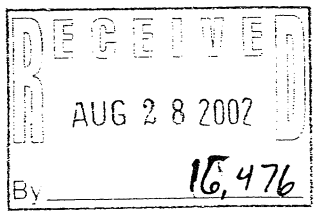
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ʃo:	Hill, Corey W.; Dittmeier, John; 'dullescorridor@aol.com'
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Subject:	DCRTP - Draft environmental Impact Statement, June 2002- Technical Review Comments
Importance:	High



Air Quality Comments.tif



Mr. Corey W. Hill
Northern Virginia Regional Manager
Virginia Department of Rail and Public Transportation

Northern Virginia District Office of VDOT, in coordination with other appropriate VDOT divisions, has conducted a review of the following documents transmitted to the District Office on June 27, 2002:

* Draft Environmental Impact Statement
* General Plans, Line and Systems
* General Plans, Facilities
* Technical Reports

VDOT acknowledges and reaffirms its full support for the State's identification of this project as one of the high priority projects for the region. I present to you the following comments and suggestions and look forward to continuation of our very successful and well coordinated efforts in improving transportation in Northern Virginia.

Traffic Analysis and Station Access Study - Technical Report (June 2002)

* Pg. 13, item 2.2, BRT Alternative:2nd paragraph states: "BRT stops would be located at facilities outside the median [of the DAAR]", and "BRT vehicles would provide access to stops by leaving the DAAR or the Greenway". Examples or descriptions of the BRT stops would be very helpful for the reader to better understand the difference between BRT stations and BRT stops.

* Section 3.3, Pg. 22, 2nd full paragraph - The report states that volumes for the various ramps proposed by VDOT to access Route 7 and 123 expressways from the local roads were necessary to complete the balancing process, and that these were obtained from the Tysons Corner Route 7 and Route 123 Transportation Collocation Study (Collocation Study), State Project Number TPD 11671-2-01, dated April 3. It should be noted that the Draft Collocation Study report was conducted within a compressed 3-month schedule. As stated in Chapter VI of the Collocation Study, traffic growth was based on a previous report (June 2000 Route 7/123 Corridor Study) and on several assumptions. It is hoped that any traffic volumes used in the DCRTP study included an understanding of the Collocation Study's context and limitations, and a verification of the assumptions used. We recommend that both the Traffic Analysis and Station Access Study and the Travel Demand Forecasting Methodology reports include a description of: the assumptions and how they were verified or modified as appropriate; and how the resulting volumes were determined to be consistent with the overall forecasting effort

conducted specifically for the DEIS.

* Section 6.3, pg. 134, Table 6-2 - Footnote 1 states that "Direction not specified by VDOT " yet numbers refer to Dulles Toll Road eastbound. Note 2 refers to Route 50, yet Footnote 2 refers to HOV lane on I-495. It appears that the text of the footnotes was changed between the 95% Review Draft and this latest (June 02) report, but the corresponding notes on the table were not revised. Footnote 1 in the 95% Review Draft referred to "Volumes exclude high occupancy vehicle lanes; no direct comparison to year 2000 can be made" (please note that by year 2000 (base year in table), HOV lanes were already in place and, for the DTR, volumes are available by lane.

* Chapters 9 through 17:
The proposed interchanges at 7/West Park-Gosnell and 123/International are not identified in the CLRP. Although an interchange at an isolated location does not need to be called-out from an air quality conformity standpoint, a series of interchanges in close proximity to one another could change the functional classification (for modeling) of the road from arterial to freeway (which would have to be accounted for in the model).
* Monroe St/Van Buren in the town of Herndon are not identified for improvement in the adopted FY-01 TIP / CLRP. East Elden St. is identified in the adopted FY-01 TIP / CLRP as reconstructed as a 4-lane section between Monroe St. and the Herndon Parkway East and widened to 6 lanes between the Herndon Parkway East and the Fairfax Co. Parkway. Both widening and reconstruction have a completion date of 2005.
* It is suggested that, when discussing the Planned Roadway Improvements, the DCRTP DEIS report make specific reference to their source official documents: the Six Year Program, the Transportation Improvement Program (TIP) and the Constrained Long Range Plan (CLRP), and the Fairfax County Comprehensive Plan. Please refrain from using statements about "VDOT's decisions" that are not backed up by the approved Six Year Program. For projects beyond the Six Year Program time horizon, reference should be made to the source document (TIP, CLRP as appropriate), noting that these documents are the result of cooperative efforts of multiple agencies at various levels (federal, state, local) and subject to public review. Please remove all references to VDOT deciding that specific interchange and road widening projects (Route 7 and Route 123) are "high priority" (e.g. section 10.1 on pg. 173, section 11.1 on pg. 187, section 12.1 on pg. 203, section 14.1 on page 233). Prioritization is typically a result of coordinated evaluation with input from Fairfax County, and in accordance with Fairfax County's Comprehensive Plan. Perhaps the consultant is making inferences from preliminary or final VDOT-funded consultant reports such as the 6/00 Transportation Corridor Study by PHR&A, or the 2/5/02 Tysons Corner Selected Improvement Compatibility Study by PTG. It should be noted that although these reports are used by VDOT as tools for analysis/coordination, their recommendations do not necessarily imply VDOT's concurrence.

* Existing traffic volumes appear low. For example the intersection of Route 123 at Tysons Boulevard indicates 90 vehicles during the a.m. peak and 62 vehicles during p.m. peak making left turns from southbound Tysons Boulevard onto eastbound Route 123. A recent traffic study done in the same area indicates that the existing a.m. left turn (same as above) as 392 vehicles and 1845 vehicles during the p.m. peak. All numbers need to be checked properly and appropriate numbers used as a starting base.

* The County has the nondegredation policy in place it is unclear as to how the increased development is planned to be mitigated. Also how is all the planned future higher densities addressed in the study? Are they included in the overall growth rate?

* Pg. 19 - Highway impacts are not analyzed in detail, only very generic information is presented in the document. No supporting data/analysis were provided. Statement is made that there are Synchro, HCM, Signal2000 and Transyt-7F files available for review but they were not included in the package. All the files in a electronic format as well as

paper copies need to be provided for the Department's thorough review. The report includes summary findings that are very generic in nature. Highway corridor impacts need to be addressed.

* Accident data and analysis are very generic and does not include the details needed. Specific attention needs to be given to address the pedestrian safety concerns.

Travel Demand Forecasting Methodology and Results & Travel Demand Forecasting Methodology and Results Appendix - Technical Report (June 2002)

* An executive summary as previously suggested, is highly recommended. This summary ought to include information such as transit modal split, LOV and HOV for both with and without Transit (i.e. Tyson or Herndon to DC). It is unclear what are some of the critical assumptions and data sources used.

* Screen-line volumes for the forecasted years under all alternatives, including no-built should be included.

* It is very difficult to assess whether Highway LOS for the corridor has been addressed. It would be helpful to include Highway LOS for both with and without transit improvements and increase land use density, in order to evaluate highway impact and related mitigation measures identified. "Dulles Corridor Transit Trip Summary, 2025 Alternative T4, Home Based Work Person Trips" Table (in the Appendix I, no page # , no table #) shows 64.6% transit share from Tyson to DC Core. In this case, please show the impact on the highway LOS.

Transit Operations and Maintenance Plan - Technical Report (June 2002)

* Page 28 - Shows the summary of dead head calculations. The Metro rail Service and inspection yard sites are listed in column 1 but not show in the report. Please include a map showing these potential locations for the Metro rail Service and inspection yard sites.

* Page 29 - Table 3-8 Some of the columns heading show units and others particularly the distance column does not show any units. Please check all the tables to include the units for columns.

* Chapters 1 &2 - Header on most of the pages incorrectly displays Index of Figures in the upper right hand corner on most of the pages.

* Page 23 - 2nd paragraph second line should read New Carrollton would be replaced instead of New Carrollton would replaced.

Land Use and Socioeconomic - Technical Report (June 2002)

* Page 7 - PURPOSE - "By providing a high-capacity transportation choice for travelers, the proposed project would be better able to meet the anticipated increases in travel demand, reduce the projected use of existing facilities, and help reduce further congestion in the corridor."

This statement would be true if the construction of rail transit in the corridor did not also allow for increased densities. However, the comprehensive plans within the local jurisdictions provide for higher densities with the introduction of rail transit. Therefore, any reduction in auto travel due to the availability of rail transit is exceeded by the increase in demand resulting from the increased densities, and the anticipated benefits are lost.

"Moreover, the ability of the proposed improvements to increase person-moving capacity over long distances with fewer numbers of vehicles,

should help minimize future increases in vehicle miles traveled in the corridor and vehicle emissions."

This statement would be true if the construction of rail transit in the corridor did not also allow for increased densities. However, the comprehensive plans within the local jurisdictions provide for higher densities with the introduction of rail transit. Therefore, any reduction in auto travel due to the availability of rail transit is exceeded by the increase in demand resulting from the increased densities, and the anticipated benefits are lost. In addition, because the proposed improvements only provide for increased transit opportunities in only the east-west directions, the increased travel demand in the north-south directions due to the increased densities is not even partially reduced by the proposed construction, again reducing the anticipated benefits.

* Page 8 - TABLE 1-1: GOALS AND OBJECTIVES "Goal 4 - Support Environmental Quality"- The many objectives listed under this goal would be true if the construction of rail transit in the corridor did not also allow for increased densities. However, the comprehensive plans within the local jurisdictions provide for higher densities with the introduction of rail transit. Therefore, any reduction in auto travel due to the availability of rail transit is exceeded by the increase in demand resulting from the increased densities, and the anticipated benefits are lost. In addition, because the proposed improvements only provide for increased transit opportunities in only the east-west directions, the increased travel demand in the north-south directions due to the increased densities is not even partially reduced by the proposed construction, again reducing the anticipated benefits.

* Page 188 - Table 4-8- SUMMARY OF COMMUNITY IMPACTS OF METRORAIL ALTERNATIVE
"Access Changes - T1, T6, T9, and T4
.. congestion affects two neighborhoods . . ."

This statement would be true if the construction of rail transit in the corridor did not also allow for increased densities. However, the comprehensive plans within the local jurisdictions provide for higher densities with the introduction of rail transit. Therefore, any reduction in auto travel due to the availability of rail transit is exceeded by the increase in demand resulting from the increased densities, and congestion will increase throughout the corridor and beyond.

"Property Values - T1, T6, T9, and T4
Increase at station areas"

The comprehensive plans within the local jurisdictions provide for higher densities with the introduction of rail transit. Therefore, any reduction in auto travel due to the availability of rail transit is exceeded by the increase in demand resulting from the increased densities. While this may still result in increased property values at station areas, the increase in congestion throughout the corridor may result in a decrease in property values in other areas.

Economics and Secondary Development Effects- Technical Report (June 2002)

* Page 5 - Need - "The projected increase in residents and job opportunities, will result in markedly higher traffic volumes on highways and streets in the Dulles Corridor and throughout the region."
*
* "Given that the corridor transportation network currently experiences traffic volumes that meet or exceed the capacity of roadways and intersections, causing severe congestion, these increases in traffic volumes are only expected to worsen conditions."
*
* "Because the existing transit system in the Dulles Corridor

operates on the congested roadways described above, it generally offers a poor alternative to auto travel."

* While these are valid considerations, there is no information as to how this impact will be mitigated other than a mention of the increase in rail transit opportunities with the Metro rail Alternative. While it is recognized that rail would provide some mitigation for congested auto travel in the east-west direction, in this instance the increase in land use densities allowed with the provision of rail transit would result in an increase in traffic that is greater than any reduction that which might be provided by rail patronage. Additionally, it should be anticipated that there will be no reduction in congestion, but an increase in congestion, in the north-south direction.

* Page 28 - Tax Revenue Effects - "Construction of the Build Alternatives will require the purchase of some private land and/or structures for easement, rights-of-way, parking and station facilities, thereby removing these properties from the existing local tax base."

* Should any necessary lands be obtained through a process that would allow for density transfers, which is often the case; there would be no loss of tax revenue. In addition, under this process there may be no cost for acquisition.

* Page 105 - Secondary Effects Related to Density Increases - "The allowable transit-related growth will result in an increase in development in the immediate vicinity of stations throughout the corridor, but does not represent a dramatic increase over the overall level of growth allowed in Fairfax and Loudoun counties"

* As this is already a congested corridor, "an increase of approximately 38 million of 43 million square feet of development over the Baseline Alternative (Page 112)" with associated increase in work vehicle trips of "20,000 per day" (Page 114) and increase of non-commute vehicle trips of "55,000 per day" (Page 114), does pose a significant threat for increased delays.

* "transit related growth allowed in Loudoun County was not included (in) the supplemental transportation demand analysis."

* One proposal in Loudoun County calls for the development of some 19 million square feet of office space alone at the Route 772 Station. No resultant impacts of such development on the Metro rail system, the surrounding roadways, and the corridor in general are provided in the report.

* "Even without mobility benefits associated with the provision of rapid transit improvements, the corridor is projected to absorb high level of development under the Baseline Alternative."

* While it may be possible to physically add all this new development under the Baseline Alternative, it does not seem reasonable to assume that it would actually be built with the higher traffic congestion that would result from such development.

*

* Page 125 - MITIGATION - The mitigation strategies contained in the report speak mainly to the opportunity of the local jurisdictions to limit development in the area of the transit stations if undue congestion is experienced in the area. The report does not look at the impacts to roadways running in a north-south direction or otherwise outside the corridor. As indicated, these roadways would also be affected by the increase in density at the transit locations.

<<Air Quality Comments.tif>>

Cultural Resources Technical Report - (June 2002)

* As stated in previous comments, this study has not established which resources previously identified are in fact eligible for the National Register. This is a fundamental flaw.... There are clearly a number of resources previously documented within the APE (for example Bois de Gosses, Shiloh Baptist Church, Plantation, Wiehle/Sunset Historic District, etc) that have not been evaluated by the FTA or VDHR. Comments on eligibility for each resource need to be obtained from VDHR.

* Without knowing which resources are eligible for listing in the National Register, an effect determination cannot be made.

* Without knowing which resources are eligible and what their boundaries are, Section 4(f) evaluations cannot be made.

* If documentation is provided by the FTA (or their consultants) to VDHR, several of the resources may well drop from consideration in the context of Section 106. There appear to be very few resources that will be eligible for listing in the National Register.

* The report states on page 111, that additional architectural resources may exist beyond those previously documented. This is a potentially fatal flaw in the study... if there are other eligible historic properties they need to be identified now. Their location may well effect a location decision (via Section 4(f)).

* Page 111 - Archaeological survey needs should be depicted on maps.

Hazardous Contamination Materials Technical Report (June 2002)

* No additional comment since the review comments of the 95% Draft EIS, on 3/10/02

Natural Resources Technical Report (June 2002)

* The 95% Draft EIS Technical Report was reviewed and deemed to adequately address Natural Resources issues. Since the Final Draft Technical Report appears to be essentially unchanged, we have no further comments on this section of the report.

Noise and Vibration Technical Report (June 2002)

* Table 3-13 - Several office, restaurant and retail establishments are incorrectly classified as FTA Land Use Category 3 sites. These and similar commercial and industrial properties are not considered noise-sensitive according to FTA.

* The term "Baseline Alternative" as used throughout the report should be more appropriately termed the "No-Build Alternative." While FTA does not specifically require a noise assessment for the future No-Build Alternative, it is appropriate to provide such an assessment where significant changes in the noise environment are anticipated due to factors unrelated to the project. Typically, the No-Build conditions are similar to the existing conditions such that no assessment is needed. However, the No-Build case needs to be addressed in the EIS and thus it is of interest to know if impacts are expected without the project. Such information can be useful in determining if mitigation for the build alternatives is reasonable and feasible.

* The first sentence on page 93 incorrectly states, "While vibration criteria are generally used to assess annoyance from transit sources at the

exterior façade of receptors, ground-borne noise, or the rumbling sound due to vibration room surfaces, is typically assessed indoors." In fact, both ground-borne vibration and noise effects are assessed indoors.

* Section 4.8.2 should be more specific with regard to the locations and proposed methods for mitigating vibration impacts from Metro rail operations. In addition to the potential measures listed, the use of spring rail or moveable point frogs at crossover locations should also be considered.

* Reference section 5.0 does not make mention of the VDOT Noise Abatement Policy.

Visual and Aesthetic Resources Technical Report (June 2002)

* No additional comment since the review comments of the 95% Draft EIS, on 3/10/02

Dulles Corridor Rapid Transit Project DEIS and Section 4(f) Evaluation, Vol. I - (June 2002)

* Pg. S-27, 4th paragraph. (Summary, Environmental Effects) - Next to the discussion for secondary effects of increased development at transit stations, the sidebar comments (right margin) states one of the potential positive effects as being "Reduction in traffic congestion". By itself this statement appears counter-intuitive (you would expect more traffic congestion caused by increased development, as only a portion of new trips are captured by transit). Suggest the margin comment be further explained, such as by "Potential positive effects of concentrated vs. more spread out development".

* Pg. 2-13 - The adopted FY-01 TIP / CLRP specifically identifies the following projects in the Route 28 Corridor between I-66 and VA 7:

Partial interchange at Barnsfield Road, open to traffic in 2003
VA 606 Interchange, open to traffic in 2005
VA 625 Interchange, open to traffic in 2005
VA 606 Interchange, open to traffic in 2005
Westfields Road Interchange, open to traffic in 2006
McLearen Road Interchange, open to traffic in 2006
Innovation Avenue Interchange, open to traffic in 2006
Study widening to 8 lanes and upgrading to a freeway between I-66 and the Dulles Toll Road, study to be completed by 2020
Study upgrading to a freeway between the Dulles Toll Road and VA 7, study to be completed by 2020

The draft FY-03 TIP / CLRP specifically identifies the following projects in the Route 28 Corridor between I-66 and VA 7:

Partial interchange at Barnsfield Road, open to traffic in 2003
VA 606 Interchange, open to traffic in 2007
VA 625 Interchange, open to traffic in 2005
Upgrade VA 28 to a freeway (construct interchanges / eliminate at-grade access points) and widen to eight lanes between I-66 and VA 7, open to traffic in 2015. Interchanges and widening could occur in the 2006 to 2015 time frame with all improvements open to traffic by 2015.

* Planned Roadway Improvements - It is suggested that, when discussing Planned Roadway Improvements, the DCRTP DEIS report make specific reference to their source official document(s): the Six Year Program, the Transportation Improvement Program (TIP) and the Constrained Long Range Plan (CLRP), and the Fairfax County Comprehensive Plan. Please refrain from

using statements about "VDOT's decisions" that are not backed up by the approved Six Year Program or referred to in official correspondence. For projects beyond the Six Year Program time horizon, reference should be made to the source document: TIP, CLRP as appropriate (noting that these documents are the result of cooperative efforts of multiple agencies at various levels --federal, state, local -- and subject to public review), and/or the Fairfax County Comprehensive Plan. Example planned improvements that need source clarification:

- Pg. 2-13. To statements that Route 7 /Route 123 within Tysons Corner are planned for expansion to 8/ 6-8 lanes by 2010
- Pg. 6.6, 2nd to last paragraph: "VDOT is planning several major roadway improvements along Routes 7 and 123 in Tysons Corner.... widening of Routes 7 and 123, and the construction of grade-separated interchanges at Route 7 / Westpark Drive, Route 7/ International Drive, and Route 123/ International Drive... by 2010." (Recall 8/4/00 letter by Tom Farley, included in report's Appendix, asking that the team consider and evaluate the improvements planned by 2010 that are included in the Fairfax County Comprehensive Plan and the regionally adopted Constrained Long Range Plan (CLRP).

* Pg. 3-11, Fig. 3.1-2 - Proposed Land Use in the Corridor: Map and insert identify major roads (Dulles Toll Road, Beltway) as Open Space. Suggest additional label in the legend.

* Pg. 6.53: Table 6.3-11 - suggest adding "Corridor Transit" to beginning of title

* Pg. 8-3 : Table 8.2-2 - suggest adding: in $ million

* Pg. 11.16. - Dulles Corridor Steering Committee is "composed of the executives from each of the project's funding partners". Suggest adding that the committee is chaired by a member of Virginia's Commonwealth Transportation Board (CTB), representing VDOT and VDRPT.

Dulles Corridor Rapid Transit Project DEIS and Section 4(f) Evaluation, Vol. II - (June 2002)

* No Comment.

General Plans, Facilities, Vol. III (June 2002)

* Site Plans for the Route 772 Stop indicate North and South of Dulles Greenway alternatives with Proposed Transit Connector Roads to be constructed by others. There is considerable cost in these roadway improvements particularly the bridge crossing Dulles Green Way. The agency charged with building these roads would need to program and fund these commitments and look at the cost verse area of service/ease of service vs. roadway network serviceability. For example the North Station Facility option could connect to Route 643 with traffic routing to Route 772 interchange avoiding the expensive bridge crossing of Dulles Green Way. This would also effect development / access to the areas of stations.

* Station at Route 28 Stop has a proposed overpass by others shown with no tie into North Green Drive. Given that this road bisects the development and parking of the South Station and will profoundly affect entrance to North Station, there needs to be an agreement by builder of over pass prior to the construction of these stations and the dedication of right of way.

* Sheet 690 - Does pedestrian bridge have adequate clearance over the Herndon Monroe Park and Ride Ramp from Structure?

* Reston Parkway Stop - Shows proposed underpass by others directly conflicting with station- By who? Is it part of regional network? Does

this station preclude overhead crossing over of roadway?

* Sheet 774, Tysons West Station - The frontage Road between West wood Center Drive and Spring Hill Road needs to be available for the frontage road system.

Sheet 796- Do the Pedestrian Tunnels conflict with a depressed Route 7 that would be needed with 7/123 Interchange modifications per the collocation study?

General Plans, Line and Systems, Vol. IV - (June 2002)

* Dulles Green Way was recently widened to 6 lanes from Mainline Barrier Toll Plaza to Route 659. This generally leaves a median of 40' beyond shoulder (20' each side). Rail plans should update base as some locations may require more extensive roadway work.

* SWM ponds may require access for maintenance- show how this is to occur. Also these are regarded as hazards to be protected by guardrail-If joint pond, the pond will need to meet state or county design standards as appropriate.

* Review guard rail / barrier requirements beyond normal roadway warrants if a vehicle striking obstruction would result in hazard or result in collateral hazard to road or rail if hit. IE would damage to facility cause further injury or lose of life (power stations/control facilities).

* Limited access facilities have special requirements that must be met even for the infrequent access to maintain ponds/power stations. If access can be reasonably or economically provided from other than the limited access facility this is recommended.

* All structures including columns should be of adequate design, location and depth so that planned / future interchanges shall not have to replace, reinforce or underpin these structures.

* In general, structures/column placement at intersections should be placed to meet sight distance requirements for streets, side road and entrances.

Comments below apply to most sheets in a series but have been identified at sheet first encountered.

* Sheet 015 L1 Alignment- Cross over location at 1910+00 is pushing curve out at sta. 1900+00 and will require significant roadway work due to overlap. Can this cross over location be shifted?

* Sheet 103 Sta. 1869+00 Most of gore as loop meets EB Dulles Greenway will need to be reconstructed. Match line likely further back.

* Sheet 019 Sta. 1820+00 1815+00 Can curve be made shallower (increase radius) shifting rail station 1810+00 slightly South East to avoid reconstruction of WB Dulles Greenway.

* Sheet 026/30 - Stat 1782+00 has a possible SWM pond located in off ramp gore. This would be an un-ideal location as potential hazard to vehicles leaving the road. Would alternate site be available to the southeast of the ramp or further north?

* Sheet 30- what is clearance from rail structure to shoulders may require roadway widening (bow out) as 6th lane continues in this area The relatively flat skew at 1757+00 will require a relatively large span bridge does vertical alignment allow for required structural depth and clearance over roadway?

* Sheet 42-Sta 1480+00 SWM pond widened-evaluate need if further guard rail is required due to proximity of hazard to road. Provide access from Worldgate Dr.

* Sheet 43- Will pedestrian bridge have adequate clearance over Herndon Park and Ride Ramp Structure?

* Sheet 43/44 - Sta. 1440+00 skew of station results need to rebuild EB DAAR- Can different skew or shallower curve/transit be used to stay within existing DAAR bubble and lessen impacts?

* Sheet 44 - Extend guardrail along ramp to protect TBS/RTC

* Sheet 50 - 1275+00 SWM/BMP protect with guard rail- how will it be accessed or maintained? 1260+00 SWM/BMP will it be maintained / accessed from Sunset Hills?

* Sheet 51 Sta. 1232+00 SW quadrants SWM pond- Coordinate will VDOT Hunter Mill Road Project. May result in joint pond within Loop.

* Sheet 56- Sta. 1090+00 to 1080+00 drafting issue show the rail alignment within the median. If shoulder really needed to be rebuilt, indicate on other plans.

* Sheet 57- Configure SWM pond sta. 1061+00 to avoid rebuilding shoulder and guardrail on WB DTR

* Sheet 58- Sta. 1030+00 structure is spanning loop ramp, a more relaxed curve could allow column placement in area between DTR/outer ramp and loop. This would also pull column out of gore Sta. 1026+00 where it presents a hazard. This might only be achievable if cross over location is moved.

* For Tysons Corner area please incorporate comments made during collocation study.

* Sht. 059 Frontage Road should be maintained between Westwood and Spring Hill Road. Ramp or CD road may some day tie into frontage road system.

* Sht. 060 at Sta. 980+00 Verify that frontage road lane shift at portal meet min. standard.

* Sht. 061 Sta. 946+00 Verify that underground rail (any alternative) is below any interchange configuration with International Drive below Chainbridge Road with Chainbridge Road at present day elevation.

* Sht. 64 Sta. 880+00 - Can curve be modified to avoid column near ramp gore or in Rte. 123 shoulder? Possibly shift to North side of 123.

* Sht. 78 Sta. 980+00 - Ensure TPSS 5 is sufficiently below grade so that interchange configurations shown in Tysons collocation study are not effected or impacted.

* Sht. 79 Station 969+00 - Is blocked out area offset to not impact Route 123/7 configurations shown in Tyson's Co-location study. Move EA out of loop ramp.

* Sht. 82 - See comments for sht. 58

* Sht. 85 - Ensure rail structure is sufficiently below grade to not impact Interchange at Rte. 123/International Drive if Chain Bridge Road is maintained at present grade. This may be a more stringent requirement than shown in the Collocation Study. Any lack of clearance should be resolved prior to any construction.

* Sht. 87 - Is Old Spring House Road being realigned or modified?

* Sht. 88 - See comments for Sht. 64

* Over all "T-9 Design Option" with adequate vertical clearances is the alignment that impacts existing and potential future highway improvements the least, while meeting railway over all objectives.

Thank you for providing this opportunity for VDOT to provide comments on this very important project. Please let me know if I could be of any further assistance.

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4.0 REGULATORY SETTING

This section describes the applicable statutes and regulations that govern air quality in the project study area at both the federal and state levels and describe the procedures necessary to demonstrate compliance.

4.1 STATUTES AND REGULATIONS AFFECTING AIR QUALITY

Public awareness of the effects of air pollution has increased noticeably in recent years. This concern resulted in the passage of the *Federal Clean Air Act of 1970*, as amended in 1977 and 1990. These statutes are the basis for most federal air pollution control programs. The *Virginia State Implementation Plan* (SIP), developed under the *Clean Air Act*, as amended, contains the major Commonwealth-level requirements with respect to the project.

The EPA under the Clean Air Act regulates air quality nationally. The EPA delegates authority to the Virginia Department of Environmental Quality (DEQ) for monitoring and enforcing air quality regulations in the Commonwealth of Virginia. DEQ is responsible for preparing the SIP and submitting it to EPA for approval. DEQ also works with local and regional agencies that have air quality responsibilities.

The study area is within the area covered by the Metropolitan Washington Council of Governments (MWCOG), which has air quality responsibilities related to transportation and air quality planning in the Washington Metropolitan Region. MWCOG develops the region's transportation and air quality strategies as well as specific programs to reduce emissions, and the strategies and programs developed become part of the Virginia SIP.

4.2 AMBIENT AIR QUALITY STANDARDS

Under the authority of the *Clean Air Act*, EPA established a set of *National Ambient Air Quality Standards* (NAAQS) for seven major "criteria" air pollutants (40 CFR 50). These pollutants are: CO, NO_2, O_3, $PM_{2.5}$, PM_{10}, SO_x, and Pb. New NAAQS for O_3 and $PM_{2.5}$ were passed into law on July 16, 1997 (Federal Register Notice July 18, 1997, effective date September 16, 1997).

The standards are intended to protect the public health and welfare. Primary NAAQS are established at levels intended to protect the public health, including sensitive population groups, with an adequate margin of safety. Secondary NAAQS are set at levels designed to protect the public welfare by accounting for the effects of air pollution on vegetation, soil, materials, and other aspects of the general welfare. States can develop ambient air quality standards provided that they are at least as stringent as the National standards. Table 4-1 presents the NAAQS and the *Virginia Ambient Air Quality Standards* (9 VAC 5, Chapter 30), which are identical.

Compliance with these standards must be achieved by any project to be constructed in the Commonwealth of Virginia.

TABLE 4-1: NATIONAL AND STATE AMBIENT AIR QUALITY STANDARDS

Pollutant	Standard Type	Averaging Period	Standard Value[a]
Carbon Monoxide	Primary and Secondary[b]	8-Hour average	9 ppm (10 mg/m^3)[c,d]
	Primary and Secondary[b]	1-Hour average	35 ppm (40 mg/m^3)
Nitrogen Dioxide	Primary and Secondary	Annual arithmetic mean	0.053 ppm (100 µg/m^3)[e]
Ozone	Primary and Secondary	1-Hour average	0.12 ppm (235 µg/m^3)[f]
Respirable Particulates (PM10)	Primary and Secondary	Annual arithmetic mean	50 µg/m^3[g]
	Primary and Secondary	24-Hour average	150 µg/m^3[g]
Lead (Pb)	Primary and Secondary	Quarterly mean	1.5 µg/m^3
Sulfur Dioxide (SO_2)	Primary	Annual arithmetic mean	(0.03 ppm) 80 µg/m^3
	Primary	24-Hour average[h]	(0.14 ppm) 365 µg/m^3
	Secondary	3-Hour Average	(0.5 ppm) 1300 µg/m^3

NOTES:

a Short-term standards (1 to 24 hours) are not to be exceeded more than once per calendar year.

b Former national secondary standards for carbon monoxide have been repealed.

c ppm: parts per million.

d mg/m^3: milligrams per cubic meter.

e µg/m^3: micrograms per cubic meter.

f Maximum daily 1-hour average. The ozone standard is attained when the expected number of days with maximum hourly average concentrations above the value of the standard, averaged over a three-year period, is less than or equal to one.

g The PM10 standard is attained when the expected number of days with maximum hourly average concentrations above the value of the standard, averaged over a three-year period, is less than or equal to one.

h National standards are block averages rather than moving averages.

Sources: National - 40 CFR 50. Virginia - 9 VAC 5, Chapter 30.

4.3 ATTAINMENT STATUS AND STATE IMPLEMENTATION PLAN REQUIREMENTS

In addition to the standards described above, the *Clean Air Act* specifies geographic areas of the country, which have measured pollutant concentrations that exceed the levels prescribed by the air quality standards (non-attainment areas). It classifies non-attainment areas and specifies compliance deadlines for these areas.

The project is located in Fairfax and Loudoun counties, which are located in the Metropolitan Washington, D.C.-MD-VA Non-attainment Area. EPA has classified this area as attainment for all pollutants except ground-level ozone. With respect to ozone, the EPA designated the Metropolitan Washington D.C.-MD-VA Non-attainment Area, including Fairfax and Loudoun counties, as a [illegible] non-attainment area under the Clean Air Act. The ozone non-attainment area must demonstrate attainment with the ozone standards by 2005. EPA provided the region an extension of time to 2005, due to the effects of ozone transport.

In compliance with the mandates of the *Clean Air Act*, DEQ has developed a SIP for air pollution ntrol. The SIP defines the process by which the ozone NAAQS will be attained, and defines control strategies and schedule that the Commonwealth will employ to reduce emissions in order to reach attainment. To comply with the SIP, a proposed project must not result in any new violations of the NAAQS or *Virginia Ambient Air Quality Standards*, must not exacerbate any existing violations, and must meet the conditions of the conformity regulations.

4.4 CONFORMITY WITH THE VIRGINIA SIP

Under the Clean Air Act, it is the responsibility of federal agencies, such as the FTA, to ensure that a proposed project conforms to the SIP. Because the study area is located in an ozone non-attainment area, a conformity determination is required under Section 176(c) of the Clean Air Act.

EPA has issued two separate regulations for demonstrating conformity of Federal actions in non-attainment areas to the SIP. These regulations are the *Transportation Conformity Rule* and the *General Conformity Rule*. The *Transportation Conformity Rule* (40 CFR Part 93 Subpart A) applies to all transit projects developed, funded, or approved by FTA under the *Federal Transit Act*, including the Dulles Corridor Rapid Transit Project. The Commonwealth of Virginia has established transportation conformity regulations (9 VAC 5 Chapter 150) that are similar to the Federal conformity rules.

The transportation conformity process applies to the Dulles Corridor Rapid Transit Project because FTA will fund the project. Under the *Transportation Conformity Rule*, if a project is not included in the area's Transportation Plan or Transportation Improvement Program (TIP), then emissions inventory (mesoscale or regional emissions burden) analysis must be performed demonstrate conformity. The emissions inventory must demonstrate that the regional emissions with the Build Alternative [redacted]. On the other hand, if a project is included in the area's Transportation Plan or TIP, and if FTA and EPA have approved this plan or program as conforming to the SIP, then the project is presumed to conform, [redacted]

Stay below prescribed regional air quality limits.

Delete ?

The Transportation Plan for the region is the *Financially Constrained Long Range Plan* (National Capital Region Transportation Planning Board, amended November 15, 2000) prepared by the MWCOG Transportation Planning Board. The Dulles Corridor Rapid Transit Project is included in the *Financially Constrained Long Range Plan*. Therefore, the project conforms to the SIP, subject to continued approval of the *Constrained Long Range Plan* by FTA and EPA and eventual full conclusion in an approved and conforming TIP. Near-term phases of the project are included in an approved conforming TIP (FY01). As the dates for implementation of the later phases of the project approach, they will be included in approved and conforming TIPs

Currently, the Dulles Corridor Rapid Transit Project is included in the MWCOG CLRP and TIP. Therefore, because the project is part of the approved CLRP and the TIP for the entire region, there is no regulatory requirement to prepare a project-specific emissions inventory (i.e., project level conformity is assumed).

For the intersections and the park-and-ride facility analyses, CO concentrations were evaluated for the existing conditions in 2000, and the future conditions for the Baseline (or No-Build) Alternative and the four Build Alternatives. Because the project may be built in phases, the future conditions were analyzed with 2006 as the opening year for the BRT and BRT/Metrorail Alternatives; 2010 as the opening year for the full Metrorail Alternative; and 2025 as the project design year for all alternatives.

Although there may be concern about severe traffic congestion along major highways of the area, there are currently no federal or State regulations or requirements to analyze the CO concentration along highway mainlines. Furthermore, the adverse levels of CO due to traffic on highway mainlines are very unlikely to occur for two reasons: (1) recent model year vehicles have relatively low emission rates and (2) the rapid drop off of CO concentrations due to the large distances between the travel lanes and receptors located beyond the highway right-of-way. For these reasons, EPA and DEQ do not require assessment of CO concentrations from highway mainlines.

5.1.1 Analysis Methods

The analysis methodology consists of an intersection assessment and a dispersion modeling analysis for computing CO concentrations at candidate intersections along the corridor.

Intersection Screening

Motor vehicles emit CO at the highest rates when they are operating at low speeds or idling in queues. For this reason, the potential for adverse air quality impacts is greatest at intersections where traffic is most congested. EPA has specified criteria (U.S. EPA-454/R-92-005, *Guideline for Modeling Carbon Monoxide From Roadway Intersections,* November 1992) based on traffic level of service (LOS) and volume for screening the intersections in the study area and selecting intersections for detailed air quality analysis. Level of service is a measure of the performance of the intersection in processing the volume of vehicles attempting to pass through it. Level of service is expressed as a letter rating based on the amount of overall delay at the intersection, where LOS A is best and LOS F worst. The EPA's LOS criterion states that intersections that currently operate at LOS D or worse, or would operate at LOS D or worse under future conditions, should be considered for air quality analysis. In applying the EPA screening procedure to the project, the candidate-signalized intersections in the traffic study area were ranked by LOS and by total volume in accordance with the guidelines. The intersections with the worst LOS and those with the highest volumes, or a combination of the two, were selected for detailed air quality analysis.

Based on the results of the intersection screening analysis, 15 sites listed in Table 5-2 were selected for analysis. Figure 5-2 illustrates the locations of these sites.

In addition to the intersection analysis, a typical park-and-ride facility was modeled to assess the potential air quality impacts of such facilities. The Route 606 Park-and-Ride Facility was selected as a worst-case representative because it is the largest planned park-and-ride facility, and experiences a high ratio of demand to capacity. The Route 606 facility is likely to experience a high degree of traffic congestion and, consequently, high CO concentration levels. The park-and-ride analysis also includes the adjacent intersections of Route 789/Lockridge Road with the Park-and-Ride Entrance Road and the Park-and-Ride Exit Road. These two additional sites are also listed in Table 5-2.

eliminate impacts in the areas above the tunnel and station, but would increase the potential for localized impacts at the tunnel portals and station access shafts where equipment must enter and excavate must be removed. Alignment T1 includes the tunnel section but only three stations, and accordingly, would be expected to have generally less potential impact than the other alignments.

Construction of the Phased Implementation Alternative would involve the implementation of BRT and Metrorail over an extended period of time. Although the construction effects would be the same as those described above for the other three alternatives, the timing would be different. The effects of constructing Metrorail through Tysons Corner would add to the effects of constructing BRT between the Orange Line and Loudoun County. These effects would then be followed by the effects of constructing Metrorail from Tysons Corner to the end of the study area in Loudoun County. Small increases in fugitive dust and emissions from construction equipment would occur as a result of Phased Implementation over what is described above. This would occur as a result of the demolition of the Spring Hill Road Station, the BRT ramps between the Tysons West Station, and extension of the construction period that would occur during phased implementation.

On a corridor-wide basis the potential air quality impacts due to construction of the BRT Alternative would be least, the impacts from construction of the BRT/Metrorail Alternative would be greater, and those of the Metrorail Alternative and the Phased Implementation Alternative would be largest. For the rail alternatives in Tysons Corner, the expected potential impacts would be least with Alignment T1, somewhat greater with Alignments T6 and T9, and greatest with Alignment T4.

5.3 CONSTRUCTION MITIGATION

Direct emissions from construction equipment would not be expected to produce adverse effects on local air quality provided that all equipment is properly operated and maintained. Appropriate mitigation could consist of assurance of proper operation and maintenance, specification of low-emissions equipment (EPA Tier 2 compliant, alternative-fueled, or retrofit with emissions controls), and prohibition of excessive idling of engines.

Traffic management techniques are available during the construction period that could mitigate increased emissions from traffic congestion due to lane closures, detours, and construction vehicles accessing sites. Examples of these techniques include development of site-specific traffic management plans; temporary signage and other traffic controls; designated staging areas, worker parking lots (with shuttle bus service if necessary), and truck routes; and prohibition of construction vehicle travel during peak traffic periods.

Potential fugitive dust impacts can be mitigated through good "housekeeping" practices such as water sprays during demolition; wetting, paving, landscaping, or chemically treating exposed earth areas; covering dust-producing materials during transport; limiting dust-producing construction activities during high wind conditions; and providing street sweeping and tire washes for trucks leaving the site. Such practices during construction would meet VDEQ regulations for fugitive dust and emissions as outlined in VDEQ regulation 9 VAC 5-50-90.

Predicted CO Concentrations: Intersections

The air quality modeling analysis for the BRT/Metrorail Alternative was conducted in the same way as for the Baseline and BRT Alternatives. The project team determined that Tysons Corner

6.0 CONCLUSIONS

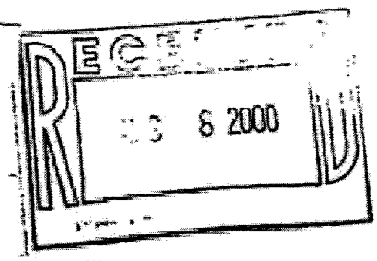
As shown in Tables 5-5 to 5-10, carbon monoxide concentrations do not vary appreciably between the BRT, Metrorail, BRT/Metrorail, Phased Implementation alternatives, nor will they vary from the Phased Implementation Alternative, indicating a fairly equal diversion of vehicles into transit under each of the selected alternatives.

The project is not predicted to cause or exacerbate a violation of the applicable NAAQS, and with respect to regional emissions and conformity, the project has been shown to conform to the SIP. No mitigation measures are necessary with respect to compliance with the transportation conformity requirements.

Construction activities have potential to produce short-term, localized air quality impacts. These potential impacts can be minimized with appropriate mitigation measures.

Scoping Comments





COMMONWEALTH of VIRGINIA

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RLES D. NOTTINGHAM
COMMISSIONER

THOMAS F. FARLEY
DISTRICT ADMINISTRATOR

August 4, 2000

Mr. Leonard Alfredson, PE
Washington Metropolitan Area Transit Authority Project Manager
Dulles Corridor Rapid Transit Project
1550 Wilson Blvd., Suite 300
Arlington, Virginia 22209

Subject: Dulles Corridor Rapid Transit Project – PE/NEPA Agency Scoping Comments

Dear Mr. Alfredson,

As the Federal Transit Administration (FTA), Virginia Department of Rail and Public Transportation (VDRPT) and Washington Metropolitan Area Transit Authority (WMATA) are preparing an Environmental Impact Statement (EIS) for the multi-phased Dulles Corridor Rapid Transit Project (DCRTP), Virginia Department of Transportation (VDOT) looks forward to a very successful and well coordinated effort on this very exciting project. We acknowledge and fully support the Governor's and the Secretary of Transportation's identification of this project as one of the high priority projects for the region.

Per your request, VDOT offers the following input and comments, and requests your incorporation of these issues in the scope of work for the EIS:

- The DCRTP should include the following roadway improvement projects currently programmed by VDOT:

  1. Widening of Route 7 to 6 lanes, from:
     - Rolling Holly Drive to Reston Parkway. Tentative location public hearing scheduled for Summer of 2001 and construction advertisement for Summer 2003.
     - Reston Parkway to Dulles Toll Road (DTR) (including the interchange at Route 7 & DTR), currently planned to coincide with the schedule above; however, this segment is only funded through the preliminary engineering phase at this time.

  2. Reconstruction of the DTR interchange at Hunter Mill Road, which will also consider ancillary improvements to Hunter Mill Road and Sunset Hills Road necessary to increase operational efficiency of the interchange. A location public hearing is currently scheduled for Spring of 2001 for Phase I, which will result in identification of construction improvements for the mid and long terms.

3. Realignment of Hunter Mill Road from Hunter Station Road to Sunrise Valley Drive (on proffered right of way) is currently scheduled for a location public hearing in the Winter of 2002, with construction advertisement scheduled for Summer of 2003.

4. Construction advertisement of additional toll collection capacity on the westbound DTR ramp at Spring Hill Road is scheduled for Spring 2001.

5. Implementation of an open toll plaza configuration for the two adjacent "Smart Tag only" lanes at the DTR's Main Toll Plaza (both directions) is scheduled for Fall of 2000.

6. Widening of Route 123 to 6 lanes from I-495 to DTR is currently in the final design phase with construction advertisement scheduled for December 2000. This project is managed by Fairfax County under an agreement with VDOT.

- The Fairfax County Department of Public Works and Environmental Services is currently developing design plans for replacement and additional bus-only slip ramps between the DTR and Dulles Airport Access Road (DAAR). The DCRTP should also include these improvements.

- According to the Fairfax County Comprehensive Plan and the current 1999 regionally adopted Constrained Long Range Plan (CLRP) (interchanges not specifically identified) the following improvements are planned by 2010. These planned improvements must be considered and evaluated during this phase of DCRTP:

1. Widen Route 7 to 8 lanes from DTR to I-495
2. Widen Route 7 to 6 lanes from the Fairfax. Co. Parkway to DTR (this will necessitate reconstruction of the DTR Interchange)
3. Widen Route 123 to 8 lanes from Route 7 to I-495
4. Widen Route 123 to 6 lanes from I-495 to Great Falls Road (segment between I-495 and DTR is funded and currently underway, see #6 above)
5. Interchanges @:
    - Route 123 & International Drive
    - Route 7 & International Drive
    - Route 7 & Westpark Drive
    - Interchange modification at Route 123 & Route 7
6. Widen DAAR to 6 lanes
7. Capital Beltway study (may result in I-495 reconfiguration of its interchanges with DTR and Routes 7 & 123) currently underway

Currently under review, the year 2000 CLRP is anticipated to be adopted by Fall of this year. Upon adoption of the Plan, the year 2000 inputs should be used for the PE/NEPA process for the DCRTP.

As agreed upon at the July 11, 2000 pre-scoping meeting, the PE/NEPA process for the Dulles Corridor Rapid Transit Project will develop concept and design plans at 30% for these projects. The design of the highway improvements will be carried to the same level of design as the rail project at this stage, so that potential conflicts among all the transportation elements will be avoided. To that end, we recommend that WMATA initiate working technical meetings with VDOT and FDOT during the

NEPA/PE phase to address technical issues, and particularly, the co-location of the rail alignment with future roadway improvements in Tysons Corner.

- Per the July 11th pre-scoping meeting discussions, the PE/NEPA process will continue the effort to define system requirements for the proposed technology concepts (as described in the adopted "Dulles Corridor Rapid Transit Project Technology Implementation Plan"). It is critical to further define technology tasks in various phases and to assimilate the outcome into the project design. The refinement of the technology could be undertaken by the existing Technology Task Group and/or an ITS design consultant. 6.11.3

- Presently, VDOT and Fairfax County Staffs have been closely working with elected officials and citizen representatives from the Tysons and Reston Communities per House Joint Resolution 276 (House Document No. 23 - Tysons Corner Interim Transportation Improvements), General Assembly of Virginia, 1999; and Senate Joint Resolution 335/ House Joint Resolution 335 (Senate Document No. 35 - Transportation Improvements for the Reston Area), General Assembly of Virginia, 2000. The Town of Herndon has recently initiated consultant procurement to complete concept design, traffic analysis and engineering feasibility for the provision of pedestrian and vehicular access from Herndon to the planned BRT and rail station at the Herndon/Monroe park & ride facility. We recommend that pedestrian circulation, as well as other recommendations identified as part of these three efforts, be incorporated into the PE/NEPA process at this early stage. 6.9.2

- The 2020 Plan, adopted by the Northern Virginia Transportation Coordinating Council, provides the overall vision guiding transportation improvements over the next 20 years. The Plan will serve as a useful resource for the Dulles Corridor Rapid Transit Project during the PE/ NEPA phase. 6.7.7

Finally, we recommend that the technical staff currently working on parallel tracks on several subjects work together to facilitate a balanced multi-modal transportation system. These subject areas are: Land Use Density, Travel Forecast, Highway Design, Rail Stations /Alignment, and Pedestrian Circulation. This is the appropriate time for the technical staff currently working on these separate areas to share and test ideas in a coordinated manner. 6.7.7

Thank you for providing this opportunity for VDOT to comment on this very important project. As in the past, my staff and I will be available to provide technical assistance or to help clarify any issues.

Sincerely,

Thomas F. Farley

cc: Mr. Arthur Bowen – Deputy Secretary of Transportation
Mr. Kenneth Klinge – Chairman of Dulles Corridor Task Force, CTB Member
Mr. Leo Bevon – Virginia Department of Rail & Public Transportation

COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION
1401 EAST BROAD STREET
RICHMOND, 23219

DAVID R. GEHR
COMMISSIONER

July 2, 1999

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CITY OF FALLS CHURCH
CITY MANAGER'S OFFICE

Falls Church Transportation Plan

Mr. Hector A. Rivera
City Manager
Harry E. Wells Building
300 Park Avenue
Falls Church, Virginia 22046-3332

Dear Mr. Rivera:

Thank you for your review of the suggested scope of work for the local transportation plan and the task oriented development for a small urban area.

We have asked the Transportation Planning Division to review the City's comments and recommendations for inclusion in the scope of work to address your particular concerns. Also, we have requested they provide an estimate of the cost for a transportation study of this size and nature so possible funding sources may be investigated.

With these issues and task underway, it will take about 30 days to complete. I would suggest your meeting with the Secretary, District Administrator and yourself be postponed until the middle of August so sufficient information may be available to discuss possible funding sources.

Sincerely,

Reginald H. Beasley, Jr.
Urban Programs Engineer

RHBjr/aas
cc: Mr. Wayne J. French
Mr. Thomas A. Farley
Mr. Grady E. Ketron

COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION

3975 FAIR RIDGE DRIVE
FAIRFAX, VA 22033-2906
(703) 383-VDOT (8368)

RLES D. NOTTINGHAM
ING COMMISSIONER

THOMAS F. FARLEY
DISTRICT ADMINISTRATOR

December 7, 1999

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CITY OF FALLS CHURCH
PLANNING

Mr. Willie Best, Acting City Manager
City of Falls Church
300 Park Avenue
Falls Church, VA 22046-3332

Subject: Falls Church Comprehensive Traffic Management Study Plan

Dear Mr. Best:

Last month you, Otis Smith, and I met to review the status of discussions between the city and VDOT on a comprehensive traffic management study plan for the city of Falls Church.

The city continues to hope VDOT will underwrite a comprehensive study with some "VDOT grant-based" funding. VDOT continues to offer existing data and technical advice on development of the city's scope-of-work.

At the city's request, VDOT's Transportation Planning Division developed a conceptual scope-of-work for the city to tailor to their needs. A rough cost estimate indicated $1.35 million. In a letter of August 5th, Reginald Beasley of VDOT's Urban Division indicated "...the Department has limited resources in both staffing and funding to pursue a study of this magnitude."

When we met in November, we discussed ways to trim the overall costs by having city and VDOT staff undertake some of the tasks in the city's June 25, 1999 scope-of-work letter to Reggie Beasley (from Hector Rivera, City Manager). I have copied and numbered the list below:

1. A comprehensive inventory and assessment of existing transportation facilities, parking facilities, and traffic conditions in the city – vehicular and non-vehicular (pedestrian, bicycle, and mass transit). This should also note deficiencies.
2. A review of the existing transportation systems in Arlington and Fairfax counties and previously developed regional transportation plans.

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CITY OF FALLS CHURCH
CITY MANAGER'S OFFICE

3. A forecast of traffic, travel, and parking demand as result of (a) the BRT, (2) future rail links to metro, (3) future anticipated development within and near the city, (4) the above scenarios if HOV does not exist on I-66, and (5) the above scenario if HOV begins at Route 29 instead of the Beltway.
4. An identification of future transportation needs and deficiencies.
5. An assessment of the projected impacts on special needs populations, in particular the elderly and physically disabled.
6. A comprehensive and workable Transportation Management Plan that includes alternatives for state of the art traffic-calming techniques as well as for each mode of transportation and commensurate parking resources. This plan must meet the goal and objectives as stated.
7. A model that demonstrates this plan.
8. An implementation plan.
9. Public information made available for the city's web page.

You indicated that city staff could undertake numbers 1, 5, 8, and 9. I indicated VDOT could provide information on existing systems from the draft 2020 plan for number 2 and the 2020 model and assumptions for number 3 [(subtasks ("a"), ("2"), and ("3")]. Future transportation needs (number 4) at the broad-brush level are available from the draft 2020 plan and that information could also be provided.

We decided that neither the city nor VDOT staff could undertake the city level specific details from 2, 3, and 4 and all of numbers 6 and 7. Numbers 6 and 7 require a transportation consultant to pull all the information together, analyze the data, and develop a plan and model.

I spoke last week with Ken Lantz, Division Administrator for VDOT's Transportation Planning Division in the Central Office. He suggested the city apply to FHWA for the Transportation and Community System Preservation Pilot. The program is "...a comprehensive initiative of research and grants to investigate the relationships between transportation and community and system preservation and private section-based initiatives." I've attached a copy of the Tea-21 brochure page describing the program. I've also included a reference out of ITE Washington Weekly for this FHWA program.

Another source of information we discussed when we met was the environmental document under National Environmental Policy Act (NEPA) for the Dulles Corridor Transportation Study. The supplement to the earlier Dulles Corridor Transportation Study was recently released and the NEPA document is one of the next steps.

As stated in the city manager's letter of June 25th, the Dulles projects, with their connections to the East and West Falls Church Metro stations, will significantly compound the city's existing problems. The impacts of the BRT and rail project on the metro stations and adjacent neighborhoods should be an important part of the environmental document. The data and analysis of the impacts and the development of mitigation measures should contribute to needed

information for the city's transportation plan. I suggest you speak with Mr. Leo Bevon, Director of VDRPT, the state agency leading the Dulles initiatives, about the environmental document and opportunities to work with the consultant team.

Some of the city's concerns rest with cut through traffic, speeding, and parking. Traffic calming studies are usually conducted at the local level with extensive community involvement and with advice from VDOT's Traffic Engineering staff. There are two high profile traffic calming studies in Northern Virginia: the Highway 50 Traffic Calming Study funded under federal TEA-21 and Georgetown Pike traffic calming which came out of 1999 state legislation as a study, but with no appropriation. Ilona Kastenhofer, the new VDOT Traffic Engineer, is chairperson of VDOT's traffic calming committee and is a participant in both of these studies. She can be reached at (804) 786-2965.

The City of Falls Church has a number of transportation and land use challenges ahead. VDOT will support the city where we can with data and technical advice. We do not have grants to fund developing a citywide comprehensive transportation/traffic calming/redevelopment plan as envisioned by former city manager Mr. Rivera. I understand Mr. Rivera hoped that Secretary Ybarra would be able to help the city secure funding for the comprehensive study. I suggest you explore the options I have outlined above and then return to Secretary Ybarra to address the funding question. Perhaps she would have additional options to suggest. As you progress with the development of your study, please let me know if the Transportation Planning Section and/or the Northern Virginia District can be of assistance.

Sincerely,

Jo Anne Sorenson
Assistant District Engineer for Planning and Development

Enclosures

cc: Leo Bevon
Ken Lantz
Reginald H. Beasley
Bob McDonald

K.3.9 Commonwealth of Virginia, Marine Resources Commission

- October 28, 2002

Atkinson, Mathew

From: Mark Eversole [MEversole@mrc.state.va.us]
Sent: Monday, October 28, 2002 1:17 PM
To: dullescorridor@aol.com
Subject: Comments for R02-1

All work to be performed in, over or under, waters within the Commonwealth of Virginia, require the submission of a Joint Permit Application (JPA) to the Virginia Marine Resources Commission (VMRC). VMRC would then act as the clearing house, distributing copies of the application to state, local and federal agencies for review and comments.

Detailed engineered plans showing the exact location of all water crossings will be required to determine whether or not a permit will be required from the Marine Resources Commission.

The review and permitting process normally requires a minimum of 90 days, so it is advised to contact this agency as soon as final plans are complete, to allow ample time for public notice and permitting.

Copies of the JPA are available on the internet, or by contacting this office.

Mark Eversole
Environmental Engineer
Virginia Marine Resources Commission
2600 Washington Avenue
Newport News, Virginia 23607
757-247-8063
757-247-8062 Fax

K.4 COUNTY

K.4.1 County of Fairfax, Board of Supervisors

- December 17, 2003
- December 16, 2003
- Verbal Testimony at 12/2003 Public Hearings (Ms. Kathy Hudgins)
- Verbal Testimony at 12/2003 Public Hearings (Mr. Gerald E. Connolly)
- August 28, 2002
- August 16, 2002
- August 13, 2002
- August 2, 2002

COMMONWEALTH OF VIRGINIA
COUNTY OF FAIRFAX
BOARD OF SUPERVISORS
OFFICE OF THE CHAIRMAN

Suite 530
12000 GOVERNMENT CENTER PARKWAY
FAIRFAX, VIRGINIA 22035-0071

TELEPHONE 703/324-2321
FAX 703/324-3955
chairman@fairfaxcounty.gov

KATHERINE K. HANLEY
CHAIRMAN

December 17, 2003

The Honorable Whittington W. Clement
Secretary of Transportation
Ninth Street Office Building
202 North 9th Street
Richmond, Virginia 23219

Dear Secretary Clement:

At its meeting of December 8, 2003, the Fairfax County Board of Supervisors affirmed its endorsement of the revised Locally Preferred Alternative (LPA) for the Dulles Corridor Rapid Transit Project. The Board recognizes that constructing Phase I of this rail extension represents the essential first step to constructing the full LPA to Dulles Airport and Route 772 in Loudoun County. While we understand that the Federal Transit Administration will be considering funding Phase I of the Project, the Board also recognizes that as the financial plan continues to be refined, other phasing, timing and financing options may have to be evaluated and pursued. The Board supports such efforts that will help in advancing this project to final design and construction. The Board also urges that the Commonwealth work closely with WMATA to explore other options for accelerating the engineering work on this project. Therefore, we encourage and support the Virginia Department of Rail and Public Transportation's efforts to conduct preliminary engineering for the entire project.

The Board has the following comments regarding the Supplemental Draft Environmental Impact Statement:

- The Board requests that construction of the parking structure at the Wiehle Avenue Station not commence until the Full Funding Grant Agreement for Phase II is executed. However, deferring such construction should not preclude land acquisition and station access improvements at this station.

- Pedestrian access to all stations needs greater attention from the Project Team. Station plans should clearly show pedestrian access points and necessary adjacent facility improvements such as cross walks and sidewalks/trails. Station plans should clearly show pedestrian access points and necessary adjacent facility improvements such as cross walks and sidewalks/trails. Alternate points of access to the Tysons West and

Tysons Route 7 Stations should be evaluated. Staff is collaborating with a subcommittee of the County Non-Motorized Transportation Committee to identify pedestrian facility improvements that should be constructed between now and the initiation of rail service.

- The traffic mitigation measures identified in the SDEIS should be programmed by the Virginia Department of Transportation at the earliest possible date so that they are constructed before the rail system begins operation.

- At the Tysons West Station, consideration should be given to locating the parking facility and pedestrian access on the south side of Tyco Road. Locating the parking structure on the south side of Tyco Road may be more favorable to joint development. Locating pedestrian access on the south side of Tyco Road may serve a greater number of pedestrians.

- The County requests technical back-up information quantifying the benefits of the noise mitigation measures proposed for the West Falls Church S & I Yard and the efficacy of the noise mitigation measures for aerial sections of track.

- Facilities associated with the Tysons East Station are impacted by a Resource Protection Area (RPA) and an Environmental Quality Corridor (EQC). Several proposed stormwater management facilities at other sites are, or may be, in "new" RPAs as adopted by the Board on July 7, 2003. Coordination with County staff is necessary to ensure that these issues are addressed appropriately.

- The County requests further information regarding proposed stormwater management measures for several of the station facilities (Wiehle Avenue; Tysons West; and Tysons East), as no such measures are identified on the proposed general plans for these facilities. Stormwater management and best management practice measures should, at a minimum, be consistent with County requirements.

As you know, the Express Bus System in the Corridor, operated by the County with support from VDRPT, has been immensely successful. Until rail is operating, the County needs VDRPT's continued support to maintain and enhance this service. The LPA included incorporating elements of Bus Rapid Transit into the existing bus operation. In reality, existing express bus service already is Bus Rapid Transit in many respects. However, adding additional BRT elements

between now and the opening of Phase I rail would enhance the system consistent with the LPA selection and would continue to build ridership for rail.

The Board considers the Metrorail extension through Tysons Corner to Dulles Airport and Loudoun County to be of the highest priority. We commend the Commonwealth and the Project Team on its progress and commitment, and we pledge to continue our partnership with you to move this key project forward as expeditiously as possible.

Sincerely,

Katherine K. Hanley

KHH/lmc

cc: Members, Board of Supervisors
J. Kenneth Klinge, Commonwealth Transportation Board
Kirby Bowers, County Executive, Loudoun County
Steve Owen, Town Manager, Herndon
Richard A. White, General Manger, WMATA
James E. Bennett, President, MWAA
John Dittmeier, Acting Project Manager, WMATA
Karen Rae, Director, Virginia Department of Rail and Public Transportation
Corey Hill, Virginia Department of Rail and Public Transportation
Karl Rohrer, Virginia Department of Rail and Public Transportation
Anthony H. Griffin, County Executive
Young Ho Chang, Director, Department of Transportation
James P. Zook, Director, Department of Planning and Zoning
Transportation Advisory Commission, Fairfax County

COMMONWEALTH OF VIRGINIA
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December 16, 2003

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21.333

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Secretary of Transportation
Ninth Street Office Building
202 North 9th Street
Richmond, Virginia 23219

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Sincerely,

Kate Hanley

Katherine K. Hanley

KHH/lmc

cc: Members, Board of Supervisors
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Karl Rohrer, Virginia Department of Rail and Public Transportation
Anthony H. Griffin, County Executive
Young Ho Chang, Director, Department of Transportation
James P. Zook, Director, Department of Planning and Zoning
Transportation Advisory Commission, Fairfax County

MR. KLINGE: I am sure that many of you here tonight are anxious to provide us with your comments, concerns and suggestions. As explained at the beginning of the meeting, we will hear from people who registered in advance first followed by those registered tonight. If you have not signed up yet, please see Mr. Fairfax McCandlish at the registration desk at this time so that we can accommodate you.

If you wish to provide comments and do not wish to speak tonight at tonight's hearings, I encourage you to fill out a comment form, write us a letter or send us an e-mail. We will be accepting comments until the public-comment period closes at 5:00 p.m. on December 20, 2003.

Now I shall introduce the public officials here present to testify. The first is Supervisor Kathy Hudgins.

MS. HUDGINS: Good evening. I am Supervisor Kathy Hudgins of the Hunter Mill District. I am here, first of all, to welcome you to the Hunter Mill District. I want to make note

that this Supplemental Draft EIS is reflective of representing nearly all of the Hunter Mill District. I want to make note that the District and the two stations starting at Tysons Corner between 123 and Route 7 and the toll road are part of Hunter Mill District and the remaining stations that are part of the Fairfax County and Dulles Corridor Are part of the Hunter Mill District.

I note that however the area to be served by this project is a very critical area to Hunter Mill District. As you will hear testimony tonight, I hope that you will keep in mind the growth in this District, the traffic congestion that we face and the critical importance of solving those problems.

The Board of Supervisors approved the local preferred alternative last year for the full project. I believe, as we look at the Supplemental Draft EIS, the testimony that was heard at that time will reflect that as well as support for rail in the Corridor.

I know that we will hear some concerns

about it, but I think that, as we address those concerns, I hope that we will be able to complete our commitment that we made when we supported the local preferred alternative in the Corridor.

I would like to a moment, in that you have indicated that public officials have ten minutes; the Reston Association is a homeowner association of over 50,000 people. Susie Jones is here to testify for us and I hope that you will be able to incorporate as much time as possible for her to provide her testimony.

Thank you very much.

MS. HANLEY: Thank you.

MR. KLINGE: Thank you. Next is Delegate Ken Plum.

MR. PLUM: Thank you very much and good evening. My name is Kenneth Plum. I welcome you to my neighborhood. I live two blocks down the street at 2073 Cobblestone Lane, Reston. I speak to you tonight as a member of the Virginia House of Delegates representing the 36th District but I also speak as Chairman of the Dulles Corridor Rail

21,316 MR. CONNOLLEY: Thank you, Madame Chairman, and thank you all for being here and for having this public hearing. I support the Metrorail alternative and have voted for the local preferred alternative and I believe that a number of the refinements contained in the Supplemental Draft EIS reflect a number of the concerns that both the public and a number of local elected officials had.

This Corridor, as you have heard tonight, is going to be the second largest employment center in the region next only to Washington, D.C., itself. The idea that the second-largest employment center in the region, one of the most vibrant regions in the United States, would not be served by rail is, to me, something we don't want to contemplate.

We have replanned much of the land in the Corridor in advance of rail. Tysons was replanned in 1994. Merryfield was replanned a couple of years ago. The Dulles Corridor, including Reston and Herndon, were replanned about a year and a half

ago in anticipation of rail.

Rail has, as was pointed out in the study, the largest capacity. While bus rapid transit may serve on an interim basis in parts of the Corridor, it won't work in Tysons because it competes with the same congestion the rest of us do. And, at the end of the day, it only has about a third of the capacity of rail.

One might note that one of the places frequently cited and traveled to to study bus rapid transit and the efficacy of bus rapid transit is Curitiba, Brazil, had recently issued an RFP for guess what? Rail, because it has run out of capacity.

I think the experience of our region is if you build it, they will use it, when it comes to mass transit. One of the critical pieces that we don't yet have in this region in sufficient quantity is choices for people. Give us choices. In all too many instances, the only choice most of us have is to get in our automobile to go from Point A to Point B, whether it be to commute to

work or whether it be other kinds of travel, taking the kids to soccer or going to church or synagogue or temple or whatever it may be.

I believe one of the critical pieces of rail is providing a key choice in a key corridor that could move 86,000 people a day.

Now, the other thing one is struck by in listening to much of the testimony, especially the critical testimony and many of the folks make [illegible] points about this concern or that concern. But, you know, at the end of the day, it is awfully hard to get anything in this region in transportation. If you want, there must be at least 3 billion problems and reasons why you shouldn't go forward with a project like this.

I think leadership is about leading. At some point we have to decide this is the right thing for our region, this is certainly the right thing for our community. Is it perfect? Not much in life is. Does it have some problems and flaws? Undoubtedly, it does. But is there a better alternative? In my mind, no; there isn't. Can we

afford the continue to dither and delay and find fault and reason not to proceed? I don't believe so.

The time is now. We have to move forward with this project. I just won an election saying that rail to and through Tysons on the way to Dulles is my top transportation priority and I promise you, over the next four years, it is going to be the top transportation priority in Fairfax County.

Thank you so much for having this hearing and thank you for hearing me tonight.

MS. HANLEY: Thank you. And thanks to all of you that have helped us put this on tonight and thanks all of you for coming. We are adjourned.

(Whereupon, at 9:45 p.m., the meeting was adjourned.)

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By 16,510

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Atkinson, Mathew

From: DelGrosso, Christopher [Christopher.DelGrosso@FairfaxCounty.gov]
Sent: Wednesday, August 28, 2002 11:56 AM
To: dullescorridor@aol.com
Subject: Statement from Supervisor Hudgins

DEIS Public Hearing.doc

This shall serve as Hunter Mill Supervisor Cathy Hudgins' official public statement on the DEIS for the Dulles Corridor Rapid Transit Project.

Thank you.

<<DEIS Public Hearing.doc>>

Public Record Comments
Draft Environmental Impact Statement
Dulles Corridor Rapid Transit Project
Supervisor Catherine M. Hudgins

The first phase of a transit system in the Dulles Corridor was initiated in 1968 when Reston citizens established the Reston Commuter Bus System. This customized service was an immediate success for the community and received national recognition. In an attempt to keep pace with increased growth and to meet the needs of a more transit-oriented developed community, the system continued to grow and was later absorbed into the Washington Metropolitan Area Transit Authority and now the Fairfax County Connector Service.

Thirty-four years later, the corridor has the opportunity to complete the original Dulles Corridor transit system. When completed, the system should receive equal praise as the first phase and be as successful as the planned community of Reston it serves. Most importantly, a Dulles Corridor Rapid Transit Project (DCRTP) should provide a world class, comprehensive transit system, which will allow the Dulles Corridor and its surrounding communities to contribute to the ease of transportation in the capitol region. In addition, the project will connect Dulles Corridor to Dulles International

Airport, which is vital to the continued growth and development of the region.

In the last several decades, the Reston community, including residents and businesses east and west, have been actively engaged in studies, task forces and land use planning in preparation for rail. In May 2001, the Fairfax County Board of Supervisors approved changes to the Comprehensive Plan to allow for transit oriented development around the station areas. In March 2002, over 185 members from the community participated in a Charrette to explore how best to reflect the community's desires in developing the land areas for the Wiehle Avenue and Reston Parkway stations. Following the Charrette, I appointed a group of citizens to review and provide recommendations on the Draft Environmental Impact Statement. Included in this statement are those citizens' recommendations.

The Mid-Corridor of the DCRTP consists largely of Hunter Mill District, from Tysons Corner to Dulles International Airport. This area comprises over 120,000 residents, 12 million square feet of office space and six of the nine proposed rail station locations. Today, many of these residents, employers and employees face inconvenience, diminished quality of life and

the risk of economic stability as they await relief from congestion in their communities. While there are concerns that must still be addressed in the Final EIS, it is now time for federal, state and local officials to respond to the transportation needs of this community by supporting the DCRTP.

The summer of 2002 has been one of the worst in terms of air quality as measured by Code Red days for the region. It is time to cease debate and studies. The matter of relieving congestion and addressing the severe damage to the region's air quality requires that we act now. This project is long overdue. It is time to build rail in the Dulles Corridor, now.

As Hunter Mill District Supervisor, the following not only reflects my view but is also input gathered from numerous community venues. In general, there is as a consensus of support for rail now as the Local Preferred Alternative. While there are those that fear that the outcome of rail may be detrimental to the community, I believe that the rail alternative over the BRT or No Build alternatives is critical to maintaining the quality of life and the economic stability of the surrounding communities in the Dulles Corridor.

The following represents some specific concerns while supportive of the project.

- Support full Metrorail as the Locally Preferred Alternative
- Implement the Metrorail alternative as soon as legally and financially feasible, with strong consideration to provide immediate service through the Corridor to Dulles Airport, given it is the most cost-effective option to best serve Hunter Mill residents and businesses.
- Immediately begin to implement additional enhancements to the rapid express bus service in the Corridor as interim service prior to Metrorail.
- Respond to neighborhood noise concerns by including noise walls or other mitigation for Polo Fields, Westwood Village and Chatam Fords communities
- Urge Virginia Department of Public Rail and Transportation to remove from the financial analysis the increase tolls, at least until the construction of the earliest phase of the project
- Provide increased pedestrian/cycle access to the transit stations of Wiehle Avenue, Reston Parkway and Tysons Corner and particularly as a means of allowing for reconnecting the north-south Reston communities.
- Mitigate visual impact of the construction of Dulles Corridor Rapid Transit Project by incorporating innovative design features, enhanced lighting, public art and green space.

- Provide safety and security to the community and the rail system by delineating law enforcement roles and through early implementation of rail to provide needed transportation capacity in the corridor for emergency or disaster events
- Maintain implementation options for rail that do not preclude addressing the issues of air rights.

Rail in the Dulles Corridor will change the community. I urge that you consider the views expressed here in order to assure that the arrival of the Dulles Corridor Rapid Transit Project will provide change that will greatly enhance the quality of life for the residents and businesses of the corridor for years to come.

GERALD E. CONNOLLY
SUPERVISOR
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COMMONWEALTH OF VIRGINIA

COUNTY OF FAIRFAX

BOARD OF SUPERVISORS
FAIRFAX, VIRGINIA 22035

August 16, 2002

RECEIVED
AUG 23 2002
By 16,322

0308

Mr. Corey Hill, Northern Virginia Rail Manager
Virginia Department of Rail and Public Transportation
3900 Jermantown Road Suite 300
Fairfax, VA 22030

Dear Mr. Hill,

I am writing to raise concerns that I have regarding the designs of the future rail stations in Tysons Corner. I understand that when Metro is extended to and through Tysons Corner there will be a need for commuter parking. In the interim, before metro is extended from Tysons to Dulles, there will also be a need for a terminus station with ample parking. While I support parting facilities at Tysons's West I am deeply concerned that the existing DPRT / WMATA design proposal for the interim terminus station in Tysons Corner, that includes a 2,000 space parking garage on Leesburg Pike, would catastrophically effect traffic flow on Route 7 resulting in gridlock affecting most of Tysons Corner.

I strongly encourage and would fully support DPRT / WMATA to think outside the box by seriously looking at alternative design opportunities to integrate ample parking for metro with mixed-use development on and around this future metro station. To achieve that end, I encourage DPRT / WAMATA to work with the development community to explore creative ways to fully take advantage of all the opportunities that future rail stations would provide. The public investment in the extension of Metro is too great to ignore opportunities to maximize that investment.

It would be a tragic lost opportunity if we do not innovatively attempt to coordinate and integrate land use with the extension of metro to Tysons Corner. By partnering with all stakeholders we have an opportunity to preserve and improve the existing success of Tysons Corner resulting in the improvement of traffic circulation and creating pedestrian friendly civic space where none now exists. I look forward to working with DPRT /WMATA, the development community and citizens to create a more effective transportation system in Tyson's Corner.

Sincerely,

Gerald E. Connolly
Providence District Supervisor

mgw/GEC

GERALD E. CONNOLLY
SUPERVISOR
PROVIDENCE DISTRICT
8739 LEE HIGHWAY
FAIRFAX, VIRGINIA 22031

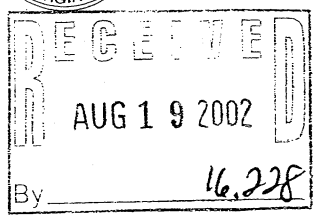
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COMMONWEALTH OF VIRGINIA

COUNTY OF FAIRFAX

BOARD OF SUPERVISORS
FAIRFAX, VIRGINIA 22035





August 13, 2002

0289

Mr. Corey Hill
Northern Virginia Rail Manager
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard
Arlington, Virginia 22209

Dear Mr. Hill:

Please enter the following comments into the official public record for the Dulles Corridor Rapid Transit Project Draft Environmental Impact Statement:

We stand at a pivotal moment in Fairfax County's history. For the last twenty years, elected officials, government agencies, and the public have talked about extending rail through Tyson's Corner to Dulles Airport. While that was taking place, Tyson's Corner grew up: businesses flocked there creating 30 million square feet of office space and close to 100,000 jobs and more than 20 million people began visiting Tyson's Corner Center and Tyson's II annually. Tyson's Corner grew to become a business district that, if it was its own city, would be larger (in terms of employment) than St. Louis or Miami. All of this success, however, has not come without a price.

Without mass transportation, all of these workers and visitors are forced to travel to Tyson's Corner by car. Finally after years of talking, we have reached the point where decisive action is called for. We are ready to bring mass transit to Tyson's Corner and the Dulles Corridor.

Integral to any public project of this size is an intelligent and practical funding plan. For Fairfax County, the funding pieces have come together in an unprecedented way; we are now uniquely positioned to capitalize on new, dedicated funding sources that will reduce or replace the County's local contribution. The November transportation referendum includes $350 million specifically for the Dulles corridor transit project: its passage is critical for the success of the project. That funding coupled with the revenues from the proposed special tax district will fund most of the local share.

The current density and size of Tyson's Corner justify the extension of rail now. Predicted growth in jobs and retail space only underscore the urgent need for mass transportation. Equally as important is growth in the number of residents in Tyson's that has occurred and will continue to occur as Fairfax County encourages increased transit-

oriented residential development pursuant to the 1994 Comprehensive Plan. It is imperative that transportation be provided to serve these people.

The Draft Environmental Impact Statement has laid out several viable alternatives. Close attention must be paid to the potential impacts of each to surrounding developments, especially residential. The road network in Tyson's Corner is at its limit. Important improvements can and will be made; however, the solution to Tyson's Corner's transportation problems is not in road expansion. And while there are some favorable characteristics of Bus Rapid Transit (BRT), there are clear advantages to rail: The capacity of rail is nearly four times that of buses and, under current proposals, no BRT stations would be located in the heart of Tyson's Corner. Moreover, BRT has significant up-front costs and will not encourage the concentration of density at transit hubs, the way rail, with its built-in density triggers, will. Rail will contain sprawl by creating a magnet for clustered development around stations and will maximize convenience to those living, working, and shopping in Tyson's. And, at a time when our region is struggling to meet EPA's ground-level ozone attainment requirements, rail transportation will improve air quality by removing the most drivers from the road.

While bringing rail to Tyson's Corner is my top priority, I believe it is imperative that transit ultimately be extended through the Dulles corridor to Dulles Airport. Washington, D.C. is one of the only capital cities in the industrialized world whose international airport is not served by rail. Demand for a rail link to Dulles will only increase as travel volume is expected to grow to nearly 32 million passengers by 2010. The opening of the new air and space museum next year is expected to attract millions more to the airport area. Furthermore, the closure of National Airport for months in the wake of September 11th is a compelling reminder of the reliance this region has on Dulles and the inconvenience of its missing rail link.

By 2020 Tyson's Corner and the Dulles corridor will be the second largest employment center in the region (second only to downtown D.C.). If we fail to act and provide multi-modal transportation alternatives, growth in jobs and population can only make traffic congestion on our area roadways worse. We cannot afford to be a victim of our own success, we cannot let the high quality of life that attracts so many people and jobs to Fairfax County in the first place be undermined by traffic congestion. We are on the verge of making our long awaited vision of rail service to Tyson's Corner and Dulles Airport a reality. The time to take bold steps to solve our transportation problems has arrived. Fairfax County and the Washington, D.C. region cannot afford to wait.

Sincerely,

Gerald E. Connolly

KATHERINE K. HANLEY
CHAIRMAN

COMMONWEALTH OF VIRGINIA
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OFFICE OF THE CHAIRMAN

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August 2, 2002

RECEIVED
AUG 07 2002
By 15,893

0121 A

Corey Hill
Northern Virginia Rail Manager
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard
Arlington, Virginia 22209

Dear Mr. Hill:

At its meeting of July 22, 2002, the Fairfax County Board of Supervisors expressed several concerns about noise and traffic impacts of the Dulles Corridor Rapid Transit Project documented in the Draft Environmental Impact Statement. The Board requested a written response addressing these concerns and plans for appropriate mitigation efforts. Three specific concerns were identified and these are noted below.

1) The first concern is about the impact of 26 additional rail cars at the WMATA Service and Inspection Yard at the West Falls Church Metrorail Station on homes in the Lemon Road community. Rail cars entering and leaving the yard at late night and early morning hours are a source of increased noise, loud horns and squealing brakes. The project team has identified this impact, but has not specifically proposed any mitigation strategies.
2) The current noise abatement recommendations for properties near Hallcrest Heights include a three-foot tall parapet along the aerial rail sections next to residential areas. It is clear that this may be insufficient to reduce the noise generated by the meeting of rails and wheels on a curve.
3) Significant noise and traffic impacts may be caused by the proposed 2000 car parking structure on Route 7 at Tysons Corner. The current proposals do not address the noise impact that could reasonably be expected from increased traffic.

Sincerely,

Katherine K. Hanley

cc: Board of Supervisors
Young Ho Chang, Director, Department of Transportation
James P. Zook, Director, Department of Planning and Zoning

K.4.2 County of Fairfax, Department of Transportation

- December 19, 2003
- August 10, 2000

FAIRFAX COUNTY

DEPARTMENT OF TRANSPORTATION
Suite 1034
12055 Government Center Parkway
Fairfax, Virginia 22035-5511

Telephone(703)324-1100 Fax(703)324-1450

VIRGINIA

0093
0109-

December 19, 2003

21.353

Mr. Karl Rohrer
Project Manager
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard, Suite 300
Arlington, Virginia 22209

Dear Mr. Rohrer:

The staff comments on the Supplemental Draft Environmental Impact Statement attached to this letter provides additional detail on the comments contained in the December 16, 2003 letter from County Board Chairman Kate Hanley. A few additional comments are editorial or technical. Staff from the County's Department of Transportation and other County agencies look forward to continuing to work with VDRPT to complete the Environmental Impact Statement and to initiate preliminary engineering.

Sincerely,

Young Ho Chang, P.E.
Director

YHC/LW/lmc
Attachment

cc: Robert A. Stalzer, Deputy County Executive
Jim Zook, Director, Department of Planning and Zoning

DULLES SDEIS & GENERAL PLANS COMMENT FORM

Reviewer's Name: Karyn Moreland, FCDOT (703) 324-1141

[Vol.=Volume (SDEIS is Vol. I, Proposed General Plans is Vol. II), Page=Volume Page or Sheet Number, Volume Sec.=Section/Chapter Number]

Vol.	Page	Sec.	Comment
Gen			Clarify which transportation improvements will be done as a part of the project, and which are "mitigation" that may be completed by others.
I	6-14	6.1.3.2	Table 6.1-4 – FCDOT commented on the DEIS that during peak periods, Connector bus service would have no greater than 30 minute headways.
I	6-17	6.2.2.1	Table 6.2-1 – Does this take into account the proposed parking garage addition?
I	6-19	6.2.2.3	Table 6.2-3 – Is it reasonable to expect that in 2025 for LPA I only, PNR trips will decrease? It seems that once garages fill up, they remain that way. Also, with the full LPA, bus trips appear to drop significantly. Is that reasonable to expect?
I	6-24	6.3.2	With Wiehle as the interim terminal station, will there still be no additional effects on bicycle and pedestrian facilities with the LPA Phase I?
II	019		Tysons II development area may not be a realistic "contractor work area", as it will probably be developed prior to or during rail construction. Also, the area shown on this map does not match that shown in the SDEIS, Env. Conditions Sheet 3.
II	080		Option B appears to better fit the "mixed use" concept for land use near the station. Clarify which improvements are proposed with the project, and for those that are not, include them in the mitigation chart, 6.2-7. Also show pedestrian (e.g., crosswalks) improvements.
II	081		It is unclear whether the intersection improvements (lengthen SB Route 7 dual left) proposed with the DEIS are still proposed with the preferred LPA. Also, there are 2 "emergency stairs" proposed for the station. Could one of them be upgraded for use by regular pedestrian traffic?

DULLES SDEIS REPORT COMMENT FORM
Reviewer's Name: **Sterling Wheeler**
December 17, 2003

Vol.	Page	Sec.	Comment
I	1-7	1.3	In the fourth sentence of the 2nd paragraph, the reference to densities "ranging from 8 to 45 dwelling units per acre" is development potential without the rail intensity bonus; development potential with bonus can be 100 du/ac at some future stations. This sentence should be reworded as follows: "The Fairfax County plan calls for dense development in the corridor with intensities in excess of 1.0 FAR in future transit station areas. Higher-intensity, mixed-use development ..."
I	3-1	3.1	In the 2nd and 3rd sentence of the 2nd paragraph, the information about the Tysons II rezoning is not correct. The zoning case increased the PDC's potential from about 4,655,000 sq. ft. to 6,821,000 sq. ft. (or an increase of almost 2.2 million square feet). The maximum building height is 30 stories, not 25 stories. The development has 12 high-rise buildings of which four are built (or eight new buildings). The two sentences need to be corrected based on the information provided.
I	3-3	3.1.1.2	The second bullet under "B. Proposed LPA Phase I", is not true since the Comprehensive Plan envisions higher intensity at future stations west of Wiehle Avenue. This bullet should be reworded to indicate that the LPA Phase 1 is not consistent with the Comprehensive Plan; the wording could be similar to the 3rd bullet which addresses Loudoun County.
I	3-5	3.2	Figure 3.2-1a: The Regency and Encore high-rise multifamily development should be added to this map **(as well as Figure 3.2-1b)**; the development's location is inside the Beltway, south of Route 123 and abuts the Dolley Madison Village apartments.
I	3-6	3.2	Figure 3.2-1b: The land area of the Sheraton hotel should be removed from the area labeled Westwood Village.
I	3-22	3.3	Table 3.3-1 seems to have an error in the LPA Phase 1 (2025) and LPA Phase 1 (Opening Year) columns; since Phase 1 will impact fewer properties than the Full LPA, the acreage impacted should be notably less than 139.3 acres.
I	3-25	3.4.1.2	Under the last bullet on this page, the text refers to the "Hunter Mill Road Historic District". This area is not a "District"; the area is eligible for being considered for placement on the state or national registers; in other words a proposed "District". The bullet should be corrected by referring to this area as a "proposed district". References to this area are throughout the SEIS; all references need to be corrected; the following pages (which may not be a comprehensive list) include reference to this area: pages 3-28, 3-33, 3-35, 3-36, 7-2 and 7-4.
I	3-29	3.5	Figure 3.5-1a: The proposed Hunter Mill Road District is shown, but not labeled on this map.
I	3-33	3.5	Table 3.5-1: In addition to correcting the Hunter Mill Road District issue, the last row of the third column indicates that the Road has "not yet" been designated a Scenic Byway, which is not correct. The Road has been designated a Scenic Byway (page 3-37 correctly states that the designation occurred since the publication of the DEIS).

Vol.	Page	Sec.	Comment
II	13		Wiehle Avenue station: On the south side of the station, a pedestrian connection to the west should be provided that connects to a sidewalk on Association Drive or Commerce Park Drive; this connection should provide improved access from the residential areas along Soapstone Drive. Another issue concerns joint development on the north side of the station; the final EIS should demonstrate how transit improvements do not conflict with the County's joint development objective for this property.
II	17		Tysons West station: As indicated in the BOS comment, consideration should be given to locating the bus facility and parking to the south side of Tyco Road; the purpose is of relocating the facility is to improve joint development opportunities, to improve pedestrian access and to have potential improvement in bus access; for example two points of access (one from Tyco Road and one from Spring Hill Road) should be considered for this facility
II			The pedestrian connections are not shown for the Tyson Central 7 Station. 2

Reviewer: **Sterling Wheeler**

DULLES SDEIS & GENERAL PLANS COMMENT FORM
Reviewer's Name: Noel Kaplan
DECEMBER 17, 2003

COMMENTS ON SDEIS TEXT

Vol.	Page	Sec.	Comment
I	4-4	4.2	The SDEIS states: "Amendments to the Chesapeake Bay Preservation Ordinance have been proposed by Fairfax County . . ." Amendments to the Ordinance were adopted by the Board of Supervisors on July 7, 2003 and became effective on November 18, 2003. The SDEIS suggests that Intensely Developed Areas (IDAs) would be designated; this has not been done. However, Resource Protection Area (RPA) designations have been revised, with the effect being that the extent of RPAs in Fairfax County has grown considerably (per a State requirement). Several of the proposed stormwater management facility sites (P-6, P-8, P-14, and P-17) are, or may be, located in "new" RPAs. In addition, one of the proposed tie breakers (B-6) is in an area that has been mapped as a "new" RPA. The RPA designation would not necessarily preclude the construction of these facilities; however, exceptions allowing for these encroachments will need to be pursued and will probably require public hearings. It is noted that the tie breaker site and the site for proposed pond P-14 are located in areas that have been subject to extensive disturbance. Coordination with the Office of Site Development Services of the Department of Public Works and Environmental Services (703-324-1720) is recommended.
I	4-4	4.2	The proposed Route 28 station facilities north of the Dulles Toll Road may encroach slightly into a new RPA. Project designers should coordinate with the Office of Site Development Services on this issue.
I	4-27	4.7.1.2	The DEIS indicated that there would be 260 residences at the West Falls Church S&I yard that would be affected by noise levels from the yard in excess of 55 dBA (Fairfax County's stationary source noise standard for impacts on residential properties); this was attributed to wheel squeal associated with a 300-foot radius curve at the yard. The SDEIS commits to the enclosure of this curve as well as the enclosure of a new portal that would connect the main line of the tracks along the Dulles Connector Road with the S&I yard. The proposal to enclose the tracks should be commended; however, it would be helpful if the EIS would note what the noise reduction benefits of the enclosures will be as they relate to event-specific noise impacts—what will be the decibel reduction for individual events that would result from the enclosures? Will wheel squeal from the enclosed tracks be audible? If so, what will the event-specific decibel levels be on nearby residential properties? Will any residences still be exposed to noise levels from wheel squeal in excess of 55 dBA?
I	4-27	4.7.1.2	This section notes that additional storage tracks will be needed at the West Falls Church S&I yard "in order to increase the storage capacity from 26

Vol.	Page	Sec.	Comment
			rail vehicles under the Draft DEIS Metrorail Alternative to 42 rail vehicles for the proposed LPA." The new tracks would be located closer to residences than the existing tracks. No information is provided regarding the noise level increases that would be associated with the additional storage, although it is noted that the overall change in noise, when considering both the increased storage and the noise reductions associated with the proposed track enclosures, would be a reduction of seven decibels. It is not clear if this seven decibels reflects an overall average noise level reduction or if it is meant to apply to a hypothetical single event. In any case, more guidance should be provided regarding the nature of the increased noise impacts associated with the additional vehicles (e.g., train movements; horns), and whether there will still be any residential receptors exposed to single event impacts of 55 dBA or more.
I	3	Env. Cond. Sheets	As noted in my comments on the DEIS, facilities associated with the Tysons East station will, in part, be located in a Resource Protection Area. In addition, an Environmental Quality Corridor has been identified on the site of the proposed Tysons East Kiss and Ride facility. A contractor work area is identified near the Tysons East station site; part of this site is located in the RPA. However, much of the RPA in this area has already been disturbed and is impervious in character. Coordination with the Office of Site Development Services is recommended as early in the process as possible to address possible Chesapeake Bay Preservation Ordinance issues associated with the station location, the Kiss and Ride facility, and the contractor work area. Project staff should also be encouraged to coordinate with DPZ to identify possible approaches to addressing the Environmental Quality Corridor in this area.
I	6	Env. Cond. Sheets	Proposed stormwater management facility P9 is located in an area that has been established as a conservation easement. It is not clear if it would be feasible to construct a stormwater management facility at this location.
II	79, 81, 86, etc.	X	It is not clear if stormwater management measures are being proposed for several of the station facilities (e.g., Wiehle Avenue station facilities; Tysons West facilities, Tysons East facilities), as no such measures are identified on the site plans for these facilities. At a minimum, those facilities that will be provided within Fairfax County should include stormwater management and best management practice controls that are as effective as those required for private development projects. Project designers should also be encouraged to pursue low impact development (LID)/site design measures where appropriate (e.g., bioretention/biofiltration practices in parking lots) in order to reduce potential adverse impacts to streams. Many of the facilities identified in the documentation would lend themselves to such practices.

COMMENTS ON SDEIS GENERAL PLAN REVISIONS

Vol.	Page	Comment
Gen. Plans	Various	Ponds P-8 and P-9 (and others?) would be located on the other side of a noise barrier from the highway/rail. These ponds would not, therefore, appear to be able to collect drainage from the project site. Is this the case? Is the idea to establish compensatory controls? If so, what areas will go uncontrolled, and what will be the impacts on downstream water resources?

TS 94 Scoping Comments 8.25.00

FAIRFAX COUNTY
VIRGINIA

DEPARTMENT OF TI
Suite 1034
12055 Government Center Parkway
Fairfax, Virginia 22035-5511

Telephone(703)324-1100 Fax(703)324-1450

Mr. Leonard Alfredson, PE
Project Manager
WMATA Office of Extensions
1550 Wilson Boulevard, Suite 300
Arlington, Virginia 22209

Dear Mr. Alfredson:

Please find below Fairfax County staff comments on the Preliminary Scope of Work for the Dulles Corridor Rapid Transit Project (DCRPT). This letter incorporates comments from the Department of Transportation and the Department of Planning and Zoning.

General

1. This project is located in a corridor with significant development activities and ongoing changes to adjacent uses and rights-of-way. Data collection and coordination will need to be a continuing effort, since existing conditions will be changing throughout the project. Proffer commitments and developments with various stages of approvals may have a significant effect on potential right-of-way costs. These will need to be monitored closely as the project progresses.

Schedule

2. County endorsement of the DEIS and FEIS should be listed as a separate PE/NEPA activity prior to CTB/DRPT, WMATA, and MWAA approvals.

County Comprehensive Plan

3. The Comprehensive Plan contains the following elements in the Tysons Corner area:
   - -Widen Route 7 to 8 lanes from the Dulles Toll Road to I-495
   - -Widen Route 123 to 8 lanes from Route 7 to I-495; 6 lanes from I-495 to the Dulles Toll Road connector
   - -Widen International Drive to 6 lanes from Route 7 to Route 123

Provide interchanges at: Route 7/Route 123 (improved)
I-495/Route 123 (improved)
Route 7/Westpark
Route 123/International Drive
Route 7/International Drive

4. In addition to these planned road improvements, there are pedestrian facilities recommended in the Comprehensive Plan both in the Tysons Corner Urban Center and the Reston-Herndon Suburban Center plan text. Also, the Board of Supervisors has directed that on-pavement bike facilities be considered where appropriate.

5. We are requesting that WMATA work with VDOT and Fairfax County to develop conceptual designs (to about a 15% design stage) for the interchanges cited above in conjunction with the preliminary engineering for the DCRTP in order not to preclude their future construction.

6. Some conceptual design work may also be necessary for collocation of aerial alignments in Tysons Corner. Available roadway plans are not at the level of detail implied in Section 5.25.1.

Right-of-Way

7. In several locations, existing service drives are not located within VDOT right-of-way. It should be noted that additional right-of-way may be required for the proposed transit project and/or future road widening projects.

Modeling/Forecasting

8. Task 5.23 indicates that WMATA has engaged MWCOG to conduct transportation models and references "Scoping Clarifications." These are not evident and the meaning and effect of this reference are not clear.

9. In addition, it is stressed that the development of travel forecasts at the scale implied by the scope will require the preparation of detailed land use forecasts and the execution of complex travel forecasting models. Significant time is normally required to perform these activities. A more detailed schedule which sets forth the time requirements for preparing this data and executing these models should be distributed to local staff who may be involved in the preparation of the input for these activities.

10. Task 5 appears to be scheduled for completion by January 10, 2001. It is presumed that the Technical Memorandum (Task 5.24) describing the methodology and findings of this analysis will be available by that date. It is critical that this information be available in order to fully evaluate the analysis. 6.7.1

11. An explanation should be provided as to how the one-way stations in the T-2 alignment will be modeled versus how two-way stations are modeled. 6.7.1

12. For the BRT/Metrorail alternative, a comparison of travel time should be provided between Reston/Herndon and the urban core for: a) BRT with a transfer at Tysons-West and b) BRT with a transfer at the West Falls Church - VT/UVA Metrorail Station. 6.7.1

13. At the Pre-Scoping meeting, WMATA staff indicated that the 1988 Development-Related Transit Ridership Survey will be used for preparing estimates of the amount development-related travel which will be captured by transit. The Department of Transportation possesses surveys from 1987 and 1989. Only a small percentage of the office and residential sites surveyed in those two reports were located outside the Beltway; therefore, it is suggested that caution be used in applying this data to the Dulles Corridor Rapid Transit Project EIS analysis.

Alignments

14. The following variations in the alignments proposed for study may warrant additional analysis at this stage of the project:

- Provision of a more direct connection to the Orange Line to and from the west 6.3.1 6.3.4
- Variation of T-1 alignment that is aerial with a fourth station at Pike 7 Plaza.

15. Alignment T2 requires passengers to transfer in one direction. Ways to minimize the travel time impacts associated with the T2 alignment should be considered. 6.3.4

Related Studies

16. In addition to the related studies listed, the following should be added:

HJR 276 – Tysons Area Transportation Projects
Seante Document 35 – Transportation Improvements for the Reston Area 6.7.4

Editorial Notes

Page 9: BC1 (EB Travel Lane of Connector Road) should be considered an "as built" condition as it will be constructed in 2000.

Mr. Leonard Alfredson

Page Four

Page 63: Property Identification Plans , " a parcel numbering system will not be employed." We assume that since the County tax maps are being used as the base, the County's parcel numbers will be shown on these plans as they should be.

The County looks forward to working with you on this important project and advancing it in the most expeditious manner possible. Please do not hesitate to contact us for any assistance we can provide. Thank you for the opportunity to comment on this scope of work.

Sincerely,

Young Ho Chang, P.E.
Director

YHC/RW

Cc: Anthony H. Griffin, County Executive
Robert Stalzer, Deputy County Executive
Leo Bevon, VDRPT
James Zook, DPZ

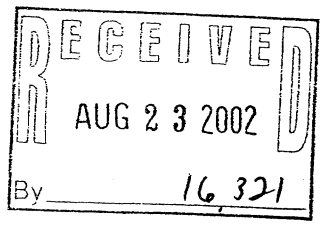
K.4.3 Fairfax County Park Authority

- August 16, 2002
- August 7, 2002
- August 4, 2002
- August 19, 2002

FAIRFAX COUNTY PARK AUTHORITY

12055 Government Center Parkway
Suite 927
Fairfax, VA 22035-1118





J306 A

August 16, 2002

Mr. Corey W. Hill
Northern Virginia Regional Manager
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard
Suite 300
Arlington, VA 22209

RE: Dulles Corridor Rapid Transit Project – Comments on DEIS

Dear Mr. Hill:

The Fairfax County Park Authority (FCPA) has reviewed the Draft Environmental Impact Statement (DEIS) and offers the following comments:

1. FCPA comments on the NEPA EIS Scoping Process were provided on August 15, 2000. These comments stated that FCPA favors the rail alternative for the Dulles Rapid Transit Project. FCPA continues to support this alternative as the best alternative for improving regional transportation options, enhancing public accessibility to parkland and long term protection of Park resources. Further, our previous comments, a copy of which is attached, identified potential areas of impact to FCPA-owned properties. The impacts to FCPA properties are relatively similar for each alternative and have been adequately identified in the DEIS.

2. Areas of cultural and historical resources were identified in the DEIS primarily based on information provided by the State Historic Preservation Officers (SHPO). To augment the information provided by the SHPO, we have attached an archeology impact assessment, analysis and recommendations from the County Archeologist and FCPA Cultural Resource Protection Group. Please note that the County Archeologist has offered to assist in any archeological work that may be undertaken.

3. FCPA reiterates its concerns that trail crossings within Stream Valley Parks adjacent to the transit alignment be included in design efforts. Further, connections from existing and planned trails to the planned stations should be designed to enhance station access. Accommodations for pedestrian and bicycle access and trail connections should be coordinated with FCPA and the County trails planner and incorporated into right of way acquisition and rail alignment planning and development.

4. Potential partnerships with FCPA to incorporate park and recreation related amenities at station locations should be explored. As mentioned in our previous comments, features such as green space, landscaping, picnic tables, cultural or natural resource interpretive areas or open space design with fountains or other elements creating a sense of place should be explored.

Thank you for the opportunity to provide input into this important transportation study. If you have any questions regarding these comments, please contact Sandy Stallman, Long Range Planner, at (703)324-8643 or by e-mail at sstall@fairfaxcounty.gov.

Sincerely,

Lynn S. Tadlock, Director
Planning and Development Division

cc: Winifred Shapiro, Chair, FCPA Board
Paul Baldino, Director
Mike Kane, Deputy Director
Kirk Holley, Manager, Planning and Land Management Branch
Sandy Stallman, Long Range Planner

Fairfax County Park Authority

MEMORANDUM

07 August 2002

TO: Michael Rierson
Park Operations-Resource Management Division

FROM: John Rutherford,
Cultural Resource Protection Group

SUBJECT: Archaeological Assessment of Dulles Rapid Transit Corridor

The Cultural Resource Protection Group (CRP) of the Fairfax County Park Authority has reviewed the alignments for the Dulles Rapid Transit Corridor. Construction along this corridor will impact six parks owned by the Fairfax County Park Authority. The parks included in this assessment are Scott's Run, McLean Hamlet, Ashgrove, Difficult Run, Olney and Hutchison School Site. A number of important archaeological resources were found to exits in these parks. A full list of all Cultural Resources in the corridor was provide by County Archaeological Services and was detailed in a memo by Mike Johnson, County Archaeologist, dated 04 August 2002.

The Cultural Resource Protection Group has reviewed this memo and concurs with its recommendations. Important sites found within the parks include 44FX 2470 (Odrick Site), 44FX1597 (Ashgrove and other related sites, including 44FX2205 and 44FX2203). The CRP recommends complete avoidance of these sites. All of these sites are important to the history of Fairfax County, and as such, deserve special attention.

As noted on the figures from County Archaeological Services, areas of moderate or high potential for archaeological sites should also be surveyed prior to any construction.

Feel free to contact the Cultural Resource Protection Group, if you have questions or comments.

Cc Richard Sacchi- Cultural Resource Protection Group;
Mike Johnson- County Archaeological Services

Fairfax County Park Authority

MEMORANDUM

August 4, 2002

TO: Michael Rierson, Manager
Resource Stewardship Section - RMD

FROM: Mike Johnson, Archeologist
Fairfax County Archeological Services - RSS/RMD

SUBJECT: Dulles Corridor Rapid Transit (DCRT) project archeological resource assessment

Table 1 (assessments), Figure 1(map index) and the attached annotated ortho-photography maps are forwarded as requested. The assessments in Table 1 reflect approximately 25 years of program experience and acquired archival data on the DCRT area.

It is understood that significant portions of construction will be confined to the current Dulles Access and Toll Road corridor. As such many of the attached recommendations will be irrelevant to this project.

However, they are provided with the understanding that with projects of this nature construction staging areas are often used outside the right-of-way. Often these do not appear on the construction plans and requests for comment but should be treated as a part of the construction.

No comments were provided on areas that had already been developed. Remarks/recommendations concerning particularly sensitive areas are highlighted in bold under the "Remarks" column in Table 1.

From the standpoint of this office, site 44FX1569 is of particular interest from an overall resource planning perspective. The site was subjected to a phase 2 assessment in the 1980s. The results were conclusive from a functional standpoint but without chronological data the functional data is largely worthless. To justify the phase 2 cost to the public this situation should be rectified.

I urge the oversight agencies to build additional phase 2 testing or construction monitoring into the plans for the any construction that will destroy this site. Arrangements can be made with FCAS for this archeological work.

Please let me know if you have any questions or need additional information

Table 1. FCAS archeological resource assessments for the Dulles Corridor Rapid Transit Project.

ITEM*	POTENTIAL	AGE	INTERVAL	REMARKS
A	44FX2662	Prehist/Hist	0	Destroyed
1-B	High	Prehist	25	Prob.quartz quarry
1-C	Low/Mod	Prehist	75	
1-D	Low/Mod	Prehist	75	
2-A	Low/Mod	Prehist	75	
2-B	44FX255	Prehist	0	Destroyed
2-C	Low/Mod	Prehist/Hist	75	
2-D	44FX388	Prehist	0	Destroyed
2-E	Mod	Prehist/Hist	50	
5-A	Var. sites	Prehist	0	Destroyed
5-B	High	Prehist/Hist	25	Known sites/old Black comm
5-C	44FX1361	Hist	0	**Hist cemetery - avoid**
5-D	29-1 A1	Hist	0	**Hist Black chch/cem-avoid**
5-E	Low/Mod	Prehist	75	
6-A	Mod	Prehist/Hist	50	
6-B	44FX2470	Hist	20	**Odricks Farmstead - avoid**
6-C	Mod	Prehist	50	Incl 44FX2299
6-D	Ash Grove	Prehist/Hist	0	**Avoid**
6-E	Mod	Prehist/Hist	50	
7-A	Mod	Prehist/Hist	50	
7-B	Mod	Prehist/Hist	50	
7-C	44FX2296	Prehist	0	**Stratified - Phase 3**
7-D	Low/Mod	Prehist	75	Recon done
7-E	Mod/High	Hist	25	**Avoid**
7-F	Mod	Prehist/Hist	50	
7-G	Wolftrap Park	Hist	0	**Avoid**
8-A	Mod	Prehist/Hist	50	
8-B	Mod	Prehist	50	
8-C	low/mod	Prehist	75	
9-A	Mod	Prehist/Hist	50	
9-B	Mod	Prehist/Hist	50	
10-A	Mod	Hist	50	
10-B	Mod	Prehist/Hist	50	
10-C	Low/Mod	Hist	75	
10-D	Mod	Prehist/Hist	50	
10-E	Low	Prehist	100	Recon done
10-F	44FX1569	Prehist	0	**Phase 2/monitor****
12-A	Low/Mod	Prehist/Hist	75	Recon done

12-B	Low/Mod	Prehist/Hist	75	
12-C	Mod	Prehist	50	
12-D	Low/Mod	Prehist	75	
2-E	Mod/High	Prehist	25	Incl 44FX1976
13-A	Mod/High	Prehist	25	See 12-E
13-B	Mod/High	Prehist	25	
13-C	Low/Mod	Prehist/Hist	75	Recon done
14-A	Low/Mod	Prehist/Hist	75	Recon done
14-B	44FX2372	Prehist/Hist	0	**Phase**
14-C	44FX2034	Hist	0	**Phase 2**
14-D	Low/Mod	Prehist/Hist	75	
14-E	44FX232	Prehist	0	Destroyed
14-F	44FX1489	Prehist	0	Destroyed
15-A	44FX915	Historic	0	**Phase 2**
15-B	Low/Mod	Hist	75	
15-C	Low/Mod	Prehist/Hist	75	Partial recon done
15-D	15-4H21	Hist.	20	**Stone foundation**
15-E	Mod.	Prehist/Hist	50	
15-F	44FX2234	Hist	0	**Phase 2**
15-G	44FX2233	Hist	20	**Pos. Black homestead**
15-H	Mod	Hist	50	

See attached maps - numbers refer to map and letters refer to site or survey area.
** Phase 2 was done by Ed Otter in 1980's on heavy prehistoric quartz quarry. No chronologically diagnostic artifacts were recovered. For Otter's data to be worth anything the site should be dated.

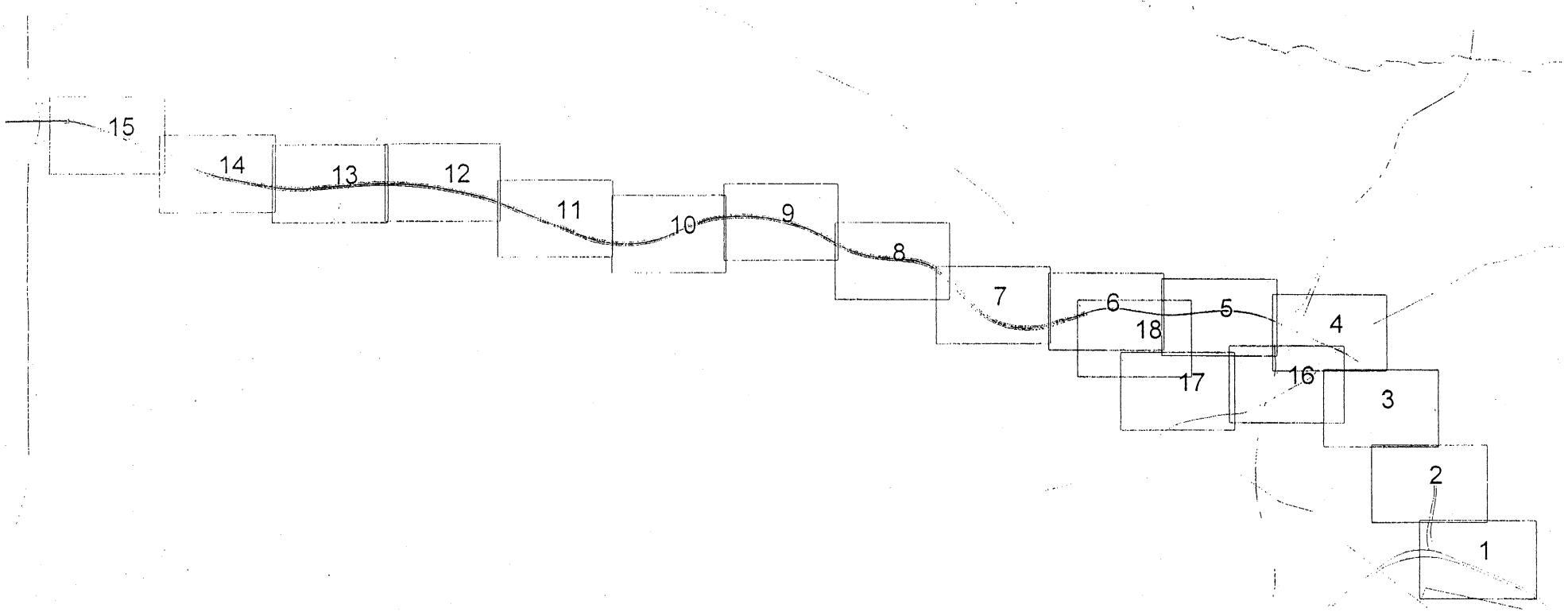
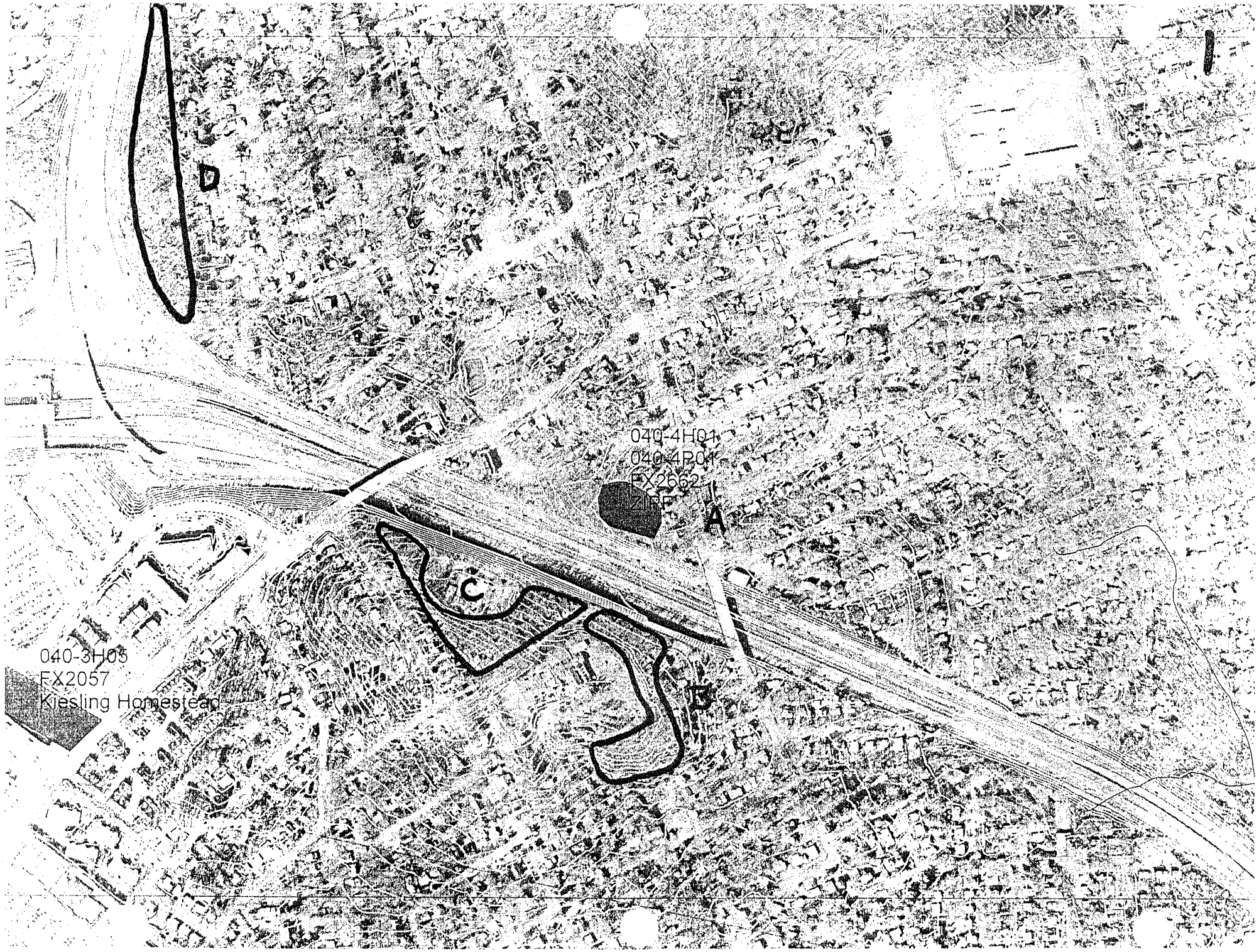
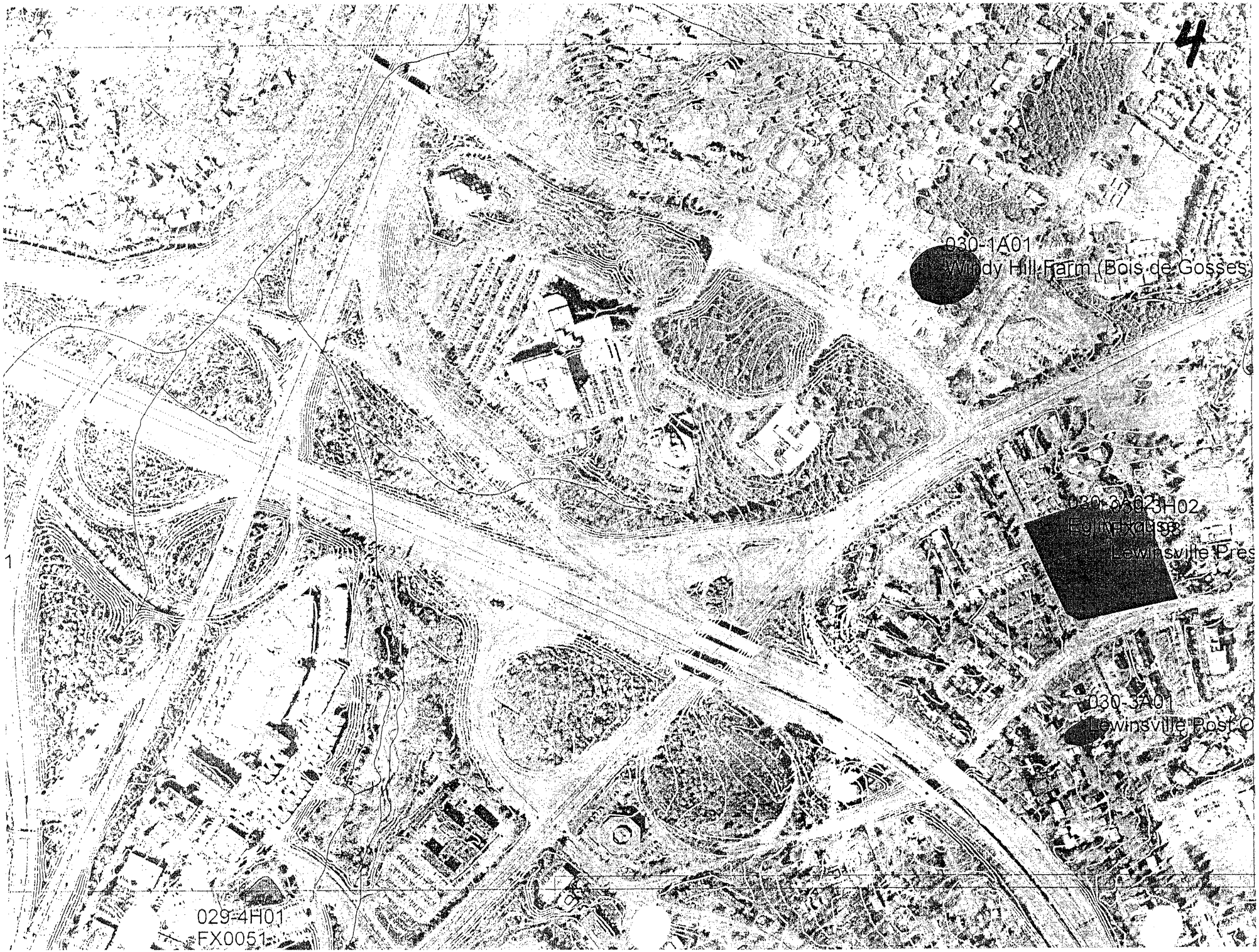


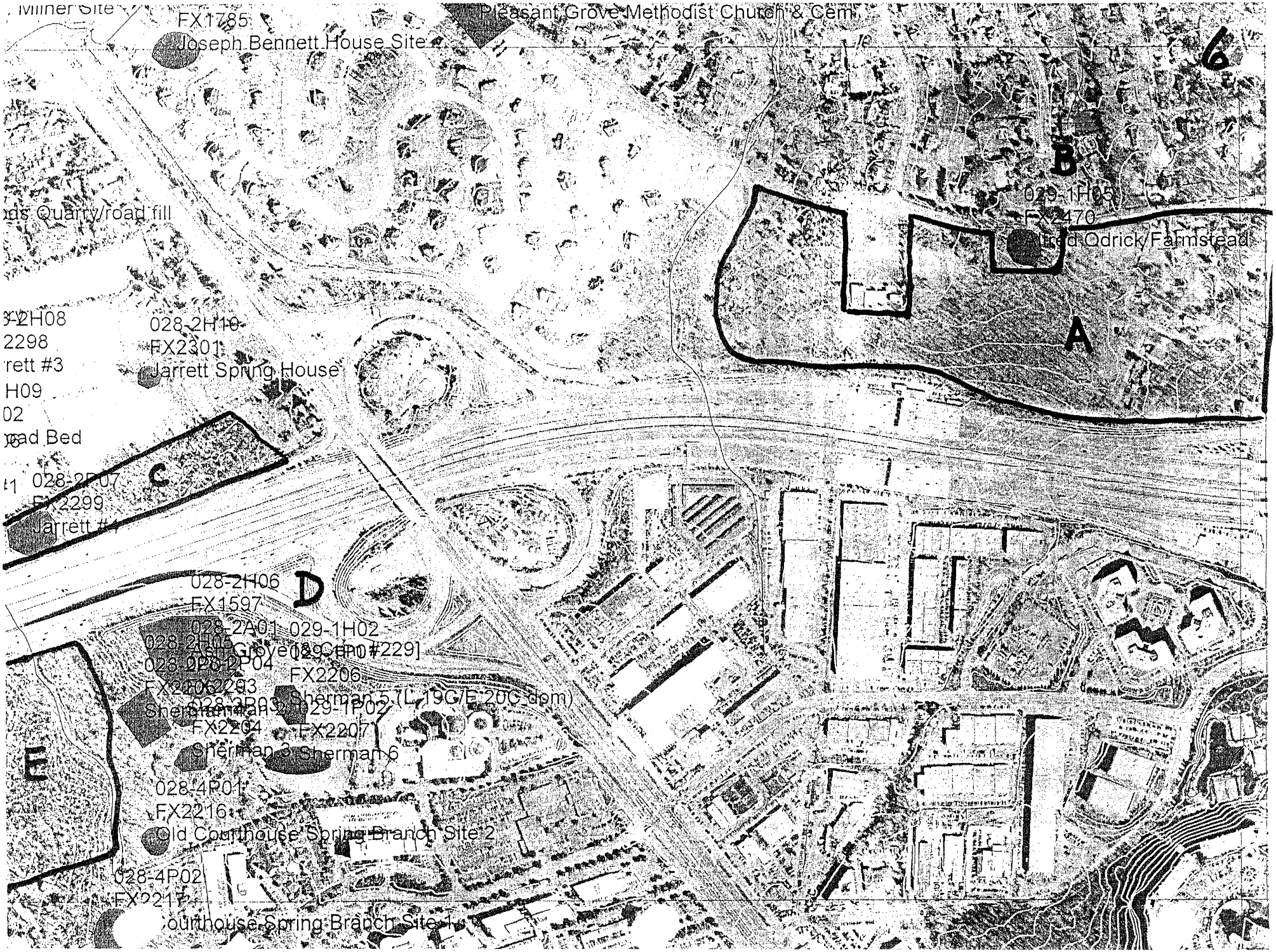
Figure 1. index to assessment area maps.

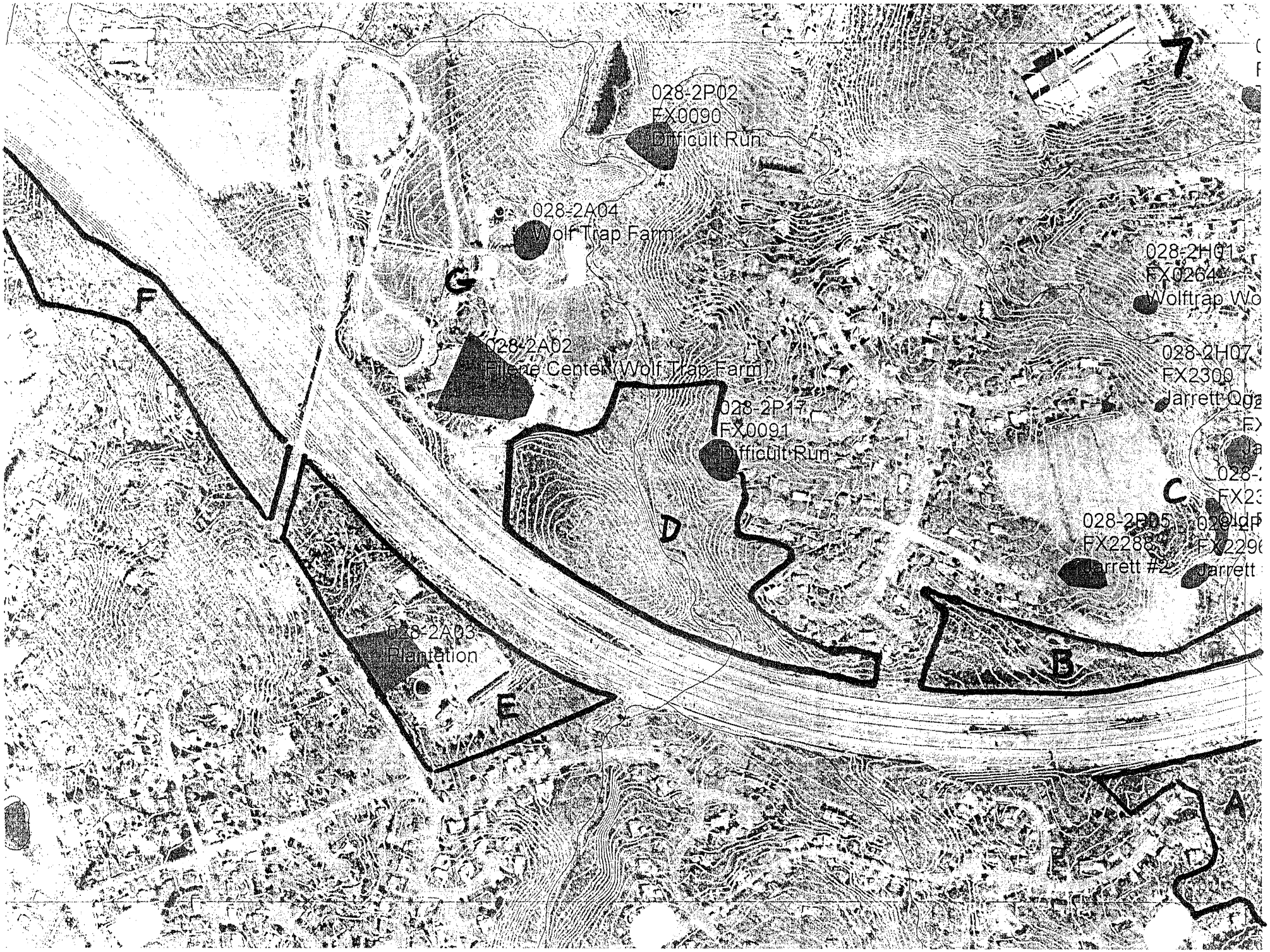

040-4H01
040-4P01
FX2652
040-3H05
FX2057
Kiesling Homestead

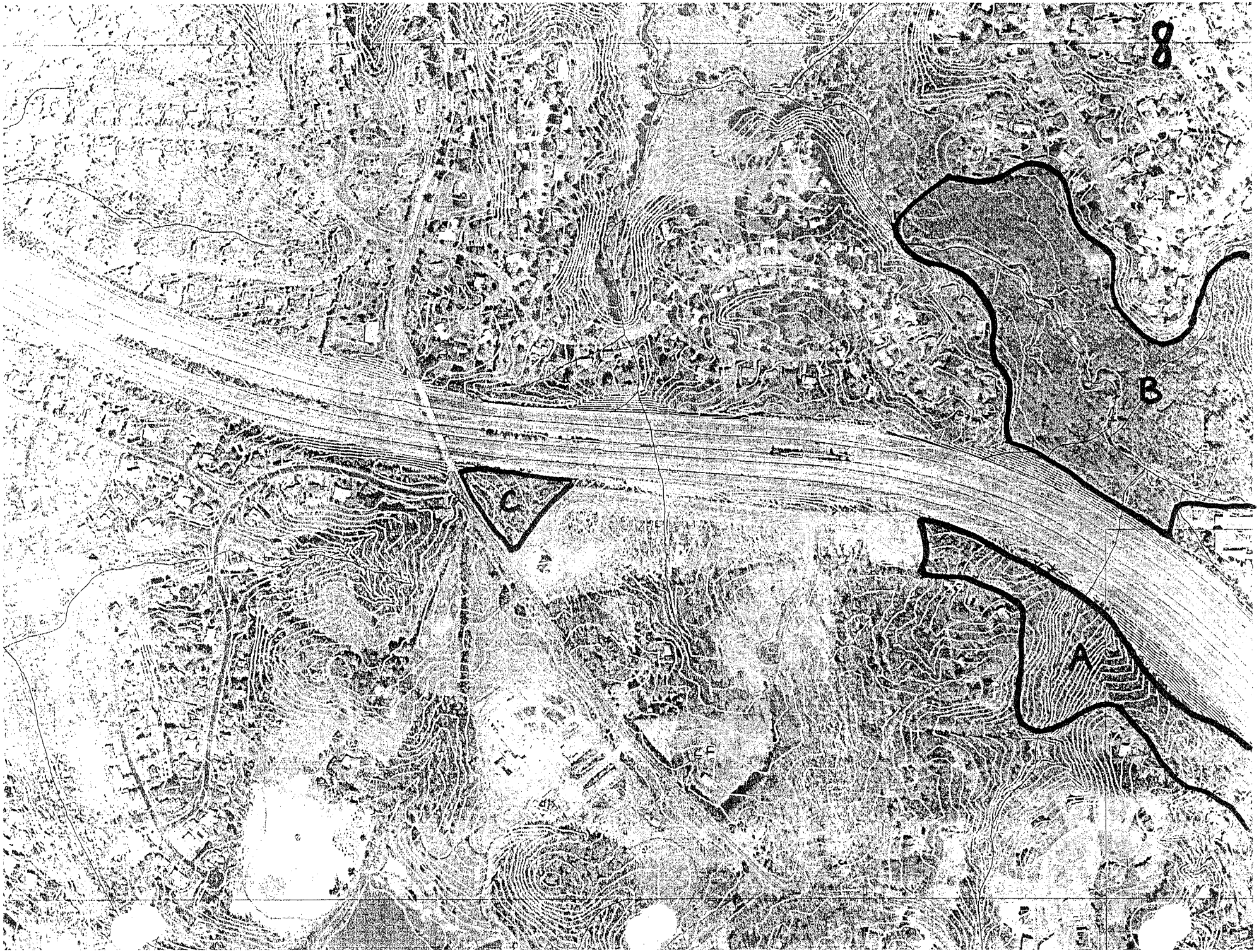
E
040-1P05
Ex 0688
Dulles Access Corridor
D
C
B
040-2P01
Ex 0255
Loudoun County Parkway Road Extension Site
040-2P
2

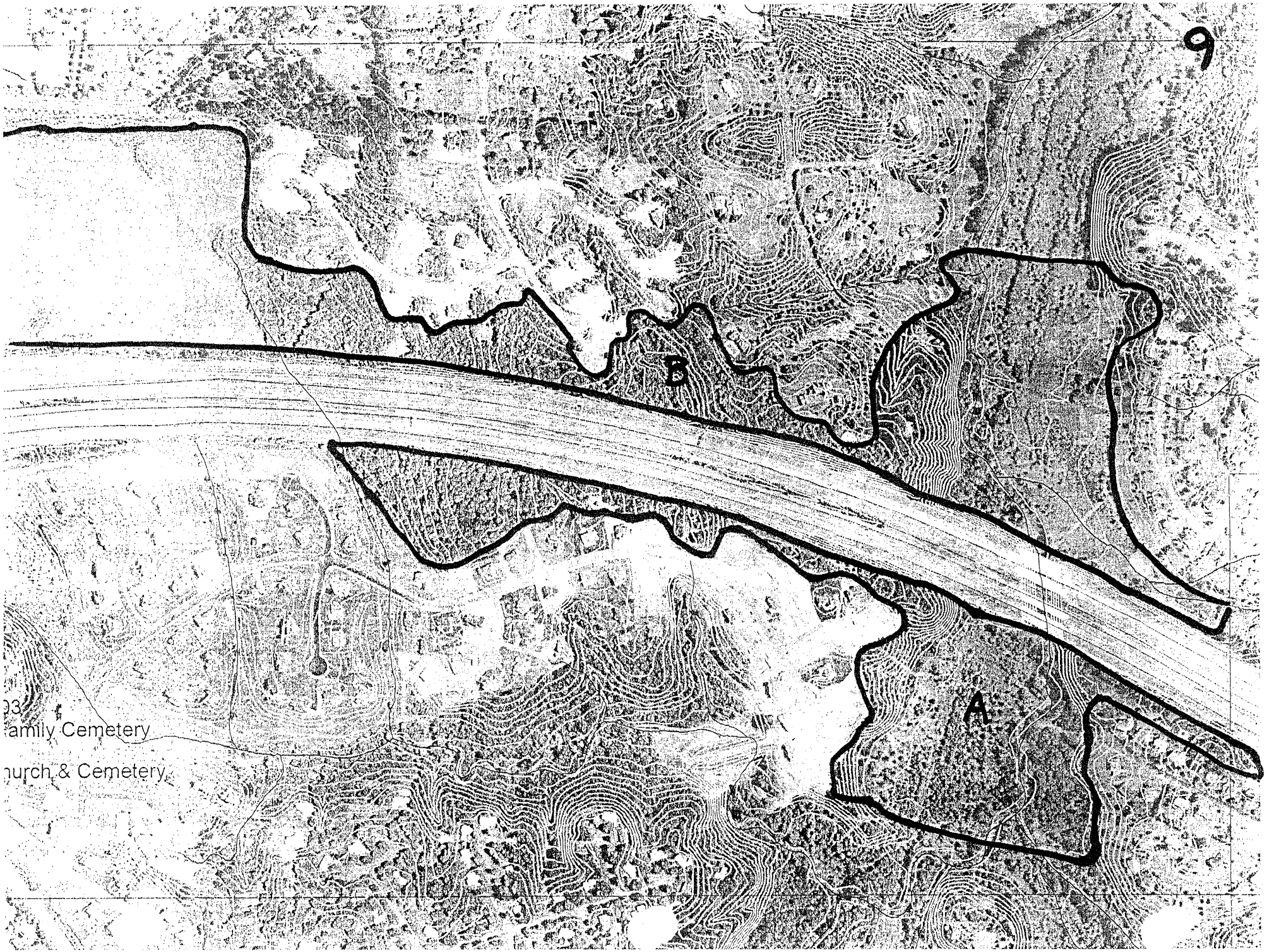
Lewisville Site #2

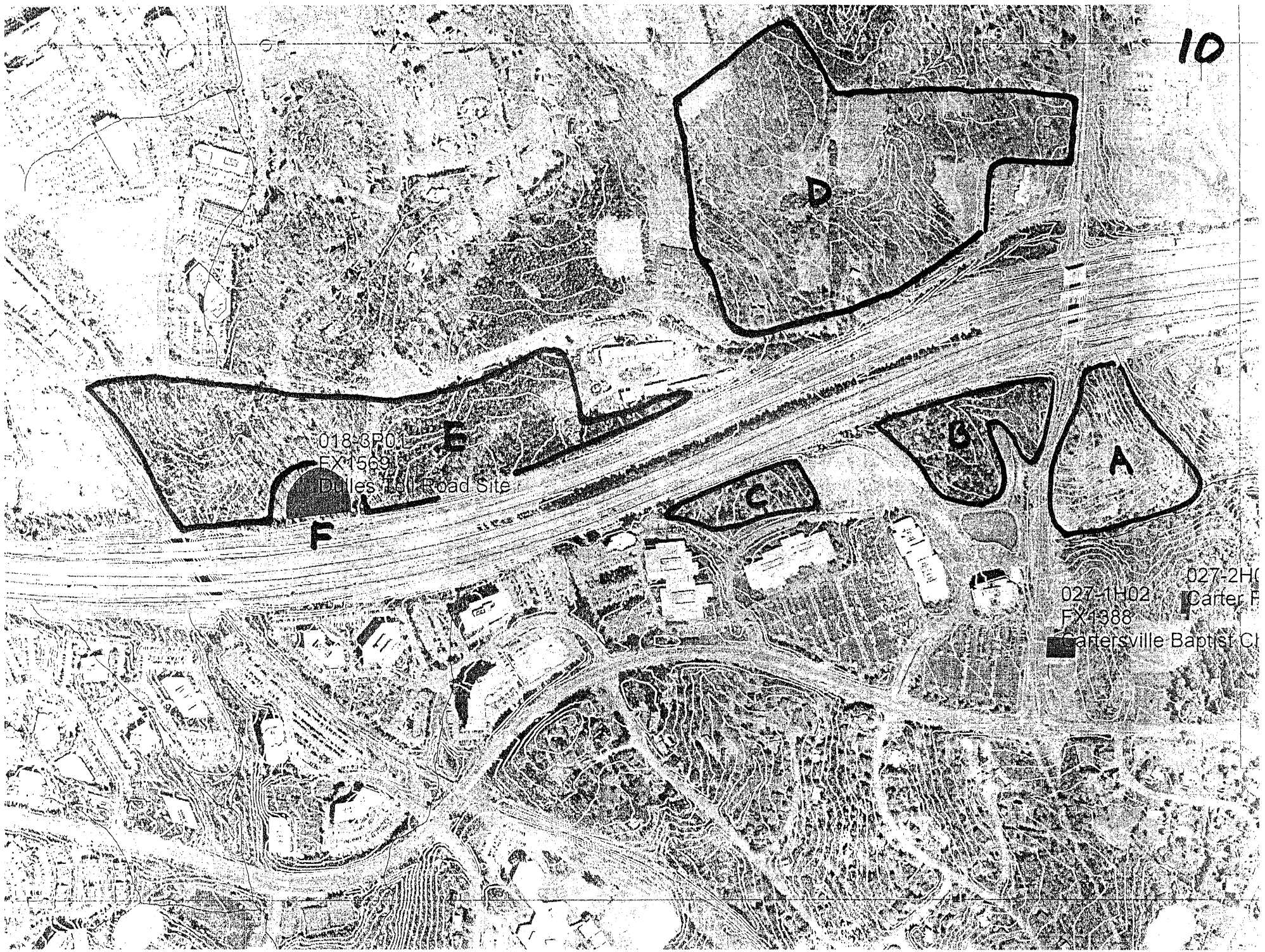

4
030-1A01
Windy Hill Farm (Bois de Gosses)
030-3A02
Lewinsville Pres
030-3A01
Lewinsville Post O
029-4H01
FX0051
1
1

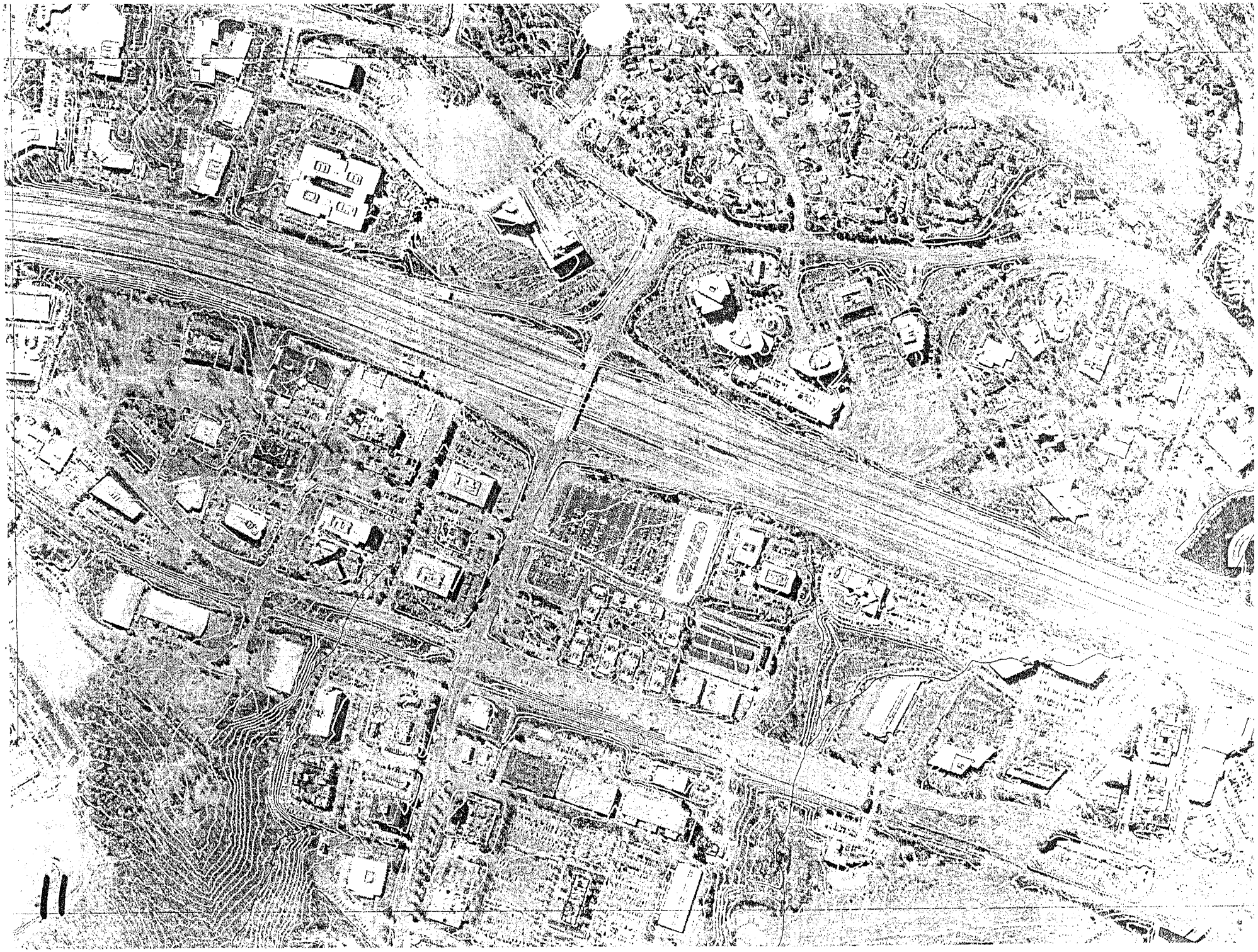

Milner Site
FX1785
Joseph Bennett House Site
Pleasant Grove Methodist Church & Cem
6
B
029-1H05
FX2470
Fred Odrick Farmstead
ds Quarry/road fill
A
028-2H08
2298
rett #3
H09
02
oad Bed
028-2H10
FX2301
Jarrett Spring House
028-2P07
FX2299
Jarrett #1
C
D
028-2H06
FX1597
028-2A01
029-1H02
Asa Grove Cem #229]
028-2P04
FX2206
FX2203
028-2P05
Sherman 5 (L-19G/E-20C dom)
Sherman 2
029-1P02
FX2204
FX2207
Sherman 3
Sherman 6
E
028-4P01
FX2216
Old Courthouse Spring Branch Site 2
028-4P02
FX2217
ourthouse Spring Branch Site 1

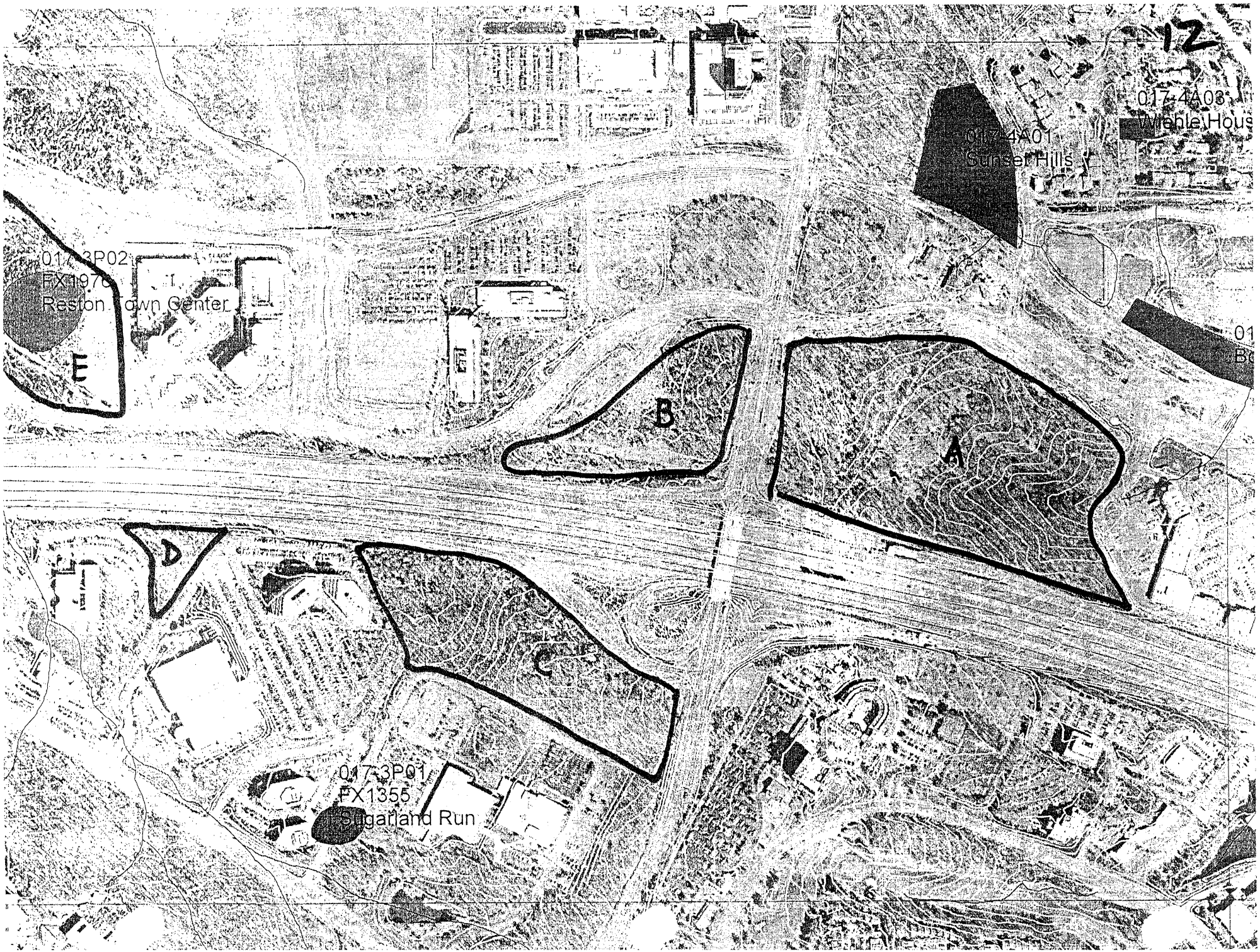

028-2P02
FX0090
Difficult Run
028-2A04
Wolf Trap Farm
028-2H01
FX0264
Wolftrap Wo
028-2A02
Filene Center (Wolf Trap Farm)
028-2H07
FX2300
Jarrett Qua
028-2P17
FX0091
Difficult Run
028-2P05
FX2288
Jarrett #2
028-2A03
Plantation
A
B
C
D
E
F
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8
B
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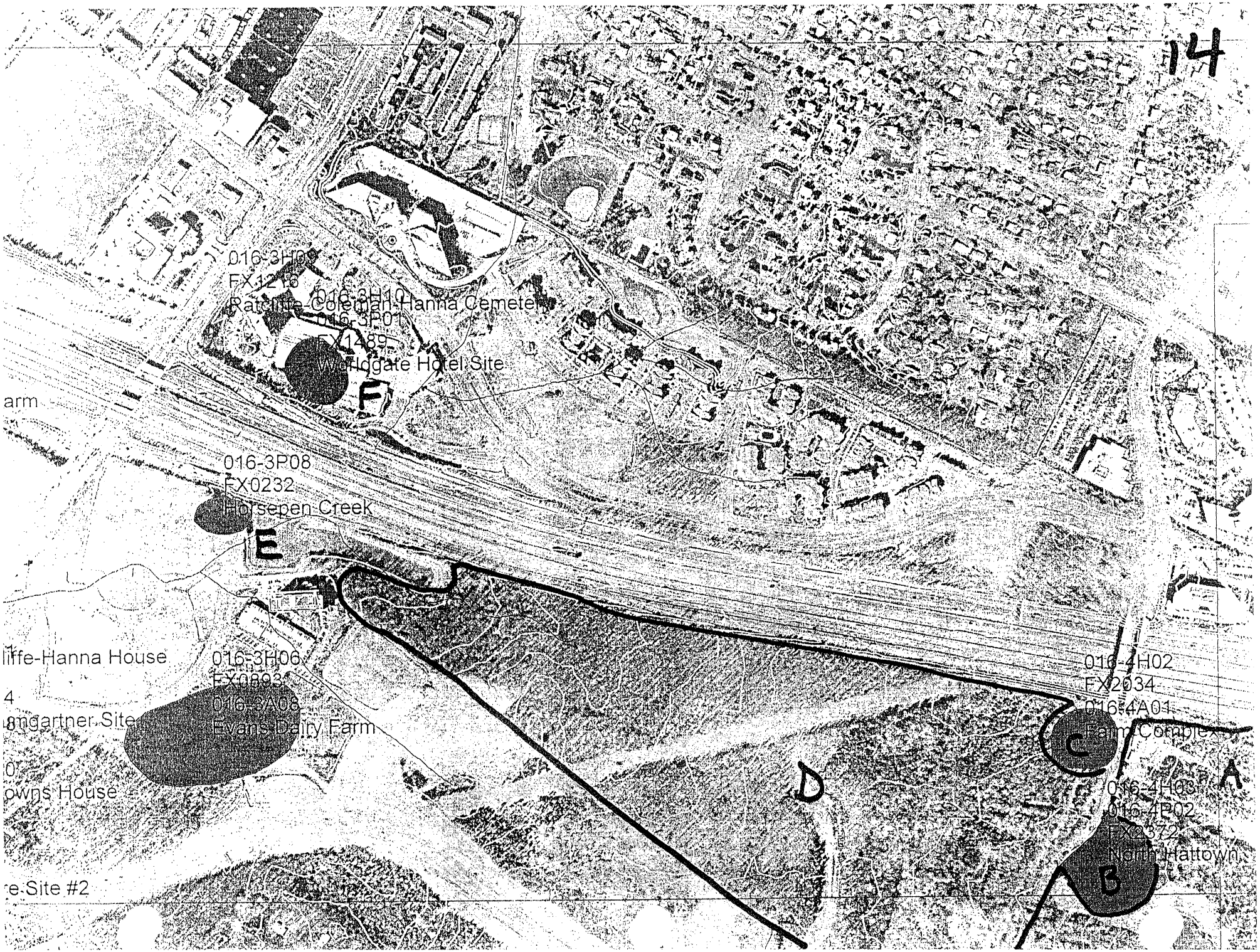

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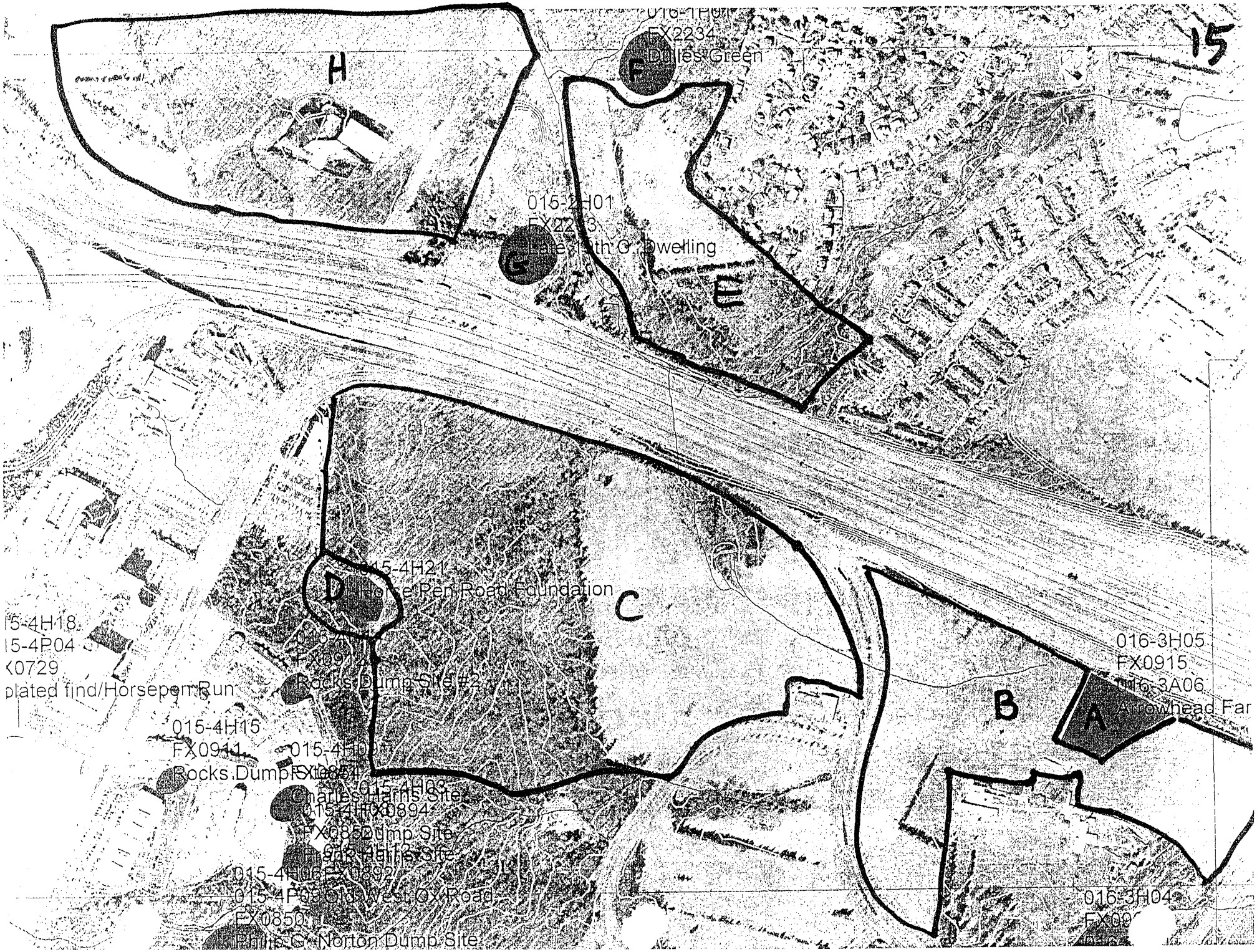

D
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B
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F
018-3P01
FX1569
Dulles Toll Road Site
027-1H02
FX-1388
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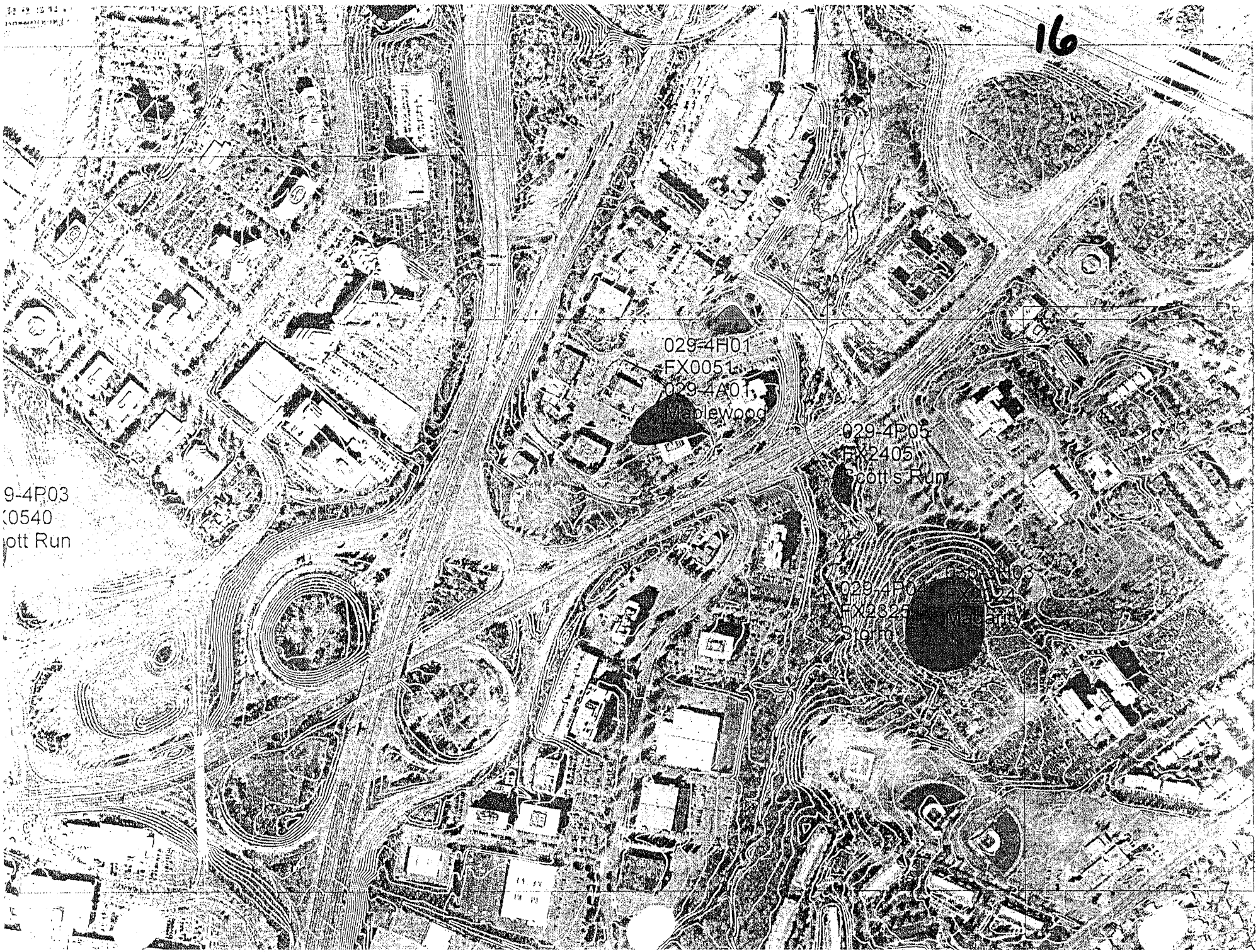



12
017-4A08
Wiehle Hous
017-4A01
Sunset Hills
017-3P02
FX1970
Reston Town Center
01
B
E
B
A
D
C
017-3P01
FX1355
Sugarland Run

C
B
A
13


14
016-3H09
FX1216
016-3H10
Ratcliffe-Coleman-Hanna Cemetery
016-3P01
FX1489
Wardgate Hotel Site
F
arm
016-3P08
FX0232
Horsepen Creek
E
liffe-Hanna House
016-3H06
FX0893
4
ngartner Site
016-3A08
Evans Dairy Farm
0
owns House
D
016-4H02
FX2034
016-4A01
Farm Complex
C
A
016-4H03
016-4P02
FX2372
North Hattown
B
e Site #2


15
016-1H01
FX2234
Dulles Green
H
F
015-2H01
FX2233
Late 18th C. Dwelling
G
E
015-4H21
Horse Pen Road Foundation
C
D
015-4H18
15-4P04
X0729
plated find/Horsepen Run
016-4H01
FX0914
Rocks Dump Site #2
015-4H15
FX0911
Rocks Dump Site
015-4H02
FX0854
015-4H03
Charles Harris Site
015-4H04
FX0894
FX0850 Dump Site
015-4H06
Frank Hall Site
015-4H08
FX0892
015-4P05
015 West Ox Road
FX0850
Philip C. Norton Dump Site
016-3H05
FX0915
016-3A06
Arrowhead Far
B
A
016-3H04
FX09


029-4H01
FX0051
029-4A01
Maplewood
029-4P05
FX2405
Scott's Run
9-4P03
:0540
ott Run

029-3H01
EX0054
P01
029-4P
EX0540
Scott R
Old Frankstown Cty Courthouse Site


18
029-1H04
029-1P03
X2279
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6
-1H02
#229]
206
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-1P02
2207
erman 6
pring Branch Site 2
Branch Site 1

50 Years
FAIRFAX COUNTY PARK AUTHORITY
Celebrating Parks and People: Building on the Past to Shape the Future
1950 2000

12055 Government Center Parkway ❖ Suite 927 Fairfax, Virginia 22035-1118 ❖ (703) 324-8701

August 19, 2000

Dulles Corridor Rapid Transit Project
1550 Wilson Boulevard, Suite 300
Arlington, Virginia 22209

Re: Dulles Corridor Rapid Transit Project – Comments on NEPA EIS Scoping Process

To Whom It May Concern:

Representatives from the Fairfax County Park Authority (FCPA) attended several of the scoping meetings and we offer the following comments for inclusion in the NEPA EIS project evaluation process:

1. Build Alternatives- Construction of an alternative mass transit system will reduce the long term transportation and environmental impacts to Park Authority Parks and Resources. Therefore, Build Alternative #3 (Construction of Metro Rail for the full length of the Dulles Corridor, between the Orange Line and Route 772) would be the desired alternative with respect to enhancing public accessibility to parkland and long term protection of Park resources.

2. Parks and Recreation Planning Strategies – The Park Authority would like to be included in a planning process, which could incorporate open space, and recreational planning initiatives into design of the proposed build alternative. During the Loudoun County scoping meeting, a citizen made the suggestion that commercial ventures be designed and included within the rail stations. This could possibly include small convenience stores, dry cleaners, snack shops or restaurants. We thought that this was an excellent idea and would like to expand on this idea by including incorporation of park and recreational facilities. This could include at a minimum green space, landscaping features, open space design with fountains or elements creating a sense of place. Minor recreational facilities such as checkerboard tables, picnic tables, etc. should definitely be investigated. In addition, it is recommended that formal recreational facilities be incorporated into the design. This could include multiuse courts; walkway connections to planned park trails, cultural/historical interpretative stations, etc.

3. Environmental Concerns- The FCPA has a number of environmental concerns relating to construction of the future rail lines, stations, and ancillary facilities. The actual construction of these systems may result in significant environmental impacts downstream and in Park property located in the immediate vicinity of the railway. The following are specific concerns:

- Biological Resources – Sedimentation from construction activity can have a significant impact on the downstream biological ecosystems and habitats. Mitigation measures beyond the standard erosion and sediment control construction practices need to be investigated.
- The Park Authority owns several significant stream valley parks, which are located, downstream of the construction. These are Sugarland Run, Difficult Run, and Scotts Run Stream Valley Parks. Construction impact mitigation measures need to be used to prevent degradation of park resources during project construction.
- Emergency plans should be in place for potential hazardous material spills or discharge from the construction area or future ancillary facilities.
- Any construction project of this magnitude will have any impact upon the watershed infrastructure both during construction and overtime. This impact needs to be studied thoroughly to prevent degradation of park resources.
- The potential location, type, and effectiveness of any associated stormwater management facilities needs to be investigated.
- There are recorded archaeological sites adjacent to the rapid rail corridor. Some of the sites are located within the park property and some are not. A cultural resource survey should be undertaken and mitigation of any disturbed cultural/historical artifacts. If the land has not been previously disturbed by development, there may be potential for recovering artifacts just prior to construction.

4. A significant amount of park resources in the form of stream valleys and drainageways to preservation areas are located downstream of the proposed development. The impact to these areas needs to be fully investigated and mitigated. The most significant natural resource and stream valley parks located downstream of the development include:

6.4.6

   - Lake Fairfax Park
   - Scotts Run Nature Preserve
   - Difficult Run Stream Valley Park
   - Scotts Run Stream Valley Park
   - Sugarland Run Stream Valley Park

5. The location of any ancillary facilities such as the bus maintenance depot, rail yard, power substations and tie breaker stations should be proposed at this time. These areas would encompass a relatively large area and could have an impact on parkland or a significant feature in the community. 6.4.3

6. The Fairfax County Comprehensive Plan calls for continuous trail connections within designated stream valley areas. The Park Authority is in the process of planning and engineering for construction of key segments of the stream valley trails. There are several locations where the stream valley trails will cross the rapid rail alignment. Overpasses or underground trail connections will need to be provided to insure the integrity of the trail

connectivity. Planned connections as shown on the Fairfax County Comprehensive Plan are in the following locations:

- The Scotts Run Crossing with Route 123
- The Wolftrap Run Crossing with Route 267
- The Difficult Run Crossing with Route 267

In addition to those shown on the Comprehensive Plan, potential crossings are located as follows:

- Courthouse Spring Branch with Route 267
- Sugarland Run with Route 267

A pedestrian crossing plan will need to be developed and reviewed by the Fairfax County Park Authority as part of the EIS process.

If you have any questions regarding these comments, do not hesitate to contact me at (703)324-8725 or by e-mail at Karen.Lanham@co.fairfax.va.us.

Sincerely,

Karen H. Lanham
Planner III

50 Years
FAIRFAX COUNTY
PARK AUTHORITY
Celebrating Parks and People:
Building on the Past to Shape the Future
1950 2000

12055 Government Center Parkway ❖ Suite 927 Fairfax, Virginia 22035-1118 ❖ (703) 324-8701

August 15, 2000

Dulles Corridor Rapid Transit Project
1550 Wilson Boulevard, Suite 300
Arlington, Virginia 22209

Re: Dulles Corridor Rapid Transit Project – Comments on NEPA EIS Scoping Process

To Whom It May Concern:

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- Biological Resources – Sedimentation from construction activity can have a significant impact on the downstream biological ecosystems and habitats. Mitigation measures beyond the standard erosion and sediment control construction practices need to be investigated.
- The Park Authority owns several significant stream valley parks, which are located, downstream of the construction. These are Sugarland Run, Difficult Run, and Scotts Run Stream Valley Parks. Construction impact mitigation measures need to be used to prevent degradation of park resources during project construction.
- Emergency plans should be in place for potential hazardous material spills or discharge from the construction area or future ancillary facilities.
- Any construction project of this magnitude will have any impact upon the watershed infrastructure both during construction and overtime. This impact needs to be studied thoroughly to prevent degradation of park resources.
- The potential location, type, and effectiveness of any associated stormwater management facilities needs to be investigated.
- There are recorded archaeological sites adjacent to the rapid rail corridor. Some of the sites are located within the park property and some are not. A cultural resource survey should be undertaken and mitigation of any disturbed cultural/historical artifacts. If the land has not been previously disturbed by development, there may be potential for recovering artifacts just prior to construction.

4. A significant amount of park resources in the form of stream valleys and drainageways to preservation areas are located downstream of the proposed development. The impact to these areas needs to be fully investigated and mitigated. The most significant natural resource and stream valley parks located downstream of the development include:

   - Lake Fairfax Park
   - Scotts Run Nature Preserve
   - Difficult Run Stream Valley Park
   - Scotts Run Stream Valley Park
   - Sugarland Run Stream Valley Park

5. The location of any ancillary facilities such as the bus maintenance depot, rail yard, power substations and tie breaker stations should be proposed at this time. These areas would encompass a relatively large area and could have an impact on parkland or a significant feature in the community.

6. The Fairfax County Comprehensive Plan calls for continuous trail connections within designated stream valley areas. The Park Authority is in the process of planning and engineering for construction of key segments of the stream valley trails. There are several locations where the stream valley trails will cross the rapid rail alignment. Overpasses or underground trail connections will need to be provided to insure the integrity of the trail

connectivity. Planned connections as shown on the Fairfax County Comprehensive Plan are in the following locations:

- The Scotts Run Crossing with Route 123
- The Wolftrap Run Crossing with Route 267
- The Difficult Run Crossing with Route 267

In addition to those shown on the Comprehensive Plan, potential crossings are located as follows:

- Courthouse Spring Branch with Route 267
- Sugarland Run with Route 267

A pedestrian crossing plan will need to be developed and reviewed by the Fairfax County Park Authority as part of the EIS process.

If you have any questions regarding these comments, do not hesitate to contact me at (703)324-8725 or by e-mail at Karen.Lanham@co.fairfax.va.us.

Sincerely,

Karen H. Lanham
Planner III

K.4.4 Loudoun County, Board of Supervisors

- December 16, 2003
- Verbal Testimony at July 2002 Public Hearing (Mr. William Bogard)

Loudoun County, Virginia
www.loudoun.gov

Board of Supervisors
1 Harrison Street, S.E., 5th Floor, P.O. Box 7000, Leesburg, VA 20177-7000
703/777-0204 • Fax: 703/777-0421 • email: loudounbos@aol.com

December 16, 2003

0074-

21,312

Mr. Karl Rohrer, Project Manager
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard, Suite 300
Arlington, Virginia 22209

Dear Mr. Rohrer:

Loudoun County wishes to enter the following statement in the Public Record in connection with the Dulles Corridor Rapid Transit Project.

County policies identify the Dulles Corridor Rapid Transit Project as one of the County's priority transportation projects. "This project is considered particularly important for the County's transportation system as it provides important surface transportation links to Dulles Airport and offers convenient commuting opportunities for County residents as well as employees who travel from neighboring jurisdictions to employment centers in the Dulles Greenway corridor". (Revised Countywide Transportation Plan). The County needs this project to reduce congestion levels on major roadway connections to Fairfax County and the Region's core and to stay within the Washington Metropolitan Area's emissions budget and satisfy the requirements of the Clean Air Act. The County has demonstrated its commitment to the project by identifying a local funding match in the adopted Capital Improvement Program.

The County's Smart Growth strategy is to encourage compact, pedestrian-friendly development in the east supported by well-functioning transportation systems. The Revised General Plan supports compact, high-density nodal development around proposed rail stations to limit sprawl and reduce public costs. The plan identifies a Transit-Related Employment Center (TREC) at the proposed Route 606 Station and a Transit-Oriented Development (TOD) at the proposed Route772 station. The TREC is planned for concentrated employment use or Special Activity use while the TOD is planned for a mix of high intensity land uses ranging from high-density residential uses, regional offices, entertainment and cultural centers, and other business and support services. Both transit nodes are planned for increased densities when rail transit and facilities are planned, scheduled, designed, and fully funded. The Moorefield Station TOD and the Loudoun Station TOD applications were approved.

In addition, the Revised Countywide Transportation Plan describes how the County intends to serve the mobility needs of the growing populace: "As the County's population has grown at its unprecedented rate over the past decade, residents, employees, and visitors are increasingly feeling the strain on the County's transportation system". The Washington Metropolitan Area's designation as a severe non-attainment area for ozone pollution under the Clean Air Act makes it imperative that multi-modal transportation planning be a part of the County's overall transportation strategy. This

Scott K. York, Chairman At-Large

Eleanore C. Towe, Blue Ridge District
Sally R. Kurtz, Catoctin District
Mark R. Herring, Leesburg District
Eugene A. Delgaudio, Sterling District
Chuck Harris, Broad Run District
J. Drew Hiatt, Dulles District
Jim Burton, Mercer District
William Bogard, Sugarland Run District

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strategy includes "steadily increasing the prioritization and allocation of resources to the development of public transportation services, especially rail in the southeastern end of the Dulles Greenway corridor".

The Dulles Corridor Rapid Transit project is of utmost importance to Loudoun County and is critical to the future adequate functioning of the transportation network. Growth patterns envisioned in the Comprehensive Plan are dependent on the project. As such, it is essential that the Locally Preferred Alternative (LPA) move forward. The LPA consists of 11 stations, 5 of which are in Phase 1 and the remaining in Phase 2. If the LPA were to be delayed or abandoned, market forces rather than comprehensive planning would determine the future land use of Loudoun County.

Economic reality in Federal appropriations may require that the project be divided into two phases, but it must be viewed as one project. It should be noted that Loudoun County has put in place funding mechanisms to fully fund its share of the project. There has never been any doubt as to Loudoun's financial commitment to this project either with the original single project or the currently proposed two-phase project.

Loudoun County takes strong exception to the statement in the Executive Summary, "FTA had determined that the first phase now being considered for the funding has independent transportation utility even if the subsequent phase is never built." (p. s-3) To terminate this project at Wiehle Avenue would undermine land use policies of neighboring Fairfax County, and would forever condemn the economic future of one of the premier development corridors in the United States.

The most pressing issue is the need to complete the full Locally Preferred Alternative (LPA) by the current scheduled date of 2015. There are those who would oppose this on the grounds of cost and number of riders served. This is based on the false assumption that Bus Rapid Transit (BRT) can handle the future transit needs of the Dulles Corridor. The use of BRT in lieu of rail takes on some apparent credibility when viewed in the strict context of Environmental Impact Analysis. The analysis year of the EIS is 2025, with phase 2 not operational until 2015. It is shortsighted to measure a system that will last a century by what it will deliver in a decade.

In summary, Loudoun County strongly endorses this project. It is vital to our future economic success, the management of traffic congestion, improved air quality and will be a major determinant of how we mature as a region.

We are pleased to have the opportunity to submit these comments.

Sincerely,

Scott K. York
Chairman

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Thank you very much.

MR. KLINGE: Thank you, Delegate Plum. And now we have Bill Bogard, member of the Loudoun County Board of Supervisors. Welcome.

STATEMENT OF BILL BOGARD

MR. BOGARD: Thank you, Mr. Chairman, members of the panel.

Before I get started tonight, I would like to note that we have been joined by Supervisor Harris from the board of supervisors. I think he was absent a little bit earlier when we were doing introductions.

On behalf of the Loudoun County board of supervisors, I am pleased to have this additional opportunity to provide comment on the Dulles corridor rapid transit project and the draft environmental impact statement.

Previous to this evening's hearing, we, Loudoun County, have offered specific technical comments in a letter to Mr. Dittmeier dated April the 18th, 2002. Thus, tonight I will offer only comments of a general nature.

Loudoun County's revised comprehensive plan carries forward the central concept that development should be systematic in compact communities and in the right location in order to function well and enable the county to provide adequate and cost-efficient public services.

In the western part of the county, the plan provides for a strengthened rural economy, while reducing residential densities. In the eastern part of the county, the emphasis has been to reinforce the match between infrastructure and planned land use, creating communities that are distinct, well designed and well serviced. This is smart growth to which we are fully committed.

A major element of this smart growth strategy is the Dulles corridor rail project, and our land use policies are specifically structured to maximize the benefits and the opportunities presented by the Dulles corridor rail project stations at both Route 606 and 772.

The county plan also recognizes that we must look toward options to the automobile to

satisfy our transportation needs. We have taken major steps to expand our transit and ridesharing services and will continue to do so to meet the needs of our citizens and to provide viable options to the automobile.

Loudoun County stands ready to support its share of this project financially and has a funding mechanism to accomplish this. We are concerned that other funding may not be available on the originally proposed schedule and strongly urge that all means necessary be taken to put a funding plan in place that will deliver this project on its current schedule. This project is too important to allow it to be delayed.

A savings in both time and funding that could be achieved on this project is the elimination of the bus rapid transit phase and going directly to rail. While BRT initially may have had certain advantages, such as a favorable Federal funding ratio, this is no longer the case. To include BRT may also have the added disadvantages of increasing the project's overall

cost and, perhaps most importantly, it would present significant operational problems if you were to build the rail line while keeping BRT operational.

Frankly, we do not see the cost justification and operational advantages for building BRT over maintaining or enhancing bus services that Loudoun County and others currently operate in the Dulles corridor.

With respect to the rail yard options, we are opposed to yard site 7 and 20 and favor yard site 15. Site 15 meets all of the Washington Metropolitan Area Transit Authority requirements and allows sites 7 and 20 to be developed as envisioned in the county's comprehensive plan. In time, these properties will contribute to the WMATA customer base.

In conclusion, we offer our strongest support possible for the extension of the WMATA metrorail system into Loudoun County. We are prepared to participate financially and have developed our land use policies to maximize the

value of the system.

Thank you.

MR. KLINGE: Thank you, Mr. Bogard.

And now I will turn the introductions over to Supervisor Dana Kauffman.

MR. KAUFFMAN: Thank you, Mr. Klinge.

I will be calling speakers three at a time, to give you folks time to proceed closer to the podium to help us move the proceedings along.

Our first speaker is Thomson M. Hirst, to be followed by Robert E. Buchanan and Patricia Nicoson.

STATEMENT OF THOMSON M. HIRST

MR. HIRST: Good evening. My name is Thom Hirst, and I live and work in Reston. In addition to my day job, which is in commercial real estate, I started the Rapid Transit Action Committee or RTRAC, which was formed to research and promote cost-efficient ways to provide better rapid transit now, not 10 to 15 years from now, but now, and at a cost we can afford.

Everyone agrees that we need rapid

K.4.5 Loudoun County, Office of the County Administrator

- February 25, 2004
- December 9, 2003
- December 20, 2002
- October 24, 2002

Loudoun County, Virginia
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February 25, 2004

Mr. Karl Rohrer, Project Manager
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard, Suite 300
Arlington, VA 22209

Re: Dulles Corridor Rapid Transit Project – Public Hearings Report (Docket Number R03-6)

Dear Mr. Rohrer:

Thank you for the opportunity to comment on the above referenced report.

General Comments:

- We wish to reiterate our previous comment questioning the evaluation of alternatives using a 2025 forecast horizon year. Results for the full LPA should use a broader forecast horizon year given that the full build LPA would be in operation by 2015. County staff does not feel that a 10-year forecast horizon provides an adequate picture. The response contained in the Public Hearings Report provides that 2025 is the forecast horizon year used in the Draft EIS and Supplemental Draft EIS because it allows for a comparison between the proposed alternatives in a future year in which they would have achieved their full potential. While 2025 as a forecast horizon year for the Draft EIS may have been appropriate, County staff do not feel this is the case for the Supplemental Draft EIS. The Draft EIS did not anticipate the Locally Preferred Alternative being developed in two phases. Additionally, the Draft EIS anticipates the Locally Preferred Alternative being operational in 2010. The Supplemental Draft EIS anticipates the Locally Preferred Alternative being developed in two phases with phase 2 being operational in 2015. County staff believes that these differences necessitate that a different forecast horizon be used when evaluating the alternatives in the Supplemental Draft EIS.

- The term "Premium Bus Service" still causes us concern. While we appreciate your email of February 17th on this subject, we still have concerns where the report speaks to this issue. We need to fully address the concept of Premium Bus Service. The report has a limited definition on page 106, but to us this sounds very much like the service we are now providing.

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- It should also be noted that in your operating plan for Phase 1 we feel it would be much more advantageous to build commuter parking at the future Rt. 772 station than to expand parking at Dulles North, where we currently have several hundred excess spaces.

Specific Comments:

- P 45
  Comment 0016
  Passengers will not be required to transfer to "Premium Bus Service" at the Rt. 606 station. Response should state Loudoun County is currently running service to Leesburg and that such service will continue. The wording in the Report appears to contradict your above referenced email.

- P 104
  Comment 0107
  "Capital Costs for Premium Bus Service are included in the projects capital cost estimate". Please define statement. What are the items covered in the estimate, and what is the amount for each?

  Comment 0061
  "The premium bus service will replace express bus service currently run by Loudoun County into Roslyn and Downtown Washington". This is an incorrect statement. While we appreciate your email on this subject, this still needs to be corrected in the final document.

If you have any questions on these comments, please contact John Clark for clarification.

Sincerely,

Kirby M. Bowers
County Administrator

cc: Julie Pastor, Planning Director
Linda Neri, Deputy County Administrator
Sarah Coyle, Community Planning Division Manager
John Clark, Director, Office of Transportation Services
Mark Moszak, Environmental and Historic Programs Administrator
Marie Genovese, Community Planning
Terrie Laycock, Assistant County Administrator

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December 9, 2003

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Mr. Charles H. Ellis III
Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, Sixth Floor
Richmond, VA 23219

Mr. Karl Rohrer, Project Manager
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard, Suite 300
Arlington, VA 22209

Re: Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation, Dulles Corridor Rapid Transit Project (Hearing No. 160, Docket R03-6)

Dear Mr. Ellis,

Thank you for the opportunity to comment on the above referenced project. The Revised Countywide Transportation Plan (CTP), adopted on July 23, 2001, identifies the Dulles Corridor Rapid Transit Project as one of the County's and Region's priority transportation projects (CTP, text, p. 2-3). Additionally, the County's Revised General Plan policies encourage transit-supportive development at planned transit nodes (Revised General Plan, pp. 6-22 to 6-27).

The County' s Bicycle and Pedestrian Mobility Master Plan (Bike/Ped Plan) was adopted on October 20, 2003. Please note that this document outlines policies establishing the need for high quality bicycle and pedestrian access to the future transit stations (Bike/Ped Plan, Transit and Demand Management Policies, p. 35). The County wishes to ensure that well designed bicycle and pedestrian access will be provided through the transit stations providing access to development on both sides of the Greenway. The County wishes to be a consulting party as the design program is further developed.

I have outlined by section and topic my comments below:

Section 1.3 Planning Context: Paragraph 2 notes the Countywide Transportation Plan this should be changed to the Revised Countywide Transportation Plan (2001).

Section 1.3 Planning Context: It should be noted that the Revised General Plan allows for up to 50 dwelling units per acre when rail transit and facilities are planned, scheduled, designed and fully funded to serve the area designated as a Transit-Oriented Development (TOD) (Revised General Plan, Policy 12c, p. 6-25). The TOD is located between the Loudoun County Parkway and Route 772 interchanges (Revised General Plan, text, p. 6-22). The transit node proposed for the Route 606 station is planned for a Transit-Related Employment Center (TREC), planned for concentrated employment use or Special Activity destination

(Revised General Plan, text, p. 6-22). Residential development is not permitted within the TREC due to the constraints of the Dulles Airport 65 Ldn, the Dulles North Transit Center, and the importance of preserving the natural environment (Revised General Plan, text, p. 6-22).

Section 1.3 Planning Context: The last sentence on page 1-7 should be edited to read "The *Loudoun County Revised Countywide Transportation Plan* also includes public support for transit services that would use the corridor, such as carpools, vanpools, bus and rail services, and other alternative modes, with specific funding support for bus services".

Section 2.2.4: Comparative Evaluation of Alternatives: County staff questions the evaluation of alternatives using a 2025 forecast horizon year. Results for the full LPA should use a broader forecast horizon year given that the full build LPA would be in operation by 2015. County staff does not feel that a 10 year forecast horizon provides an adequate description.

Section 3.1 Land Use: The total amount of development for Moorefield Station in this section is incorrect. Moorefield Station was approved for 10,750,000 square feet of non-residential development and 6,750 residential units.

Section 3.1.1.2.B. Proposed LPA Phase I: It should be noted that the Revised General Plan also supports the extension of rail facilities to the Dulles Airport (Revised General Plan, text, p. 4-8). Therefore, the proposed LPA Phase 1 is not consistent with the Revised General Plan because it would not provide rapid transit to Dulles International Airport and the Route 606 and Route 772 station areas.

Section 3.2.1.2.B. Proposed LPA Phase I: County staff asks that the first sentence on page 3-20 be clarified. "If the proposed LPA were not constructed in its entirety by 2025, neighborhoods located west of the Wiehle Avenue station area would not receive mobility benefits from access to Metrorail service during the proposed LPA Phase 1." Metrorail service is not planned to extend west of Wiehle Avenue as part of proposed LPA Phase 1.

Section 3.4 Visual and Aesthetic Conditions: This section states that a site plan has been approved for the Moorefield Station development. This statement is incorrect, the rezoning has been approved for Moorefield Station however, no site plans have been approved at this time.

Section 3.5 Cultural Resources: The County should continue to be a consulting party as impact mitigation strategies are discussed. Additionally, the Area of Potential Effect (APE) was defined as 200 feet beyond station footprints to allow for possible variation during construction. The County should be contacted if variations to the proposed alignment will impact additional sites.

Please forward a copy of the Programmatic Agreement from the State Historic Preservation Officer (SHPO) to:

Loudoun County Planning Department
c/o Marie Genovese
1 Harrison St., S.E., 3rd Floor
P.O. Box 7000
Leesburg, VA 20177-7000

Section 3.6.3 Mitigation: The document states that temporary construction impacts at the Moorefield Station recreation center and athletic fields will be mitigated, but does not provide any information as to how impacts will be mitigated.

Section 4.1.1.2A Proposed Full LPA: The total amount of development for Moorefield Station in this section is incorrect. Moorefield Station was approved for 10,750,000 square feet of non-residential development and 6,750 residential units.

Section 4.2 Water Resources: The County's Revised 1993 Zoning Ordinance was adopted on January 6, 2003 implementing many of the policies outlined in the Revised General Plan. The River and Stream Corridor Overlay District (RSCOD) was established with the revisions to the Zoning Ordinance (Section 4-2000). River and Stream Corridor Resources include:

a. "Rivers and streams draining 100 acres or more.
b. 100-year floodplains (including major and minor).
c. Adjacent steep slopes (slope 25 percent or greater, starting within 50 feet of streams and floodplains, extending no farther than 100 feet beyond the originating stream or floodplain).
d. 50-foot Management Buffer surrounding the floodplains and adjacent steep slopes.
e. Wetlands, forests, historic and cultural resources, and archaeological sites that fall within the area of one or more of the above elements" (Revised General Plan, Policy 2, p. 5-6).

Additionally, a 300-foot no-build buffer or the RSCOD, whichever is greater will be applied to scenic rivers, the Potomac River, the Bull Run, and the protected shoreline of drinking water reservoirs (Revised General Plan, Policies 1, 8, & 11, pp. 5-11 & 5-17). Please ensure that all the elements of the RSCOD have been taken into account when determining impacts to water resources.

Section 4.2.3 Mitigation: Coordination with local jurisdictions regarding mitigation for the nonconformity of any project elements within critical areas is listed as an available option. County staff considers this to be a requirement for any element of the project that impacts the RSCOD.

Section 4.2.3 Mitigation: The County supports the federal goal of no net loss to wetlands and will identify optimum receiving sites with a priority given to each geographic Policy Area (Revised General Plan, Policy 23, p. 5-8). Therefore, the County prefers any wetland impacts incurred in Loudoun County from the proposed project be mitigated within the Suburban Policy Area. However, if a wetland mitigation bank is not available within the Suburban Policy Area at the time the impacts are incurred County staff prefers that impacts to wetlands within Loudoun County be mitigated at the Bull Run Wetland Bank as shown on Figure 4.2-2.

Section 9.2.1.2B. Proposed LPA Phase 1: This section states that changes in land use under the proposed LPA and proposed LPA Phase 1 would be most dramatic in Loudoun County, where land use that is currently rural in nature would be converted to mixed-use suburban centers. It should be noted that the proposed alignment for the Dulles Corridor Rapid Transit Project is located in the

Suburban Policy Area as defined by the Revised General Plan and is planned for suburban-scale residential and non-residential development (Revised General Plan, Chapter 6).

County staff anticipates the Board of Supervisors to adopt a Resolution regarding the proposed project on December 15, 2003, at which time it will be forwarded to the Department of Rail and Public Transportation to be added to the public record.

If you have any questions regarding these comments please contact Marie Genovese, Planner in the Department of Planning at (703) 777-0246.

Sincerely,

Kirby M. Bowers
County Administrator

cc: Linda Neri, Deputy County Administrator
Julie Pastor, Planning Director
Sarah Coyle, Community Planning Division Manager
Mark Moszak, Environmental and Historic Programs Administrator
Marie Genovese, Community Planning

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Telephone (703) 777-0200 • Fax (703) 777-0325

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December 20, 2002

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Ms. Karen Rae
Director of the Virginia Department of Rail and Public Transportation
Virginia Department of Rail and Public Transportation
1313 E. Main Street, Suite 300
PO Box 590
Richmond, Virginia 23218-0590

Dear Ms. Rae:

I am pleased to forward to you a copy of the Loudoun County Board of Supervisors Endorsement of Metro Garage Parking at the Route 772 Rail Station north and south of the Greenway. The Board's action, taken on December 2, 2002, also directed me to provide a letter to VDRPT referencing the Board's Endorsement of a Metro Garage Parking including the steps the County is taking to achieve consistency with County Transit Oriented Development (TOD) policies. Attachment 1 is a copy of the Board's Endorsement.

The County has been coordinating with WMATA on issues related to bringing Metrorail Service through the Dulles Corridor to Loudoun stations. A WMATA analysis undertaken as part of the NEPA process shows an unconstrained parking demand of 3,300 parking spaces at the Route 772 station. This issue has become part of the County's review of two high density transit oriented developments north and south of the station. The two developments are seen as providing resources for Metro Garage Parking as well as a Transit Connector Bridge running across the Greenway between the projects.

The first development, Moorefield Station, was approved by the Board of Supervisors on December 16, 2002. It is the largest mixed use development in the history of Loudoun County and will be a rich source of future patronage for the Metrorail System. The final proffer package includes twelve acres of land adjacent to the station dedicated to station land uses. An additional 3.6 acres will be dedicated for a conveniently located Metrorail Parking Garage. This site is proposed to provide approximately half of the necessary 3,300 parking spaces identified by WMATA. The proffers also provide for a network of multi-modal urban roads connecting the planned road network for Loudoun County with the Route 772 Station. Finally, the proffers provide funds for a portion of the cost of the Transit Connector Road.

We are also negotiating with developers north of the Greenway to provide land dedication for the remainder of the necessary 3,300 parking spaces. Loudoun County hopes to achieve this objective next year. The bottom line is the NEPA analysis did not assume any of these spaces would be provided at e Route 772 Station Their provision will likely result in this station being the fourth highest generator of passenger loading on the Dulles Corridor Rail Line, out of thirteen stations, in a 2025 time frame. Only one of the Tysons Stations will have higher forecasted daily boardings.

We need VDRPT's help to realize the full benefits of this progress. Loudoun County is asking at this time that the facilities necessary to accommodate the forecasted WMATA demand be incorporated into the Project and that cost of such facilities be treated as project costs. Specifically these facilities are garage parking for 3,300 vehicles and a vehicular bridge over the Metro tracks connecting the north and south parking garages at this station. We view the provision of these facilities as necessary to achieve the full beneficial results of the Metro Rail system, both to Loudoun County, but perhaps more importantly, to the region. If we do not accommodate demand at its origin, it will find alternative means of travel which may be detrimental to our Region's air quality and congestion management goals.

If you have any questions concerning any of the material in this letter, please contact John Clark, Director, Loudoun County Office of Transportation Services at 703-737-8514 or jclark@loudoun.gov.

Sincerely,

Kirby Bowers
County Administrator

cc: John Dittmeier, WMATA
John J. Clark, Director, Office of Transportation
Corey Hill, Virginia Department of Rail and Public Transportation
Hobie Mitchel, Commonwealth Transportation Board

Enc. Loudoun County Board of Supervisors Endorsement of Parking at Route 772 Rail Station

Loudoun County, Virginia
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Telephone (703) 777-0200 • Fax (703) 777-0325

At a meeting of the Board of Supervisors of Loudoun County, Virginia, held in the County Administration Building, Board of Supervisors' Meeting Room, 1 Harrison St., S.E., Leesburg, Virginia, on Monday, December 2, 2002 at 9:00 a.m.

PRESENT: Scott K. York, Chairman
Eleanore C. Towe, Vice Chairman
William Bogard
James G. Burton
Eugene A. Delgaudio
Chuck Harris
Mark Herring
J. Drew Hiatt
Sally Kurtz

IN RE: TRANSPORTATION COMMITTEE REPORT/PARKING AT ROUTE 772 RAIL STATION

Mr. Bogard moved that the Board of Supervisors approve the Transportation Committee's recommendation and endorse Metro garage parking at the Route 772 Rail Station north and south of the Greenway and that the Board direct the County Administrator to provide a letter to VDRPT referencing the Board's endorsement of parking at the Route 772 Rail Station, including steps the County is taking to achieve these policies consistent with County TOD policies.

Seconded by Ms. Kurtz.

Voting on the Motion: Supervisors Bogard, Burton, Delgaudio, Harris, Herring, Hiatt, Kurtz, and Towe –Yes; None – No; Supervisor York – Absent for the Vote.

A COPY TESTE:

Denise Pugs

DEPUTY CLERK FOR THE LOUDOUN
COUNTY BOARD OF SUPERVISORS

DCR:december 2, 2002 resolution-j

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Telephone (703) 777-0200 • Fax (703) 777-0325

October 24, 2002

Mr. Cory Hill
Northern Virginia Regional Manager
Virginia Department of Rail and Public Transportation
PO Box 590
Richmond, Virginia 23218-0590

Dear Cory:

This is in reference to the Public Hearings Report for the Dulles Corridor Rapid Transit Project. We complement the Project team on this significant effort. We are pleased the Project Team concluded as we did that we should go directly to Rail and that site Y15 is best for the yard site.

We do have a significant issue at the Route 772 station that we need to bring to your attention. The issue is that of parking. WMATA analysis of unconstrained parking demand at this station has estimated a need for 3,300 parking spaces. It is our intention, subject to Board of Supervisors (BOS) approval, to address this demand.

We have been working with two major active land development applicants immediately adjacent to the station and made significant progress in identifying locations for parking facilities to accommodate this demand. It is our belief that metro-parking garages on both sides of the station connected by a transit connector bridge offers the best possible solution. We are in negotiations with the developers and believe that we can get dedication of the land necessary to accommodate these improvements at no cost to the project.

The land involved in these potential dedications is currently in the process of rezoning. We estimate a resolution of these rezoning cases by the BOS in the foreseeable future. Assuming favorable action by the BOS, we are asking at this time that the facilities necessary to accommodate the forecasted WMATA demand be incorporated into the Project and that cost of such facilities be treated as project costs. We view the provision of these facilities as being in addition to the parking already included in the project at the Route 606 station, recognizing that only through such actions will we achieve the full beneficial results of the Metro Rail system, both to Loudoun County, but perhaps more importantly, to the region. If we do not accommodate demand at its origin, it will find alternative means of travel which may be detrimental to our Region's air quality and congestion management goals.

Sincerely,

Kirby Bowers
County Administrator

cc: John Dittmeier, WMATA
John J. Clark, Director, Office of Transportation

K.4.6 Loudoun County, Department of Planning

- August 31, 2000

286 | Scoping Comments

ATM | 9/7/00

Loudoun County, Virginia
Department of Planning
1 Harrison Street, S.E., 3rd Floor, P.O. Box 7000, Leesburg, VA 20177-7000
Telephone (703) 777-0246 • Metro 478-8416 • Fax (703) 777-0441

August 31, 2000

Mr. Leonard Alfredson
Project Manager
Dulles Corridor Rapid Transit Project
1550 Wilson Boulevard, Suite 300
Arlington, VA 22209

Dear Mr. Alfredson:

Loudoun County appreciates the opportunity to present its comments on the Scoping Process for the Dulles Corridor Rapid Transit Project. We also thank you for the project presentation to the Board of Supervisors Transportation Committee on July 10, 2000 and the Public Scoping Meeting held at the Ashburn Elementary School on July 27, 2000. The comments received at the Public Scoping Meeting should be carefully considered before the final scope-of-work for the project is prepared.

Loudoun County requests that the following comments also be considered in preparing the final scope-of-work.

1. The location, design and costs for vehicle maintenance and storage facilities in Loudoun (BRT and Rapid Rail) need to be completed early in the study to facilitate land acquisition. 5.4.3

2. The Comprehensive Financial Plan for capital and operating costs will need to include significant federal and state elements so that the local jurisdictions are not faced with an unreasonable cost burden. 5.9.1

3. Loudoun County needs to be connected with key areas in the Fairfax County section of the Dulles Corridor such as Herndon, Reston and Tysons Corner by transit service. We will work with the project team and Fairfax County to implement this service. 5.3.

4. The early implementation of reverse commute transit service to Loudoun County is needed for rapidly growing businesses in Loudoun County. 5.2.

5. The extent and time frame for Bus Rapid Transit (BRT) service will need to be determined. Currently BRT is being considered for a 2003-2009 time frame, with rapid rail reaching Loudoun County in 2010.

6. Relationships between proposed levels/types of service and the land use densities required to support such service levels needs more detailed evaluation. 5.6.3

Loudoun County looks forward to its participation in the Dulles Corridor Rapid Transit Project and recognizes the importance of your efforts.

Sincerely,

Sanjeev Malhotra, P.E., AICP
Chief of Transportation

SM/llm
cc: Kirby Bowers, County Administrator
Terrie Laycock, County Administration
Memory Porter, County Administration
Julie Pastor, Department of Planning
Art Smith, Department of Planning

K.4.7 Montgomery County

- February 23, 2004
- December 16, 2003

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DEPARTMENT OF PUBLIC WORKS
AND TRANSPORTATION

Douglas M. Duncan
County Executive

Albert J. Genetti, Jr., P.E.
Director

February 23, 2004

Mr. Karl Rohrer
Project Manager
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard, Suite 300
Arlington, Virginia 22209

RE: Dulles Corridor Rapid Transit Project, Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation Public Hearing Report

Dear Mr. Rohrer:

Montgomery County supports the Dulles Corridor Rapid Transit Project and offers our comments on the Public Hearing Report for your further consideration as the environmental review process continues leading to the Final Environmental Impact Statement.

In our original letter on the Supplemental Draft Environmental Impact Statement, we commented on the need to identify and incorporate the future Capital Beltway Rapid Transit System as it is envisioned in the Northern Virginia 2020 Transportation Plan and the Fairfax County Transportation Plan into the Dulles Corridor Rapid Transit System in the vicinity of the Capital Beltway and Tysons Corner. The Public Hearing Report acknowledged our request, but did not address the technical issues.

While we understand the Dulles Corridor Rapid Transit System is much further ahead of the Beltway Corridor rapid transit system, there is still a need and necessity to consider to the fullest extent possible how and where a Beltway Corridor rapid transit system will interface with the Dulles Corridor Rapid Transit System. Further, is it our understanding that the Commonwealth of Virginia recently examined potential Beltway Corridors and has additional information that may prove useful in the Dulles Corridor analysis that we are requesting. It is very unlikely that another public opportunity for planning system integration will occur in the Tysons Corner area.

Office of the Director
101 Monroe Street, 10th Floor • Rockville, Maryland 20850-2540 • 240/777-7170, FAX 240/777-7178
Located one block west of the Rockville Metro Station

What we are seeking is a graphical depiction of the general connection of the Beltway Corridor to the Dulles Corridor Rapid Transit System, so that in future years the figure in the Final EIS is a reminder and starting point for the facilities planning of that transfer facility. We are interested in this matter, since eventually the Beltway Corridor will extend into Montgomery County.

Thank you for the opportunity to respond to your Public Hearing Document. Please contact Gary Erenrich of my staff at 240-777-7170 if you have any questions.

Sincerely,

Albert Genetti, Jr.
Director

AJG:GE:pn

Douglas M. Duncan
County Executive

DEPARTMENT OF PUBLIC WORKS
AND TRANSPORTATION

Albert J. Genetti, Jr., P.E.
Director

0092 21,319

December 16, 2003

Mr. Karl Rohrer
Project Manager
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard, Suite 300
Arlington, Virginia 22209

Dear Mr. Rohrer:

Montgomery County supports the Dulles Corridor Rapid Transit Project as outlined in the Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation. The Dulles Corridor Rapid Transit Project is consistent with regional planning processes at both the Transportation Planning Board in the Constrained Long Range Transportation Plan and at the Washington Metropolitan Area Transit Authority in the System Expansion program. The expansion of rapid transit benefits all of the region's residents and businesses and strengthens the overall Metrorail system. This project is consistent with our belief that the region's economic growth must be accompanied by a balanced transportation strategy including expansion of our transit and highway systems, technological improvements on our operations of the existing networks, and attention to alternatives to our current transportation modes.

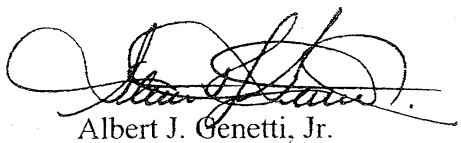
Montgomery County envisions other rapid rail corridors and would like the Dulles Corridor Rapid Transit Project to be designed to facilitate the development of these other lines. Specifically, Montgomery County supports a future rapid transit corridor along the Capital Beltway connecting the Red Line in Montgomery County to the Orange Line in the Tyson's Corner area. The expansion of rapid transit along the Beltway is also consistent with the Fairfax County Transportation Plan and the Northern Virginia 2020 Transportation Plan. The Supplemental Draft Environmental Impact Statement should acknowledge this potential Beltway rapid transit corridor. The document should ensure that any of the Dulles Corridor Rapid Transit stations proposed in Tyson's Corner or at Dunn Loring on the Orange Line will not preclude a future integration of the regional system. It would be desirable that the Supplemental Draft Environmental Impact Statement addresses how a future Beltway rapid transit system could connect to the Dulles system including passenger transfers, station platforms, and vehicle layover. Right-of-way should be preserved at the proposed Dulles Corridor Rapid Transit Stations to accommodate the future Beltway Corridor system.

Office of the Director
101 Monroe Street, 10th Floor • Rockville, Maryland 20850-2540 • 240/777-7170, FAX 240/777-7178
Located one block west of the Rockville Metro Station

Montgomery County believes that the Washington Metropolitan Area Transit Authority Board should address the operating and maintenance cost sharing formula so that all member jurisdictions have a clear understanding of their financial responsibility for both phases of the project. The Dulles Corridor Rapid Transit Project is potentially a 23 mile extension to a 103 mile system for a 22 percent increase in the system size, and this large a system expansion should be thoroughly reviewed by the funding partners at WMATA. Such a review can then be used by all jurisdictions to guide future system expansions.

Montgomery County will continue to work with the project sponsors to address the issues that we raised in this letter.

Sincerely,



Albert J. Genetti, Jr.
Director

cc: Robert Smith, WMATA Board Member
Carlton Sickles, WMATA Board Member
Richard White, WMATA
Karen Rae, Virginia Department of Rail and Public Transportation
Brian Glenn, FTA Washington DC
Howard Shipman, FTA Regional Office
Andy Scott, MDOT
Honorable Phil Shapiro, Chair, WCOG Transportation Planning Board

K.5 LOCAL

K.5.1 City of Falls Church

- February 25, 2004
- October 23, 2002
- Verbal Testimony at July 2002 Public Hearings (The Honorable Daniel E. Gardner)
- Verbal Testimony at July 2002 Public Hearings (The Honorable David Snyder)
- July 30, 2002
- June 25, 1999
- February 4, 1999

City of Falls Church

F. Wyatt Shields
Assistant City Manager
wshields@ci.falls-church.va.us

Harry E. Wells Building - 300 Park Avenue - Falls Church, VA 22046-3332

(703) 248-5440
Fax (703) 248-5146

February 25, 2004

Mr. Karl Rohrer
Project Manager
Virginia Department of Rail
And Public Transportation
1550 Wilson Boulevard, Suite 300
Arlington, Virginia 22209

RE: Docket Number R03-6.

Dear Mr. Rohrer:

This is in response to the Public Hearings Report on the Dulles Corridor Rapid Transit Project. The City of Falls Church remains concerned that the Supplemental EIS, issued in October 2003, and this subsequent Public Hearings Report contain no mention of traffic impacts at, and around, the East Falls Church Metro Station.

The East Falls Church Metro Station will be the last station on the Silver/Orange line, and will have a significant increase in service frequencies. We believe it is contradictory to assume, as the EIS does, that there will be no traffic impacts at, and around, this station.

The City's concerns were communicated to DRPT in a letter dated July 30, 2002, and included the commentary of an independent traffic engineer. These concerns were not addressed in the Supplemental EIS of October 2003. This omission was raised and repeated during our meeting on November 19, 2003, yet is not referenced in the Record of Public Hearings.

The Dulles Corridor Rapid Transit Project is a major and positive project for the region. The City of Falls Church, due to its location by the existing Orange line at the point of departure for the

proposed new line to Dulles, will be significantly impacted. We have expressed our reasonable desire to know the nature and extent of this impact.

Therefore, we take this opportunity to request once again that the EIS for the Dulles Corridor Rapid Transit Project must include a traffic impact study for the area around the East Falls Church Metro Station.

Sincerely,

F. Wyatt Shields

cc: John Dittmeier, Acting Project Manager

Attachment

Atkinson, Mathew

From: Robert Etris [REtris@ci.falls-church.va.us]
Sent: Wednesday, October 23, 2002 1:24 PM
To: Corey W. Hill (E-mail)
Subject: Public Hearings Report

Corey:

Thanks you for sending us a copy of the Public Hearings Report for the Dulles Corridor Rapid Transit Project. We have no comments on the impacts to the City's public utilities at this time. Please include us in the future as you circulate documents for review and comment or information. We would appreciate your sending us any plans, as the project progresses from concept through design, which would possibly impact our water system, which extends from the City to Tysons Corner.

Robert J. Etris
Public Utilities Engineer
City of Falls Church
703-248-5335 (phone)
703-248-5214 (fax)
571-238-6370 (cell)

in the interim.

Likewise, future planning needs to build upon the pioneering work already completed in Fairfax and Loudoun Counties to amend their comprehensive plans. That planning calls for rail stations with maximum access and flexibility for riders and transit-oriented development around the stations.

But for the decision before us tonight, that decision being the locally preferred alternative, the Dulles Corridor Rail recommends that we move to rail now.

Finally, I would ask that the record indicate that I used four minutes and 22 seconds of my 10 minutes.

Thank you.

MR. KLINGE: Thank you.

[Applause.]

MR. KLINGE: Now I'd like to introduce the mayor of the city of Falls Church, the Honorable Daniel E. Gardner.

STATEMENT OF THE HONORABLE DANIEL E. GARDNER

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MR. GARDNER: Good evening, Chairman Klinge and Chairman Hanley.

The city of Falls Church welcomes this opportunity to present concerns of the city to the Virginia Department of Rail and Public Transportation regarding the draft environmental impact statement for the Dulles Corridor rapid transit project.

Although supportive of the project, the city has some critical issues with regard to the EIS which we feel must be addressed before the project proceeds.

Generally we are concerned that although the city of Falls Church will be impacted by the project, our community overall has been overlooked in the EIS.

The impact area of the project includes the East and West Falls Church metro stations which are located on the perimeter of our city limits. We believe that the impact to the citizens and the environment of the city of Falls Church has neither been assessed nor mitigation measures considered or

developed. Specifically the city has the following concerns:

The draft EIS has failed to meet the legal requirements of environmental statement regarding significant impact analysis in particular areas as required by 40 CFR 1502.14 and 40 CFR 1508.9, including the city of Falls Church, which will be impacted by this proposed project.

The draft EIS has failed to fully assess water, traffic and transportation impacts on the city of Falls Church and thus fails to propose mitigation of those potential impacts.

The draft EIS has failed to adequately address issues of parking overflow in the residential areas adjacent to the East and West Falls Church metro stations.

The draft EIS has failed to adequately address public safety and infrastructure issues regarding pedestrian traffic, especially students conflicting with vehicular traffic in and around the West Falls Church metro station, given the prediction for increased vehicle trips per day.

Our middle school and high school are adjacent to that station.

The draft EIS has failed to address the environmental impact to surface and groundwater as it might affect the city's water distribution system that serves much of the corridor and Four Mile Run.

The city of Falls Church understands the legal requirements in the framework of the environmental impact statement, which is to assure that all issues, alternatives and concerns are weighed and evaluated for remedy.

In attempting to meet these specific requirements, we believe that mitigation of the project impact on the city of Falls Church and its immediate surroundings has not been sufficiently addressed.

We firmly believe this project will have a substantial vehicular traffic impact on the city as the East and West Falls Church metro stations transform into a major regional transportation hub in the future.

From the outset the city has been concerned that the project will bring thousands of additional motorists into the city, and urges that plans be made to accommodate the additional traffic. If these motorists drive to stations and cannot find parking, they will try to park on the residential streets, creating a significant impact on the surrounding neighborhoods.

The city has repeatedly requested that these impacts and others be anticipated and addressed.

The project, while appearing to be beneficial to the region, has a significant and direct negative impact on the city in a manner not fully analyzed in the draft EIS.

We have previously asked that this impact be thoroughly studied. However, we have now concluded it has not been given full consideration.

Overall, we strongly believe the draft EIS' lack of full analysis could prove disastrous for the city, the surrounding neighborhoods and our educational structures.

Moreover, we suspect there may be tremendous safety concerns if proper evaluations are not conducted. We believe our neighborhood streets will be inundated with motor vehicles and that the project will be considered a failure by our citizens.

Existing infrastructures will be adversely affected and must be effectively remedied by operational plans and new facilities.

While we may be critical of the EIS, and we are, we remain firmly committed to public transportation and recognize and accept that it is critical to the elimination of air pollution, minimization of vehicular transportation on city streets and in our neighborhoods.

Toward this end, section 10.3 of the draft EIS, entitled "Issues to Be Resolved," should be amended to include the issues raised by our written input.

The city council and I would appreciate your careful review and attention to these issues on behalf of all our citizens.

I would like to point out that our good neighbors in Arlington and Fairfax County also have these same issues in the area surrounding East and West Falls Church metro.

I will provide a complete copy to Mr. Hill, and I think we have mailed copies with full attachments as well.

Thank you very much for the opportunity to speak this evening, and we look forward to working with you in the future.

MR. KLINGE: Thank you, Mayor Gardner.

[Applause.]

MR. KLINGE: The next speaker is a member of the Falls Church city council, the Honorable David Snyder.

STATEMENT OF THE HONORABLE DAVID SNYDER

MR. SNYDER: Thank you very much, Chairman Klinge and Chairman Hanley, for this opportunity to be here this evening and to speak on this very important regional and local project.

Falls Church is a charter member of the metro system and so we take the issue of mass

I would like to point out that our good neighbors in Arlington and Fairfax County also have these same issues in the area surrounding East and West Falls Church metro.

I will provide a complete copy to Mr. Hill, and I think we have mailed copies with full attachments as well.

Thank you very much for the opportunity to speak this evening, and we look forward to working with you in the future.

MR. KLINGE: Thank you, Mayor Gardner.

[Applause.]

MR. KLINGE: The next speaker is a member of the Falls Church city council, the Honorable David Snyder.

STATEMENT OF THE HONORABLE DAVID SNYDER

MR. SNYDER: Thank you very much, Chairman Klinge and Chairman Hanley, for this opportunity to be here this evening and to speak on this very important regional and local project.

Falls Church is a charter member of the metro system and so we take the issue of mass

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transit very, very seriously and support it in every day that we can. I have an opportunity to do so personally as former chair of the Northern Virginia Transportation Commission and as a representative of the city of Falls Church on the Transportation Planning Board.

But the reality is that Falls Church is the eastern terminus of this project, regardless of which of the alternatives are followed. Our first set of comments, summarized by Mayor Gardner, really relates to the technical, legal and factual issues which must be adequately addressed for a draft EIS and an EIS to pass muster under the law.

Page 8 of the summary lists those in four categories:

Social effects; environmental effects; economic effects; and transportation effects.

We believe that at a minimum this project, regardless of its alternatives, has the following social effects:

Community cohesion; displacement and relocation; visual and aesthetic conditions;

parklands and recreation areas; and especially safety and security, especially regarding pedestrians and school students in the area.

Secondly, as Mayor Gardner indicated, there may be very significant water resources effect, air quality, noise, vibration, hazardous and contamination materials and other effects.

Third, in terms of economic effects, its unequal economic effect is something that deserves additional study.

Finally, transportation effects again are inadequately studied under this draft EIS. And they include effects on local and regional roadways, transit parking, and bicycle and pedestrian facilities. And we have a written submission, which we ask be a part of this record.

Now as a matter of law and as a matter of fact, we believe that additional work needs to be done, and that the draft EIS and any EIS that fails to address these issues would be inadequate and incomplete as a matter of law.

But what is more important here is that

unless these issues are addressed successfully, this will not be a project that works for the citizens of this region. We note that in the handout this evening that one of the objectives is to increase mobility and accessibility, and another key objective is to accommodate future increases in transportation demand.

We certainly now and in the past and will be in the future are committed to achieving those objectives along with our colleagues and those others who share the region with us. And yet unless the issues are addressed which we have outlined in our written submission and we have talked about this evening, this will be like a beautiful, attractive island surrounded by a sea of sharks that you can't get to.

In other words, what good is this transit system if you can't get to it? And you can't get to it unless you address systematically the neighborhood streets, the transit services that provide transportation, conceivably, to this important new addition to the region, and in

otherwise provide for a much greater area than is provided for now.

We know that the highways in the area that potentially would be accessed for this system are already significantly under stress and, frankly, break down regularly as effective transportation corridors. And those include Route 7, Route 29, Route 66, and many other neighborhood highways.

We recognize as well that there are significant pedestrian and school traffic throughout this area.

So for all the reasons indicated, we urge a much more significant study of the issues that we have talked about, that we urge inclusion of mitigating factors, and finally we urge that, not just for the citizens of Falls Church, but all the citizens of this potential region, because if it works for us, it will work for the region. If it doesn't work for us, it won't work for the region, either.

So with that, we would like to summarize by saying we appreciate the opportunity to be here,

we are absolutely committed to the objectives of increased mobility and accessibility, we are absolutely committed to mass transit, and we have shown it in every way possible. We do tonight and we will in the future, and we certainly want to accommodate future increases in travel demand more effectively than we have been able to in the past.

If we address the issues that we have outlined tonight, we believe that this project will achieve those objectives. If we don't, it fails as an EIS and it will fail as a project that serves the region.

Thank you very much.

[Applause.]

MR. KLINGE: Thank you, Councilman Snyder.

And now I am going to turn the meeting over to Ms. Hanley, who will introduce the people in the public who wish to testify. Ms. Hanley.

MS. HANLEY: Thank you, Mr. Klinge.

Let me ask one more time if you could join me, is there anyone who wants -- who requests signing services? Okay. Thank you.

City of Falls Church

Harry E. Wells Building,
300 Park Avenue, Falls Church, Virginia 22046-3332
(703) 248-5014 Fax (703) 248-5146

CITY COUNCIL
Daniel E. Gardner, Mayor
Robin S. Gardner
M. R. Lindy Hockenberry
Samuel A. Mabry
Martha R. Meserve
Ronald S. Parson
David F. Snyder

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July 30, 2002

Mr. Corey W. Hill
Northern Virginia Regional Manager
Virginia Department of Rail and
Public Transportation
1550 Wilson Blvd.
Suite 300
Arlington, VA 22209

Dear Mr. Hill:

The City of Falls Church welcomes this opportunity to present the concerns of the City to the Virginia Department of Rail and Public Transportation (DRPT) regarding the draft Environmental Impact Statement (EIS) for the Dulles Corridor Rapid Transit Project (the Project). Although supportive of the Project, the City has some critical issues with regard to the EIS, which we feel must be addressed before the Project proceeds. Generally, we are concerned that although the City of Falls Church will be impacted by the Project, our community overall has been overlooked in the EIS. The impact area of the Project includes the East and West Falls Church Metro Stations, which are located on the perimeter of our City limits. We believe that the impact to the citizens and the environment of the City of Falls Church has neither been assessed nor mitigation measures considered or developed. Specifically, the City has the following concerns:

- The draft EIS has failed to meet the legal requirements of an Environmental Impact Statement regarding significant impact analysis in particular areas as required by 40 CFR 1502.14 and 40 CFR 1508.9, including the City of Falls Church, which will be impacted by this proposed Project.

- The draft EIS has failed to fully assess water, traffic, and transportation impacts on the City of Falls Church and thus propose mitigation of those potential impacts.

- The draft EIS has failed to adequately address issues of parking overflow in the residential areas adjacent to the East and West Falls Church Metro Stations.

- The draft EIS has failed to adequately address public safety and infrastructure issues regarding pedestrian traffic (especially students) conflicting with vehicular

traffic in and around the West Falls Church Metro Station, given the prediction for increased vehicle trips per day.

- The draft EIS has failed to address the environmental impact to surface and ground water as it might affect the City, the City's water distribution system that serves much of the Corridor, and Four Mile Run.

The City of Falls Church understands the legal requirements and the framework of the Environmental Impact Statement, which is to insure that all issues, alternatives and concerns are weighed and evaluated for remedy. In attempting to meet these specific requirements, we believe that mitigation of the Project impact on the City of Falls Church and its immediate surroundings has not been sufficiently addressed. Moreover, given our past history of corresponding on these and similar issues, we continue to believe the City's concerns have not been given full evaluation.

EIS regulations state that the comparative analysis, including the proposed action, is the heart of an EIS (40 CFR 1502.14) and require a rigorous exploration and objective evaluation of reasonable alternatives, including a possible no action alternative. Reasonable alternatives include those that are practical or feasible from a common sense, technical and economic standpoint. Federal regulations (40 CFR 1508.9) recommend that the EIS address environmental impacts in proportion to their potential significance. Impact analysis is intended to concentrate on project attributes that have a significant impact or potential for significant impacts. We contend that this EIS overlooked significant impacts as they relate to the City of Falls Church and its environs.

It is our understanding that the Dulles Corridor Project is a phased regional rapid transit project with planned station facility improvements within the East and West Falls Church Metro Station areas. Given this understanding, we firmly believe this project will have a substantial vehicular traffic impact on the City as the East and West Falls Church Metro Stations transform into a major regional transportation/transit hub in the future. From the outset, the City has been concerned that the Project will bring thousands of additional motorists into the City, and urged that plans must be made to accommodate the additional traffic. In addition, new parking facilities may be needed at either metro station to support the ridership. If these motorists drive to the stations and cannot find parking, they will try to park on the residential streets, creating a significant impact on the surrounding neighborhoods. The City has repeatedly requested that these impacts, and others, be anticipated and addressed.

Our review of the draft EIS indicates that these key concerns have not yet been addressed for the City of Falls Church. The Project, while appearing to be beneficial to the region, has a significant and direct negative impact on the City in a manner not fully analyzed in

the draft EIS. Additionally, we believe the Project has large-scale and complex impacts on the City. We have previously asked that these impacts be thoroughly studied (Attachments 1–4), however, we have now concluded that they have not been given full consideration.

Following our review of the Draft EIS, we are particularly troubled that the impacts to the East Falls Church Metro apparently have never been considered. For this reason, we find the EIS significantly flawed and formally request that this area be examined and fully evaluated.

While a limited analysis was performed for the West Falls Church Metro station, we discovered that project impacts were not considered in many of the Technical Reports including Land Use and Socioeconomic, Air Quality and Economics, and Secondary Development Effects. Although West Falls Church Metro is included in the Noise Technical Report, we are concerned that the full impact has not been analyzed. We believe very strongly that the EIS must be revised to consider impacts in all Technical Reports for both the East and West Falls Church Metro areas. This project impacts our residents' quality of life in a myriad of ways and these impacts must be considered in order to be fully compliant with Federal EIS regulations.

The draft EIS did address one critical area of concern to the City -- Traffic Analysis and Station Access for the West Falls Church Metro area. While it generally addresses some concerns, we believe it falls short in its analysis. Please let me reiterate the City's critical concerns as related to this Technical Report:

- **Traffic** – The traffic generated by this project will greatly diminish the quality of life of our residents. We asked that the City's traffic consultant review and analyze the EIS. His comments are attached (Attachment 5). It is of great concern that nineteen (19) separate technical issues were identified as needing to be rectified or clarified. Our consultant states that these "shortcomings, inconsistencies, and concerns/questions are found to be rather troublesome." In addition to these specific technical issues, it is our view that the traffic impacts were not fully analyzed in four key areas:

    - **Assumptions** – We believe the assumption that ridership will not increase and the assumption that failing intersections should not be improved is fundamentally flawed. Every projection throughout the EIS shows thousands of anticipated new riders. One of the project's major goals is to increase ridership and, certainly, at the starting point for the service, additional persons will be traveling to this destination.

- **Impacts** – The traffic impacts are more far reaching than the intersections studied. The City had requested that thirteen (13) key intersections be studied and is disappointed to find only three (3) were considered. The City continues to believe this project may have a significant impact on Falls Church and its environs requiring analyses that would include secondary and cumulative effects of traffic increases through existing neighborhoods. This potential for increased commuter "cut through" traffic needs to be monitored and will require the collection of additional traffic counts.

- **Equity** – The City is more directly impacted than other communities, but these impacts were not analyzed at the same level of detail as the proposed Metro stations. Unlike the planned stations in Tyson's Corner, the impact of traffic overflow will be felt on adjacent residential streets causing safety concerns for our residents. It is puzzling to then contrast that only the three (3) directly adjacent intersections at the West Falls Church Metro area were analyzed, whereas, for the new stations, as many as nine (9) and an average of five (5) adjacent intersections were analyzed.

- **Mitigation measures** – Table 6.2-6, "Summary of Traffic Issues and Proposed Mitigation Measures," does not address or consider Falls Church traffic issues or propose mitigation measures.

- **Parking** – The pressure for Metro parking on the City's residential streets is extreme at present. We are finding that permit parking or time restrictions simply moves the parking further out into other City neighborhoods impacting more and more residents constantly.

  - **Assumptions** – The assumption that parking needs will not increase is flawed. The recently announced potential addition of 1,000 parking spaces at the West Falls Church Metro area clearly indicated parking needs are greater than stated in the report.

  - **Impacts** – Parking studies are needed for both the East and West Falls Church Metro areas.

  - **Equity** – The City and its environs have more residential streets impacted than any other locality, but no consideration was given to how parking will be handled on those streets.

- **Public Safety/Infrastructure** – The City is unique in that the West Falls Church Metro area is directly adjacent to City owned property, which includes the George Mason Middle and High Schools, as well as the UVA/Virginia Tech Grad Center.

  - **Assumptions** – The assumption that failing roadways should accommodate more traffic without improvements is flawed. One of the major goals of the Project is to support future development. However, in reality, the Project may actually prohibit such future development in the area and severely limit the City's future economic development potential because existing roads are now operating at near or full traffic capacity.

  - **Impacts** - It is troubling that little consideration was given to pedestrian improvements as a significant number of young people traverse this area due to the proximity of schools. We see pedestrian and vehicular conflicts increasing as enrollments and car trips increase in this small geographic area. There are no plans for widening either US 29 or VA Route 7 within the City and the City's Adopted Comprehensive Plan and Streetscape Plan do not recommend any future street widening in the City. As a result, the existing streets will have to accommodate any increased vehicular traffic.

  - **Equity** – Public safety and infrastructure improvements are included in the EIS recommendations for many other impacted areas, but not for the City of Falls Church.

  - **Water** – The Draft EIS addresses possible impacts to surface and ground water. Section 4.1.5.2 acknowledges the possibility of ground water degradation from contaminates, but the ground water study does not address Falls Church ground water. Furthermore, the inventory of surface water sources that might be negatively impacted within the watershed of the affected Project area omits the Four Mile Run and its tributaries. This is a significant omission that must be addressed. Additionally, Section 4.1.3.2 addresses consideration of Fairfax and Loudoun County public water and waste water systems, but omits consideration of possible impact to the Falls Church water system, which not only serves Falls Church City but also a substantial portion of the Project area. This omission is very significant and must be addressed by analyzing possible impacts and proposing mitigation measures.

  - **Social effects** – The Draft EIS at Section 3.0 addresses social effects of the proposed Project. It attempts to analyze and identify potential effects on each of the affected communities and their services and facilities. The

document, at Section 3.2, states that the section includes consideration of schools. However, the potential impact upon the Falls Church City Public School system, due to the close proximity of the Project and the attendant traffic and safety concerns, is completely omitted. This is another significant oversight that must be addressed.

Overall, we strongly believe the Draft EIS' lack of full analysis could prove disastrous for the City, the surrounding neighborhoods and our educational structures. Moreover, we suspect there may be a tremendous safety concern if proper evaluations are not conducted. We believe our neighborhood streets will be inundated with motor vehicles and the project will be considered a failure. Existing infrastructures will be adversely affected and must be effectively remedied by operational plans and new facilities.

Finally, it is our position that there is still much work to do in order for the Draft EIS to address the long-range concerns that have been previously raised by the City, including the safety concerns that continue to be paramount in the minds of our citizens, and which have not yet been studied, let alone, resolved. While we may be critical of the EIS, we remain firmly committed to public transportation and recognize and accept that it is critical to the elimination of air pollution, minimization of vehicular transportation on city streets and in our neighborhoods. Towards this end, Section 10.3 of the Draft EIS, entitled "Issues to be Resolved," should be amended to include the Falls Church City issues raised herein.

The City Council and I would appreciate your careful review and attention to these Falls Church issues. We further request that you initiate timely and appropriate analyses regarding those issues that will most directly impact the City of Falls Church and its environs. The City Council extends its appreciation to the FTA, DRPT and WMATA for its leadership in this critical transportation and transit planning for Northern Virginia. Please contact Council Member David Snyder, who serves on the Northern Virginia Transportation Commission (NVTC), Transportation Coordinating Council of Northern Virginia (TCC) and National Capital Regional Transportation Planning Board (TPB), at 202-828-7161 or Daniel McKeever, City Manager, at 703-248-5004 with any questions and responses.

Sincerely,

Daniel E. Gardner, Mayor

cc: Honorable Members of the Falls Church City Council
Congressman Frank R. Wolf
Congressman James Moran

Senator Mary Margaret Whipple
Delegate James M. Scott
Whittington W. Clement, Secretary of Transportation (Virginia)
Katherine K. Hanley, Fairfax County Board of Supervisors Chair
Chris Zimmerman, Arlington County Board Chair

Attachments

City of Falls Church

Daniel E. McKeever
City Manager

Harry E. Wells Building - 300 Park Avenue - Falls Church, VA 22046-3332

(703) 248-5004
Fax (703) 248-5146

January 8, 2001

Mr. Karl A. Rohrer, AICP
Project Manager, Northern Virginia Office
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard, Suite 300
Arlington, Virginia 22209

Ref: Scope of Work for *VDRPT Comprehensive Transportation/Traffic* Management Plan Assistance – Dulles Corridor Rapid Transit Project

Dear Mr. Rohrer:

Thank you for meeting with the City's team on November 1, 2000 to discuss the impact of the *Dulles Corridor Rapid* Transit *Project*. In accordance with our discussion relating to the scope of the *Dulles Corridor Rapid* Transit *Project* study and the effort to mitigate the impact of the *project*, the City requests your assistance in developing a comprehensive traffic *management* plan for the City of Falls Church and vicinity. This is based on the need to evaluate potential transportation issues as Falls Church emerges as a regional transportation hub in the future. *Of* the numerous future planned roadway and transit improvements *that will converge* in the Falls Church area the Dulles Corridor Rapid Transit Project will *be one of the first with a terminus involving both the* West Falls Church *and East Falls Church* Metro Stations and vicinity. *While mobility of travelers in the Dulles Corridor and around the region will be significantly improved these new station terminus points in the vicinity of Falls Church will* impact *the city* dramatically in the future. A comprehensive transportation study and plan is needed to effectively coordinate and address *future* regional mass transit linkages, *inter-modal facilities, impact of increased* local *vehicle* traffic/*congestion, parking needs/deficiencies*, safety and land use issues.

The following is some background information that details the City's *need and* efforts to date to secure transportation planning *assistance*.

Basis for Comprehensive Traffic Management Study/Plan:

Several recent *local mixed-use development* projects have suggested the need to do a comprehensive study and to create a plan for traffic management and calming in the City *in order to address potential adverse traffic impacts of larger scale developments. However, of even more significance are* the various *current regional transit plans and projects* including the Dulles Corridor Project, a *phased* regional *rapid* transit project *with planned station facilities within the East and West Falls Church Metro Station areas, that will have an even more substantial vehicular traffic impact on the City as it transforms into a major regional transportation/transit hub in the future.*

The *initial* phases of the planned regional *Dulles Corridor* mass transit project *will include the provision of express* bus rapid transit (BRT) from the West Falls Church Metro Station to Dulles Airport. The *subsequent* phases of this project will provide a rail link from the East Falls Church Metro Station to Dulles and possibly a rail link from one of the metro stations to Springfield. These changes could potentially bring thousands of additional motorists into the City, and thus some plans must be made to accommodate the additional traffic. In addition, *new* parking facilities *may be needed* at either metro station to support the ridership. If these motorists drive to the stations and cannot find parking, they may try to park on the residential streets, creating a significant impact on the surrounding neighborhoods. This issue must also be anticipated and addressed.

The combination of the *planned* BRT/Metro *transit* link*ages* suggests that *initial portions of a* comprehensive *traffic management* study and plan should be completed using funds earmarked for the Dulles Corridor Transit Project to whatever extent is possible. *The initial phases of the* study should be comprised of the following; 1) a thorough analysis of existing conditions on residential and commercial streets, which could require a large data collection and analysis effort to include traffic volumes, speed, street designs, traffic light signalization, and an analysis of pedestrian, bicycle, and mass transit facilities. 2) to *develop projections regarding* the potential increases in traffic generation due to the BRT/Metro link, proposed redevelopment projects, and other developments, and the impacts of those increases on both commercial and residential streets, as well as on pedestrians, cyclists and mass transit riders; and 3) a plan, which would include recommendations for mitigating current and future potential traffic impacts on the City's transportation system and residents through a variety of means. *The City could then use results of this initial study and plan along with its baseline data to complete the final phases of a comprehensive traffic management plan. The recently adopted 2020 Northern Virginia Transportation Plan, the currently ongoing Dulles Corridor Rapid Transit Project NEPA and PE studies and other general regional traffic data collection and modeling by the Virginia Department of transportation (VDOT) should provide much of the data needed to address the Falls Church study area.*

The following is a statement of goals and objectives for the Study/Plan and specific expectations for deliverables.

Goals and Objectives of Study/Plan

GOAL: To maintain the quality of life within the City as the new BRT and rail links to the City's Metro stations and as new development occurs in and around the City.

- To ensure safety on residential streets, controlling parking and the speed and volume of traffic on them.

- To ensure efficient traffic movement into and within the City on primary streets with minimum impacts on existing Level of Service (LOS).

- To provide as many non-vehicular (pedestrian, bicycle, and mass transit) safe, convenient, and integrated transportation options as possible to move people into and within the City and to mass transit facilities.

- To create a small model of multimodal/intermodal efficiency that might be replicated in other areas of the Country.

Expected Deliverables for Project

- A comprehensive inventory and assessment of existing transportation facilities, parking facilities, and traffic conditions in the City -- vehicular and non-vehicular (pedestrian, bicycle, and mass transit). This should also note deficiencies.

- A review of the existing transportation systems in Arlington and Fairfax Counties and previously developed regional transportation plans.

- A forecast of traffic, travel, and parking demand as a result of (a) the BRT, (2) future rail links to metro, (3) future anticipated development within and near the City, (4) the above scenarios if HOV does not exist on I-66, and (5) the above scenarios if HOV begins at Route 29 instead of the Beltway

Please review the City's proposal and contact me to set up a meeting to confirm the scope of the study and associated timelines.

Sincerely,

Daniel E. McKeever
City Manager

cc: Mayor Daniel E. Gardner and Members of the City Council
Willie Best, Assistant City Manager
Roy B. Thorpe, Jr., City Attorney
General Managers
Gary Fuller, Principal Planner
Fred Seldon, Director Planning Fairfax County

ATTACHMENT 2

FILE

City of Falls Church

Daniel Gardner, Mayo
Steven Rogers, Vice Mayo
Robin Gardne
Lindy Hockenberr
Ron Parso
David F. Snyde
Kathie Winckle

Harry E. Wells Building - 300 Park Avenue - Falls Church, VA 22046-3332

(703) 248-501
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August 9, 2000

Mr. Len Alfredson, P.E. Project Manager
Dulles Corridor Transit Project
1550 Wilson Boulevard
Suite 300
Arlington, Virginia 22209

Dear Mr.Alfredson:

The City of Falls Church appreciates the opportunity to review and comment on the Dulles Corridor Rapid Transit Project and its scope of work for the environmental impact study under the PE/NEPA process. The City Council and I support the continued evaluation and refinement of alternatives to provide proposed transit improvements in the Dulles Corridor, Tyson's Corner and Falls Church areas, which would serve as the easternmost terminus of the new proposed transit corridor. We also appreciate your taking time from your busy schedule to brief us on the project at the Council Work Session on July 31st.

We believe this project will have a significant impact on the City requiring environmental analyses that would include -- secondary and cumulative effects; transportation and traffic; land use, zoning and economic development; land acquisition, displacements and relocation of existing uses; neighborhoods and communities. Other key PE/NEPA objectives include financial analyses of funding sources for project capital, operating and maintenance costs and engineering analyses of possible alternative alignments.

On behalf of the City Council I request that the Federal Transit Administration (FTA), Virginia Department of Rail and Public Transportation (DRPT) and the Washington Metropolitan Area Transit Authority (WMATA) carefully review and consider our comments and initiate appropriate action and analyses to address these issues. Allow me first to provide some important contextual background.

Background:

- The City is not planning any future widening of US 29 or VA Route 7 (within the City) and will work to maintain the character of these roadways. US 29 currently carries 31,000 vehicles per day and VA Route 7 35,000 vehicles per day through the City.

- The City's Adopted Comprehensive Plan and Streetscape Plan does not recommend any future street widening in the City, and as a result the existing streets will have to accommodate any increased vehicular traffic.

- The City and School Board are major landowners in the vicinity of the West Falls Church Metrorail Station, as they own the Virginia Tech/University of Virginia Graduate Center (City leased land to universities) and George Mason Middle/High School properties. The City is also encouraging the redevelopment of a large area of land (Gordon Road Triangle area) within two blocks of the West Falls Church Metrorail Station.

City and Regional Roadway Impacts:

- Establishing BRT at the West Falls Church Station and full rail service at the East Falls Church Station intensifies the need for a transportation/traffic management and impact study for the City to evaluate potential impacts and develop appropriate mitigation measures. This point is made more clear by the projection of 48 buses during the peak hour can be accommodated at the West Falls Church station during the BRT phase of the project. A traffic impact study for the West Falls Church area needs to be an integral part of the analysis for this project.

- Establishing BRT at the West Falls Church station, and full rail at the East Falls Church station without taking into consideration the traffic impacts along the Route 7 corridor from Falls Church to Tyson's Corner is shortsighted. The project must consider the impact of the BRT through this corridor as well as any projected changes in traffic volume that may occur as a result of project providing access to Dulles from the Falls Church and Tyson's Corner areas. In addition, the study must consider relieving US 50 of its prohibition against truck traffic as a way to relieve VA Route 7 of this traffic traveling through the City of Falls Church.

- What alternatives are available to mitigate traffic bottlenecking in the City due to increased vehicle trips on vicinity roads of traffic through the City to and from the East Falls Church and West Falls Church stations as transit rider ship increases? Without this information WMATA is doing a disservice to this process and in particular, to those commuters who use Route 7 from Baileys Crossroads to Tyson's Corner. It is not logical to conclude the majority of riders to Dulles will be riders who are already on the system.

- What measures will be taken to protect City residential neighborhoods from increased commuter traffic? WMATA should consider alternatives that rely on off site parking facilities and shuttles to the East and West Falls Church station that would relieve city streets from a large part of this traffic leaving it to shuttles. The City would like to play a part, if not a partner, in this analysis and ultimately discussions of potential solutions and sites.

Transit Improvements:

- WMATA should consider utilizing the both the West Falls Church and East Falls Church stations for the BRT. By utilizing the East Falls Church station the project invests its time, analysis and money in the station that will ultimately support the full rail service thereby dissipating some of the traffic and transportation impacts along Route 7 and on local roadways around the West Falls Church station. This would obviously entail close coordination with Arlington County.

- Analyze all currently proposed and alternative mass transit improvement options (i.e. impact, benefits, physical constraints), including light rail alternatives as proposed in the 1999 Northern Virginia 2020 Transportation Plan. The project should also consider linkages between certain nodes along this light rail, from Baileys Crossroads through Falls Church, to the Station that will best provide efficient access and service to Dulles. These linkages might be light rail, bus, or electric bus.

- Additional studies are needed to evaluate alternatives for increased parking at or near the West and East Falls Church Metrorail Stations. WMATA representatives have advised the City that a study is planned for the West Falls Church Metrorail Station, but a study is also needed for the East Falls Church Metrorail Station.

Financing Strategies:

- Explore public/private partnerships for alternative funding of transit improvements as opposed to seeking local subsidies.

- Take steps to insure that project costs that project limited benefits to one jurisdiction only, do not become financial obligations of another jurisdiction.

- Carefully consider the impacts from Special Taxing Districts. There will be strong opposition to any tax proposal especially if the DCRT project does not provide the City with additional economic development opportunities.

Land Use:

- Consider carefully improvements that may have cumulative and secondary impacts related to changes in future land regulations and requirements. There are clear differences in land use opportunities associated with the project. Falls Church City, which is fully built out, will be impacted very differently than areas in Fairfax and Loudon Counties. Fairfax and Loudon have the opportunity to plan their land use and its impacts, while we here in Falls Church must deal with the impacts of the project as it relates to the current use of the land.

Other Issues:

- WMATA needs to consider, if not fully study and analyze, the impact on the City (traffic, noise, parking, etc.) from extended operating hours of Dulles Airport. The early and extended hours of operation of Dulles Airport may conflict with normal commuting patterns or, more importantly, extend the length of time the City's transportation network is impacted by the increased traffic volume.

- The City of Falls Church and Fairfax County will be working together to review, evaluate and address future land use issues, impacts and opportunities in the West Falls Church Metrorail Station vicinity.

- The City will also be working closely with Arlington County on those issues related to the East Falls Church stations and nearby commercial and residential sections of the City.

- It is critically important the City of Falls Church be specifically included in the EIS portion of the project and, more importantly, be fully included in any and all traffic and transportation studies and/or analysis conducted for this project.

The City Council and I would appreciate your careful review and attention to these issues and to initiate timely appropriate analyses regarding those issues that will most certainly affect the Falls Church and its environs. The City Council extends its appreciation to the FTA, DRPT and WMATA for their leadership in this critical transportation and transit planning for Northern Virginia. Please contact David Snyder, Council member, who is on regional transportation boards that include the Northern Virginia Transportation Commission (NVTC), Transportation Coordinating Council of Northern Virginia (TCC) and National Capital Regional Transportation Planning Board (TPB), at 202-828-7161 or Daniel McKeever, City Manager at 703-248-5004 with any questions and responses.

Sincerely,

Daniel E. Gardner, Mayor

cc: Honorable Member of the Falls Church City Council
Senator Mary Margaret Whipple
Delegate Robert D. Hull
Shirley Ybarra, Secretary of Transportation (Virginia)
Katherine K. Hanley, Fairfax County Board of Supervisors Chair
Barbara A. Favola, Arlington County Board of Supervisors Chair

ATTACHMENT 3

City of Falls Church

Daniel Gardner, Mayor
Steven Rogers, Vice Mayor
Robin Gardner
Lindy Hockenberry
Ron Parson
David F. Snyder
Kathie Winckler

Harry E. Wells Building - 300 Park Avenue - Falls Church, VA 22046-3332

(703) 248-5014
Fax (703) 248-5146

July 31, 2000 (edited 7/27/00)

Mr. Len Alfredson, P.E. Project Manager
Dulles Corridor Transit Project
1550 Wilson Boulevard
Suite 300
Arlington, Virginia 22209

Dear Mr.Alfredson:

The City of Falls Church appreciates the opportunity to review and comment on the Dulles Corridor Rapid Transit Project and its scope of work for the environmental impact study under the PE/NEPA process. The City Council and I support the continued evaluation and refinement of alternatives to provide proposed transit improvements in the Dulles Corridor, Tysons Corner and Falls Church areas, which would serve as the easternmost terminus of the new proposed transit corridor.

e believe this project will have a significant impact on the City requiring environmental analyses that would include -- secondary .d cumulative effects; transportation and traffic; land use, zoning and economic development; land acquisition, displacements and relocation of existing uses; neighborhoods and communities. Other key PE/NEPA objectives include financial analyses of funding sources for project capital, operating and maintenance costs and engineering analyses of possible alternative alignments.

On behalf of the City Council I request that the Federal Transit Administration (FTA), Virginia Department of Rail and Public Transportation (DRPT) and the Washington Metropolitan Area Transit Authority (WMATA) carefully review and consider our comments and initiate appropriate action and analyses to address these issues. Allow me first to provide some important contextual background.

Background:

- The City is not planning any future widening of either US 29 or VA Route 7 and will work to maintain the character of these roadways.

- The City's Adopted Comprehensive Plan and Streetscape Plan does not recommend any future street widening in the City, and as a result the existing streets will have to accommodate any increased vehicular traffic.

- The City and School Board are major landowners in the vicinity of the West Falls Church Metrorail Station, as they own the Virginia Tech/University of Virginia Graduate Center (City leased land to universities) and George Mason Middle/High School properties. The City is also encouraging the redevelopment of a large area of land (Gordon Road Triangle area) within two blocks of the West Falls Church Metrorail Station.

City Roadway Impacts:

- Establishing BRT at the West Falls Church Station and full rail service at the East Falls Church Station intensifies the need for a transportation/traffic management and impact study for the City to evaluate potential impacts and develop appropriate mitigation measures. This study is needed to effectively coordinate and address mass transit linkages and local traffic, parking, safety and land use issues.

- What alternatives are available to mitigate traffic bottlenecking in the City due to increased vehicle trips on vicinity roads of traffic through the City to and from the East Falls Church and West Falls Church metrorail stations as transit ridership increases? WMATA needs to be prepared to study increased day trips to both of these stations. It is not logical to conclude the majority of riders to Dulles will be riders who are already on the system.

- What measures will be taken to protect City residential neighborhoods from increased commuter traffic?

Transit Improvements:

- Analyze all currently proposed and alternative mass transit improvement options (i.e. impact, benefits, physical constraints), including light rail alternatives as proposed in the 1999 Northern Virginia 2020 Transportation Plan.

- Additional studies are needed to evaluate alternatives for increased parking at or near the West and East Falls Church Metrorail Stations. WMATA representatives have advised the City that a study is planned for the West Falls Church Metrorail Station, but a study is also needed for the East Falls Church Metrorail Station.

Financing Strategies:

- Explore public/private partnerships for alternative funding of transit improvements as opposed to seeking local subsidies.

- Take steps to insure that project costs that are incidental only to a particular jurisdiction, do not become the obligation of any other jurisdiction.

- Carefully consider the impacts from Special Taxing Districts. There will be strong opposition to any tax proposal especially if the DCRT project does not provide the City with additional economic development opportunities.

Land Use:

- Consider carefully improvements that may have cumulative and secondary impacts related to changes in future land regulations and requirements.

Other Issues:

- WMATA needs to consider, if not fully study and analyze, the impact on the City (traffic, noise, parking, etc.) from extended operating hours of Dulles Airport. The early and extended hours of operation of Dulles Airport may conflict with normal commuting patterns or, more importantly, extend the length of time the City's transportation network is impacted by the increased traffic volume.

- The City of Falls Church and Fairfax County will be working together to review, evaluate and address future land use issues, impacts and opportunities in the West Falls Church Metrorail Station vicinity.

The City Council and I would appreciate your careful review and attention to these issues and to initiate appropriate analyses as they may affect the City and its environs. The City Council extends its appreciation to the FTA, DRPT and WMATA for their leadership in this critical transportation and transit planning for Northern Virginia. Please contact David Snyder, Council member, who is on regional transportation boards that include the Northern Virginia Transportation Commission (NVTC), Transportation Coordinating Council of Northern Virginia (TCC) and National Capital Regional Transportation Planning Board (TPB), at 202-828-7161 or Daniel McKeever, City Manager at 703-248-5004 with any questions and responses.

Very truly yours,

Daniel E. Gardner, Mayor

cc: Honorable Member of the Falls Church City Council
Senator Mary Margaret Whipple
Delegate Robert D. Hull
Shirley Ybarra, Secretary of Transportation (Virginia)
Katherine K. Hanley, Fairfax County Board of Supervisors Chair
Barbara A. Favola, Arlington County Board of Supervisors Chair

ATTACHMENT 4

David F. Snyder, Mayor
Samuel A. Mabry, Vice Mayor
Mary Ann Capria
Merni Fitzgerald
Daniel Gardner
Steven Rogers
Kathie Winckler

City of Falls Church

Harry E. Wells Building, 300 Park Avenue, Falls Church, Virginia 22046-3332

(703) 241-5014
Fax (703) 241-5146

December 17, 1999

Mr. Leo J. Bevon, Director
Virginia Department of Rail and Public Transportation
1401 East Broad Street
Richmond, Virginia 23219

Dear Mr. Bevon:

I wanted to take a moment to update you on the City's efforts to seek transportation planning assistance in developing a comprehensive traffic management study plan for the City of Falls Church and vicinity. This is based on the need to evaluate potential transportation issues as Falls Church emerges as a regional transportation hub in the future. The numerous future planned roadway and transit improvements including the Dulles Corridor Rapid transit project that will converge at the West Falls Church Metro Station and vicinity will impact Falls Church dramatically in the future. A comprehensive transportation study and plan is needed to effectively coordinate and address regional mass transit linkages and local traffic, parking, safety and land use issues.

The announcement at the December 7, 1999 meeting of the Dulles Corridor Task Force to fund a transportation planner for Fairfax County was of particular interest to the City and myself. As you may be aware the previous City Manager, Hector Rivera had been pursuing for almost a year through the Commonwealth of Virginia Secretary of Transportation and Virginia Department of Transportation (VDOT) funding for a similar transportation planner/engineer position. This grant based City staff position or VDOT assistance would involve work on a variety of transportation management, traffic and land use issues. Currently the City does not have either a transportation planner or transportation engineer on staff.

I have included some background information for your review that details the City's efforts to date to secure transportation planning assistance. I will call you so we can plan to have lunch soon to discuss the City's interests and what assistance may be available now and in the future. I also can be reached at (202) 828-7161 (work).

Very truly yours,

David Snyder /gsh

Mayor, David Snyder

VETTRA Co. *Transportation Planning & Engineering Services*

11535 Gunner Court
Woodbridge, Virginia 22192 Tel: 703/590-4932 Fax: 703/590-1277 Email: vettra@aol.com

June 29, 2002

via Email
& Facsimile

Mr. Samer S. Beidas, P.E., CCM
General Manager, City of Falls Church
300 Park Avenue
Falls Church, Virginia 22046-3332

(email) sbeidas@ci.falls-church.va.us
(fax) 703/248-5214

RE: Dulles Corridor Transit Project – Draft EIS

SUBJ: Impact Evaluation
City of Falls Church, Virginia

Dear Mr. Beidas:

I am pleased to provide the following *"Impact Evaluation"* for the referenced draft EIS report dated January 28, 2002 (including revised Section 8.0 dated March 15, 2002). This brief evaluation reviews this EIS report in consideration of possible impacts to the City of Falls Church, particularly the affected Metrorail stations and environs with the City of Falls Church. Based on my evaluation of this report (and revised Section 8.0 attachment), I offer the following observations and comments (presented in order by Section of the EIS report):

Section
Section 1.0 -- No comment.
Section 2.2 -- It is noted that the BRT alternative includes modification to the West Falls Church Metro Station.
Section 3 – No comment.
Section 4 – No comment.
Figure 5-1 – At the Haycock Rd./Falls Reach Drive intersection, it is shown that the predominant AM inbound flow is from Great Falls Street, yet the predominant PM outbound flow is to the other direction (towards Rt.7). This is a curious traffic pattern where the predominant outbound trips (from West Falls Church Metro Station) are opposite of the predominant inbound trips. This should be explained further.
Figure 5-17 – At the Haycock Rd./Falls Reach Drive intersection, there are "movements" going into an unmarked road opposite Falls Reach Drive. Perhaps this unmarked road is one-way, yet nothing is shown on this graphic. This should be explained further.
Section 5.3.2 – Roadway analysis was performed for eight (8) roadway segments, not including Rt.7 near Falls Church (e.g., near Haycock Road). Why not? It seems this important eastern end of the study area should have been included.
Section 6.1 – Level Of Service (LOS) analyses were conducted for selected highway links, but not Rt.7. Why not? Again, it seems this important highway corridor within the study area should have been included.
Section 7.1 – A general statement is made that *"... traffic impacts within the Orange Line Connection subarea of the corridor are not expected to be significant."* On what basis is this general statement made? On what proof or evidence can this be made?

Section 7.1 – It is stated that *"...no formal analysis of park/kiss-and-ride entries and exits or the nearby local road network was undertaken for the East Falls Church metro station area..."* due to insignificant increase in traffic near the station, yet it is also stated that *"... implementation of either the Metrorail or BRT/Metrorail Alternative would result in increased off-peak service frequencies at East Falls Church for eastbound trains..."* These statements seem contradictory. An explanation of how increased off-peak service creates no significant increase in traffic near the affected station needs to be clarified.

Section 8.2 (March 15, 2002) – It is stated that none of the planned changes to the West Falls Church Metro station are assumed in the analysis, yet no explanation is provided as to why? Also, isn't a parking garage being planned/programmed for this station? If so, why isn't this included in the analysis?

Table 8-1 (March 15, 2002) – This table shows exactly the same LOS and delay for the Rt.7/Haycock Rd. and Haycock Rd./West Falls Church Station Parking Entrance intersections during the AM and PM peak hours for the 2025 Baseline condition. It is highly unlikely that this coincidence would occur. This needs to be checked and verified.

Section 8.3.1 (March 15, 2002) – Under the "BRT Alternative" it is stated twice that the Rt.7/Haycock Rd. intersection would improve to LOS C in the PM peak hour. I believe that this applies to the AM peak hour as well (per Table 8-1).

Section 8.3.1 (March 15, 2002) – Under the "BRT Alternative" it is stated that *"...any of the build alternatives would reduce the demand for parking at the West Falls Church Station ..."*, yet no evidence is presented to support this finding.

Section 8.3.2 (March 15, 2002) – It is stated here that *"...only selected intersections and station entrances/exits are analyzed."* It is curious why the most impacted intersection in the West Falls Church Metro Station area (Great Falls Rd./Haycock Rd. intersection) was not part of the analysis.

Section 8.3.2 (March 15, 2002) – It is stated here that *"...because it is the controlling time period for the design year, only the PM peak hour conditions have been analyzed..."* Since the area near the West Falls Church Metro Station (i.e., Rt.7/Haycock Rd. intersection area) is directly influenced by the adjacent educational facilities, thus directly and strongly influenced during the AM peak hour much more than the PM peak hour, it is questionable why only the PM peak hour was analyzed, and not the AM peak hour.

Section 8.5 (March 15, 2002) – It is stated that since *"... the project is not anticipated to have a negative impact on adjacent intersections, analysis of pedestrian and bicycle access and circulation was not undertaken."* In light of prior comments and uncertainties, it is not necessarily factual that no negative impact has been afforded at adjacent intersections, thus perhaps pedestrian and bicycle access and circulation should be conducted.

Section 8.6 (March 15, 2002) – It is claimed that the measured "delay" impact is not significant enough to warrant mitigation. Under what criteria is this based? This seems to be objective.

Figure 8-1 (March 15, 2002) – The predominate PM peak hour traffic flow out of Falls Reach Drive is contrary to that shown in Figure 5-1. Which is correct?

Section 22.0 – It is noted that the study only accesses the potential effects of development near the Tysons Corner and Mid-Corridor areas. Apparently no development is forecast near the Falls Church Metro Stations. This needs to be verified with the City.

Section 22.2 – It is noted that *"... the increase in traffic attributable to the rail development-related forecasts represent area-wide impacts."* It is curious whether these area-wide impacts reach to Falls Church Metro Station areas.

Section 22.2 – The final paragraph of the report states that development will result in increased ridership and also attract additional traffic to adjacent roadways. Does this apply to roadways near the Falls Church Metro Stations? This needs to be clarified.

All in all, I find the report rather comprehensive and well done – mostly within standard methodologies and criteria. However, I do note and find some of the above-identified shortcomings, inconsistencies, and concerns/questions to be rather troublesome, which should be rectified and/or clarified.

I trust that this evaluation provides you with the information requested. Please feel free to call me if you should have any questions.

Respectfully Submitted,
VETTRA Company
Vernon E. Torney
Vernon E. Torney, AICP
Certified Planner # 8543
President

cc:

\fc\eval8_eis.doc

Hector A. Rivera
City Manager

Planning Division
Helen Reinecke-Wilt, Senior Planner

City of Falls Church
Department of Development Services

Harry E. Wells Building - 300 Park Avenue - Falls Church, Virginia 22046-3332

(703) 248-5104
Fax (703) 248-5225
e-mail: helenrw@hotmail.com

MEMORANDUM

DATE: June 25, 1999

TO: Hector A. Rivera, City Manager

FROM: Helen Reinecke-Wilt. Senior Planner HR-W
Wayne French. Director, Public Works Division WF
Samer Beidas. City Engineer
Harry Reitze, Captain. Falls Church City Police
Jim Gahres. Economic Development Authority Deputy Director
Halsey Green. Director. Finance Division
Otis Smith. Assistant to the City Manager

SUBJECT: Scope of Work for VDOT Transportation Management Plan Assistance

Basis for Comprehensive Traffic Management Study/Plan:

Several projects have suggested the need to do a comprehensive study and to create a plan for traffic management and calming in the City. These include recent plans for a two stage regional mass transit project, which will impact the East and West Falls Church Metro Stations; the City's Comprehensive Plan; and TR99-11, an add-on to the adopted Mixed-Use Redevelopment (MUR) Ordinance.

The first phase of the planned regional mass transit project will provide bus rapid transit (BRT) from the West Falls Church Metro Station to Dulles Airport. The second phase of this project will provide a rail link from the East Falls Church Metro Station to Dulles and possibly a rail link from one of the metro stations to Springfield. These changes could potentially bring thousands of additional motorists into the City, and thus some plans must be made to accommodate the additional traffic. In addition, no new parking facilities are proposed at either metro station to support the ridership. If these motorists drive to the stations and cannot find parking, they may try to park on the residential streets, creating a significant impact on the surrounding neighborhoods. This issue must also be anticipated and addressed.

A second purpose for this study/plan lies within the City's Comprehensive Plan, adopted in November 1997. This plan recommends that the City create a comprehensive traffic-calming

plan due to the constant complaints by residents about vehicular speeding and traffic volume on residential streets during the past 10 years or so. After several years of being asked to consider piecemeal traffic problems, the City's Transportation Committee realized that a comprehensive plan to address these issues was necessary to insure safety and efficient traffic flow for vehicular and non-vehicular traffic throughout the City. The new BRT and rail link proposal will compound the City's existing traffic problems.

TR99-11, a resolution in support of sustainable development in the Mixed-Use Redevelopment (MUR) areas, was adopted by the City Council along with the MUR Ordinance on March 8, 1999 (See attachment). This resolution stated that a variety of actions should take place as soon as possible. One of these actions is transportation and parking study to determine the potential impacts of fully developed MUR areas on both the residential neighborhoods and commercial districts. It also called for recommendations on how the additional traffic could be accommodated.

The combination of the BRT/Metro link, the Comprehensive Plan, and the associated MUR resolution, suggests that a comprehensive study and plan should be completed using the VDOT grant-based staffing to whatever extent is possible. This study should be comprised of a thorough analysis of existing conditions on residential and commercial streets, which could require a large data collection and analysis effort to include traffic volumes, speed, street designs, traffic light signalization, and an analysis of pedestrian, bicycle, and mass transit facilities. The second phase of the study should be to project the potential increases in traffic generation due to the BRT/Metro link, MUR projects, and other developments, and the impacts of those increases on both commercial and residential streets, as well as on pedestrians, cyclists and mass transit riders. The third and final phase should be a plan, which would include recommendations for mitigating current and future potential traffic impacts on the City's transportation system and residents through a variety of means. This should include recommendations for a variety of traffic calming measures on residential street; recommendations for improvements to pedestrian and bicycle facilities; as well as recommendations for the efficient utilization of other alternative modes of transportation. Transportation demand management techniques for new businesses such as carpooling, shuttles to metro, and employee mass transit cost-sharing should also be considered amongst the recommendations. This plan must be comprehensive in terms of both the physical or built environment and human element. The safety of vehicles and pedestrians and a peaceful environment for residents must be maintained.

The following is a statement of goals and objectives for the Study/Plan and specific expectations for deliverables.

Goals and Objectives of Study/Plan

GOAL: To maintain the quality of life within the City as the new BRT and rail links to the City's Metro stations and as new development occurs in and around the City.

- To ensure safety on residential streets, controlling parking and the speed and volume of traffic on them.

- To ensure efficient traffic movement into and within the City on primary streets with minimum impacts on existing Level of Service (LOS).

- To provide as many non-vehicular (pedestrian, bicycle, and mass transit) safe, convenient, and integrated transportation options as possible to move people into and within the City and to mass transit facilities.

- To create a small model of multimodal/intermodal efficiency that might be replicated in other areas of the Country.

Expected Deliverables for Project

- A comprehensive inventory and assessment of existing transportation facilities, parking facilities, and traffic conditions in the City -- vehicular and non-vehicular (pedestrian, bicycle, and mass transit). This should also note deficiencies.

- A review of the existing transportation systems in Arlington and Fairfax Counties and previously developed regional transportation plans.

- A forecast of traffic, travel, and parking demand as a result of (a) the BRT, (2) future rail links to metro, (3) future anticipated development within and near the City, (4) the above scenarios if HOV does not exist on I-66, and (5) the above scenarios if HOV begins at Route 29 instead of the Beltway.

- An identification of future transportation needs and deficiencies.

- An assessment of the projected impacts on special needs populations, in particular the elderly and physically disabled.

- A comprehensive and workable Transportation Management Plan that includes alternatives for state of the art traffic-calming techniques as well as for each mode of transportation and commensurate parking resources. This Plan must meet the goal and objectives as stated.

- A model that demonstrates this plan.

- An implementation plan.

- Public Information -made available for the City's Web Page.

Project Management Specifics

- A public participation process for the project would be developed by the City. This would include a minimum of at least one Planning Commission and one City Council public hearing and several neighborhood meetings to explain the initial findings of the study and receive input for the plan component.

- The City would have the ability to review and comment on draft recommendations prior to the publication of the final document.

- The City anticipates that this Study/Plan should be completed within six to nine months of the execution of the contract.

- A review of the actual impacts of the BRT should be made within six to nine months of the program's implementation to gauge the accuracy of forecasted impacts and potential readjustments to forecasts for the second rail link phase of the project should be made if necessary. In addition, a review of the actual impacts of the proposed rail links should also be made within six to nine months of implementation.

Attachments:

(1) City of Falls Church *Comprehensive Plan*, 1997
(2) TR99-11, a Resolution in Support of Sustainable Development in the Mixed-Use Redevelopment (MUR) Areas

cc:
Robert Murray, Chief/Director, Public Safety Division
David Holmes, Director, Economic Development Authority
Ray Spicer, Director, Housing and Human Services Division
Brenda Creel, General Manager, Community Services Department
Son Nguyen, General Manager, Environmental Services Department
Sheila Graham, Communications Director
Willie Best, General Manager, Administrative Services

RECEIVED
JUN 24 1999
CITY OF FALLS CHURCH
PLANNING

City of Falls Church
Department of Environmental Services
Division of Public Works
Interoffice Memorandum

To: Hector A. Rivera, City Manager, City of Falls Church
Otis B. Smith, III, Assistant to the City Manager, City of Falls Church
Tom Farley, Northern Virginia District, VDOT
Joanne Sorenson, Northern Virginia District, VDOT
Reggie Beasley, Urban Division, VDOT, Richmond
Chris Detmer, Traffic Planning Division, VDOT, Richmond
Elona Kastenhofer, Traffic Engineering Division, Northern Virginia District, VDOT
Grady Ketron, Traffic Planning Division, VDOT, Richmond
✓Andrea Giberson, Chairwoman, Citizens Advisory Committee on Transportation, City of Falls Church
David Holmes, Executive Director, Economic Development Authority, City of Falls Church
Captain Harry W. Reitze, Commander, Uniform Division, City of Falls Church Police Department
Halsey T. Green, III, Director of Finance, City of Falls Church
Gary Fuller, Director of Planning, City of Falls Church
Samer Beidas, City Engineer, City of Falls Church
Wayne J. French, Director of Public Works, City of Falls Church

From: Wayne J. French, Director of Public Works WJF

Date: 19 May 1999

Subject: **REVISED** Synopsis of 5/19/99 VDOT Traffic coordination meeting

Pursuant to our discussion, I am providing the following meeting synopsis:

People Present

VDOT: Tom Farley, Reggie Beasley, Joanne Sorenson, Chris Detmer, Elona Kastenhofer, Grady Ketron

City of Falls Church: Andrea Giberson, Hector Rivera, Otis Smith, David Holmes, Harry Reitze, Halsey Green, Gary Fuller, Samer Beidas, Wayne French

Key Points/Issues:

1. The City presented the historical information to VDOT personnel regarding the City; its issues, problems, concerns, location, and desire to be involved and

considered in any and all future transportation and traffic issues that may have an impact on the City and its citizens.

2. Mr. Fuller gave a historical background as to the City's desire and need to have traffic studies conducted, including the recently adopted Comprehensive Plan and a recently adopted resolution concerning sustainable development, which mandates the initiation of a traffic and parking study to determine the impacts of the current situation, as well as those created by new developments.
3. Captain Reitze explained the City's unusual position in regards to emergency response, as the two METRO stations are not in the City, but the City Police are often called to respond to these areas due to our proximity. Also, if the Bus Rapid Transit (BRT) system utilizes West Falls Church as a hub, then the growth in traffic will be almost debilitating. He stressed, as everyone in attendance noted, a regional approach must be taken on these issues.
4. The BRT is the one of the main reasons for the initiation of this cooperative effort and will be key in its success.
5. Mr. Rivera had met with Virginia Secretary of Transportation Shirley Ybarra and requested assistance from her for the funding of a two-year (+/-) transportation engineering position so that the impacts on the City caused by the BRT could be evaluated. This position would also allow the City to assess impacts of development on City and County highways. She expressed a desire to investigate this option based on its link to the BRT. Mr. Rivera then met with Mr. Tom Farley in response to a request to Mr. Farley from the Secretary's office.
6. The City desires to have other services performed in conjunction with this effort, including, but not limited to, traffic impact studies, level-of-service studies, congestion mitigation recommendations, safety issues, traffic calming, etc.
7. *In my conversation with Mr. Beasley, I expressed to him the City's desire to include the Village Section of West Broad Street for consideration of inclusion in the State's six-year plan, once funding becomes available in FY01. This could be accomplished by completing the downtown section, which is already on the State's project list and then including the Village Section with this project. If this is done, and the State constructs the project, the State would pay 98%, the City 2%, of the cost of most of the work, although a portion of the streetscape may be 100% City funding.*

DELIVERABLES

1. VDOT will prepare a two or three page Scope of Services to ensure that the needs of all involved are met and will have a draft to Mr. Rivera by 4 June 1999.
2. A final Scope of Services should be finished by the end of June 1999.
3. Reggie Beasley, Urban Division, Richmond, will be the coordinator for this effort to ensure that sufficient resources are assigned and that the project continues. This was done due to the fact the Reggie deals directly with the City, whereas the Northern Virginia Division does not.
4. Once an agreeable scope of services is finished, it will be sent out to bid, possibly with the City being the agent for the effort.
5. *A follow-up meeting with Secretary Ybarra, Mr. Farley, and Mr. Rivera would be established to finalize the agreement and establish the payment information and to establish the teams to correspond back and forth on the product.*
6. *The inclusion of the Village Section (400-900 blocks) of West Broad Street into the existing downtown section of Broad Street for funding and construction by*

VDOT in their six-year plan. This would complete the streetscape on all sections of West Broad Street.

Revised 6/2/99
Revised 6/18/99

Cc: VDOT Traffic engineering file

City of Falls Church

Office of the City Manager

Harry E. Wells Building - Park Avenue - Falls Church, VA 22046-3332

Hector A. Rivera
City Manager
(703) 248-5004
Fax: (703) 248-5146
E-Mail: fcpio@erols.com

February 4, 1999

The Honorable Shirley Ybarra
Secretary of Transportation
Commonwealth of Virginia
1401 E. Broad Street
Richmond, Virginia 23219

Dear Secretary Ybarra:

I have had the opportunity and privilege to serve on the Dulles Corridor Task Force which is exploring exciting approaches to BRT, funding alternatives, management approaches, etc., in order to realize a bus-rail/combo that would relieve congestion and engender continued development and technological growth. I thank you for the appointment to this important committee and for your sensitivity to local practitioners.

The plans to date reference West Falls Church as a point of expansion and/or origination for this east-west connector. In the future, the same may be true of a future northern connector from Springfield to Falls Church and to D.C. or Dulles. Our city is doing aggressive and "smart" (managed) economic development along our West Broad (Main) Street with Don Beyer of Don Beyer Volvo. We plan to develop a Technology Triangle (across from the Northern Virginia Graduate Center, near George Mason High School), conveniently located near the West Falls Church Metro station. A Marriott Assisted Living facility will be further down on Broad Street. This will be the second Marriott project in our small independent city of 2.2 square miles in the last two years.

We also host the crossroads of Routes. 29 and 7 which has the potential to be our future Town Center, and further on East Broad Street we collide into the famous Seven Corners. Route 29, known as Washington Street, is experiencing development, such as, new Falls Church Fire Station and a new State Theater (private sector).

It would be essential and imperative for the City to conduct traffic impaction studies for traffic management purposes and for community sustainability in this highly citizen-interactive community as we move towards a "regional transportation hub." I would ask that you consider a capacity-building grant to allow Falls Church to hire a professional traffic engineer/ planner, retain consultants as appropriate, and provide the citizens and developers with the anticipated and possible unanticipated consequences of development. We would be willing to provide a share of in-kind services and cash match. I project that a grant from the Commonwealth to us in the range of $175-200K may be realistic to get the job done systematically and with depth.

Thank you. I remain,

Sincerely,

Hector A. Rivera
City Manager

HAR:ecr
cc: Leo J. Bevon, Director
Department of Rail and Public Transportation
J. Kenneth Klinge, J.K.K. Associates
Thomas F. Farley, District Administrator
Virginia Department of Transportation
Robert J. O'Neill, County Executive, Fairfax County

K.5.2 Town of Herndon

- December 31, 2003
- August 26, 2002
- April 2, 2002
- August 8, 2000

TOWN OF HERNDON

P.O. Box 427
HERNDON, VIRGINIA 20172-0427
703-435-6805

Richard C. Thoesen, Mayor
rol A. Bruce, Vice Mayor
n M. De Noyer
is D. Husch
Connie H. Hutchinson
Michael L. O'Reilly
Harlon Reece

Richard C. Thoesen
Mayor

December 31, 2003

Via Facsimile & US Mail

0132 1

0171-

Mr. Karl Rohrer, Project Manager
Virginia Department of Rail and Public Transportation (VDRPT)
1550 Wilson Boulevard, Suite 300
Arlington, Virginia 22209

Mr. John Dittmeier, P.E., Acting Project Manager
Washington Metropolitan Area Transit Authority (WMATA)
Dulles Corridor Rapid Transit Project
1550 Wilson Boulevard, Suite 300
Arlington, Virginia 22209

31,405

Re. **PUBLIC HEARING RECORD – Docket R03-6**
Town of Herndon comments on the October 2003 Supplemental Draft Environmental Impact Statement and Proposed General Plans - Revisions for the Dulles Corridor Rapid Transit Project (DCRTP)

Submission of the Town of Herndon's Transportation Improvement District Resolution and Associated Resolutions in support of Metrorail

Dear Messrs. Rohrer and Dittmeier:

On behalf of the Herndon Town Council and the citizens we serve, thank you for the opportunity to comment on the Supplemental Draft Environmental Impact Statement (EIS) and Section 4(f) Evaluation and Proposed General Plans – Revisions for the Dulles Corridor Rapid Transit Project (DCRTP). We are appreciative of the steadfast energy and outstanding leadership provided by the Virginia Department of Rail and Public Transportation (VDRPT) and the Washington Metropolitan Area Transportation Authority (WMATA) staff in your efforts to meet the transit demands and challenges facing the Commonwealth.

On August 13, 2002, the Town Council unanimously passed a resolution recommending the "Metrorail Alternative" as the Locally Preferred Alternative (LPA). The Town Council views the near-term implementation of rail transit in the Dulles Corridor as imperative. However, I wish to express several significant concerns associated with the Supplemental EIS and General Plans for the Dulles Rail.

1. **PROJECT PHASING.** At the forefront of our concerns is the proposal to construct the project in two phases with the Phase 1 terminus at Wiehle Avenue. We recognize that the Federal Transit Administration (FTA) is considering only the first phase of construction to Wiehle Avenue for the FY 2004-2009 transportation reauthorization for the primary reason that "the phasing of construction is necessary to spread the costs of construction over a longer period of time to reduce annual funding needs." The Herndon Town Council is particularly concerned with the EIS statement that "FTA may consider the subsequent phase for FTA funding in the future, but has made no commitment to do so," and that "FTA has determined that the first phase now being considered for funding has independent transportation utility even if the subsequent phase is never built."

   Moving the terminus for Phase I to Herndon-Monroe is a means to guarantee immediate value for landowners in the western end of the district. Under the current funding and construction phasing proposals, these owners face the possibility of paying taxes to support Phase 1 construction bonds for thirty years or more, even in the event of a failure to get Federal funding for any subsequent phase. Under the best case scenario, these owners would be taxed from 2004 through at least 2015 before seeing any transit facilities in the Herndon area.

   We understand the financial and operational realities of the recommended extension as well as the practical difficulties engendered by an alternative proposal to construct rail directly to the Washington Dulles Airport by bypassing a number of planned stations and constructing them in a subsequent phase. While we understand that there is no way to guarantee future Federal funding, we do assert that an equitable tax district structure can be enacted. Current possibilities under discussion include a differential rate for the western portion or a scheme where western funds are escrowed until Phase 2 Federal funding is approved. These funds could be rebated if Federal funding does not materialize.

   In short, the proposed phasing scheme provides significant uncertainties for the implementation of a future phase. The Town Council opposes a single tax district, as proposed by the LEADER group, with the phasing scheme that does not extend the system to the Herndon-Monroe Station within the first phase.

   Please enter the attached Town Council Resolution 03-G-144 of December 2, 2003 into the public hearing record for the Draft Supplemental EIS. This resolution does support the LPA but conditions Town approval of the Transportation Improvement District on a Phase 1 interim terminus at Herndon-Monroe, as a means to assure rail service to the western part of the Dulles Corridor. The Herndon resolution recommends removing language that would have allowed landowners to veto Phase 2 implementation with one or more failures to obtain federal funding. The resolution also provides for minor adjustments to the boundaries of the tax district within the Town of Herndon.

2. **HERNDON-MONROE STATION NORTH SIDE ACCESS.** The Town commented previously on the minimal nature of the improvements proposed on the north side of the Herndon-Monroe Station. To recap, the Town completed an engineering concept and feasibility study in cooperation with VDRPT as well as other project sponsors, a copy of which was furnished to the project team. On June 12, 2001, the Town Council recommended a preferred access alternative as noted in the attached Resolution. The selected alternative includes pedestrian walkways extending from the station in several directions, with a modal transfer point (Kiss and Ride) for persons arriving by bus, car-pool, van-pool, automobile and bicycle. This scheme would maximize transit ridership.

   The walkway to Herndon Parkway shown in the General Plans provides basic access. However, are bus stop slips envisioned on Herndon Parkway near the end of the pedestrian walkway? Where do bicyclists store their bicycles? Where do the kiss & ride vehicles wait? How do transit users from nearby office buildings to the east and west reach the northside touchdown? How do transit users from the office buildings north of Herndon Parkway safely cross the four-lane divided roadway? Minimal improvements such as a signalized crosswalk on Herndon Parkway and multiple pedestrian sidewalks would at least fulfill the intent of the project as described on page 6-16, Section 6.2 of the Supplemental Draft EIS.

3. **TRANSPORTATION MITIGATION IMPROVEMENTS.** Two issues should be clarified with regards to Chapter 6 - Transportation Effects, 6.2.3 Transportation Mitigation, Table 6.2.7 presented on page 6-22 and 6-23. Specifically, the table provides a summary of proposed mitigation options to include construction of an additional through lane on the northbound (NB) and southbound (SB) approaches to the westbound (WB) Dulles Toll Road ramp at Fairfax County Parkway and construction of an eastbound (EB) right turn lane onto Herndon Parkway/Van Buren Street intersection. According to the Table 6.2.7, these proposed mitigation measures are required by 2025. We believe that both of the measures are warranted and should be completed prior to the opening of the Herndon-Monroe Rail Station, rather than by 2025. A northbound right turn lane at Van Buren Street and Herndon Parkway is also a critical need prior to the opening of the Herndon Monroe Station.

4. **ROUTE 28/CIT STATION.** The Town supports the accommodation of the overpass as shown in the General Plans for the Route 28 Station, although we had hoped the overpass would be constructed as part of the station project. This new connection will greatly enhance local circulation across the Dulles Toll Road between the Center for Innovative Technology (CIT) and the approved Dulles Center Development. It will enhance station access and an incomplete road network with regards to Rock Hill Road, Horse Pen and other local streets.

I would be happy to respond to any questions you may have concerning the Town's position on these or other matters related to the development of Dulles Rail. On behalf of the Town, I wholeheartedly wish the project team and the congressional delegation continued success in working with Congress and the Federal Transit Administration.

Sincerely,

Richard C. Thoesen
Mayor

Attachments:
Resolution 03-G-144, Adopted December 2, 2003
Resolution 02-G-98, Adopted August 13, 2002
Resolution 01-G-57, Adopted June 12, 2001

c. Members of the Herndon Town Council
Members of the Herndon Planning Commission
Stephen F. Owen, Town Manager
Anthony H. Griffin, County Executive

TOWN OF HERNDON, VIRGINIA

RESOLUTION

DECEMBER 2, 2003

Resolution- Determining if the Town Council Wishes Commercial, Industrial, or Multi-Unit Rental Residential Property in the Town to be Included within the Proposed Dulles Rail Transportation Improvement District.

BE IT RESOLVED by the Council for the Town of Herndon that:

1. The Town Council determines that the Town Council wishes the property in the Town of Herndon, zoned for commercial, industrial, or multi- unit rental residential uses, described in "Petition Pursuant to Virginia Code Section 33.1-431 for the creation of the Dulles Rail Transportation Improvement District" (Petition) dated August 1, 2003, to be included within the proposed Dulles Rail Transportation Improvement District (District), provided the petitioner and the Board of Supervisors of Fairfax County, respectively, make all of the following changes to the Petition and to the proposed and final resolution that creates the District:

   (a) The inclusion in the District of area at the northwest corner of Worldgate Drive and Van Buren Street that includes a sizeable office building.

   (b) The exclusion from the District of the single family residential areas west of commercial parcels that front on Victory Drive.

   (c) The exclusion from the District of the area along the east Elden Street corridor and outside the one mile radius from the Herndon-Monroe Park and Ride Station.

   (d) The extension of the interim terminus of the rail line in Phase I to the Herndon-Monroe Park and Ride Station.

   (e) Modification of Paragraph 4(f) of the Petition by removing the provision dealing with the Full Funding Grant and modifying the first sentence so that the Paragraph would read, in its entirety, "The District would continue to pursue funding for and construction of the remainder of the Transportation Improvements within the District".

2. In the absence of the petitioner and the Board of Supervisors of Fairfax County making all of the above changes in the Petition and in the proposed resolution and final resolution creating the District, the Town Council determines that the Town Council does not wish such property located within the Town to be included within the proposed District and therefore does not approve such inclusion.

3. The revised District with the changes proposed in paragraph 2 above is described in detail as follows:

The tax district boundary as it extends into the Town from the east along Baron Cameron Avenue (Route 606) would turn southward at the Town's eastern boundary rather than to the north; thence continuing southward to the W&OD Railroad Regional Park property; turning thence northwest along the park property to the end of the tax map parcel 017-1-02-0022, turning eastward a short distance along the boundary of that parcel and thence northward along the western boundary of parcel 017-1-06-00J4 to a point where it meets Herndon Parkway and continuing northward along Herndon Parkway a short distance; thence crossing Herndon Parkway and continuing west along Grove Street to an unnamed parcel shown on a plat approved April 1, 2003 (recorded at Deed Book 14224, pages 933-945) and being the location for the relocation of H and S Plumbing due to the extension of Grove Street; thence extending southward and westward along that parcel, continuing westward along subdivision 32 and thence northward returning to Grove Street; thence extending westward along Grove Street; turning southward along the eastern boundary of parcel 016-2-02-0191 and westward along the W&OD Railroad Regional Park property to Van Buren Street; thence extending southward along Van Buren Street as it becomes Spring Street; thence extending southeast along Spring Street to the northeast corner of parcel 016-2-02-0173B; thence extending southward along a line formed by that parcel and parcels 016-2-02-0174C and 016-4-02-0010C; thence turning westward along the boundary of subdivision 10 and extending along this subdivision and parcel 016-4-02-0002 (Town of Herndon property) to a point where it meets Herndon Parkway; thence continuing westward along Herndon Parkway a short distance and turning south along parcel 016-4-02-004A; thence continuing south along this parcel to its southwestern corner; thence extending northwestward along a line formed by subdivision 15 and 14 (Worldgate) and continuing thus within the Town as shown in the Petition.

4. The Mayor, any member of the Town Council, the Town Manager, or the Town Attorney shall deliver a certified copy of this resolution to the Fairfax County Board of Supervisors at or before its public hearing on the Petition on December 8, 2003.

5. This resolution shall be effective on and after the date of adoption.

This is certified to be a true and accurate copy of Resolution 03-G-144 adopted at a legally convened meeting of the Town Council of the Town of Herndon on December 2, 2003.

Viki L. Wellershaus

Viki L. Wellershaus, Town Clerk

TOWN OF HERNDON, VIRGINIA

RESOLUTION

AUGUST 13, 2002

Resolution- Recommending a Locally Preferred Alternative (LPA) and Other Considerations to be Forwarded to the Washington Metropolitan Area Transportation Authority (WMATA), the Virginia Department of Rail and Public Transportation (VDRPT) and the Commonwealth Transportation Board (CTB) as a Response to the Draft Environmental Impact Statement and Proposed General Plans of the Dulles Corridor Rapid Transit Project.

WHEREAS, the public information and public participation meetings were held concerning the Draft Environmental Impact Statement and Proposed General Plans for the Dulles Corridor Rapid Transit Project on July 29, July 30, and July 31, 2002 at the locations identified in the Notice of Public Hearings for the purpose of identifying issues and concerns of community members and stakeholders likely to be affected by the project, and to describe the purpose of the Study, identify the alternatives, the goals of the Study, and to increase public awareness and to receive citizens comments with regard to the Draft Environmental Impact Statement and Proposed General Plans for the Dulles Corridor Rapid Transit Project which includes Bus Rapid Transit and Metrorail Service in Fairfax and Loudoun Counties, Virginia; and

WHEREAS, the Town of Herndon approved a resolution, dated November 13, 2001, in support of the efforts of Congress and other leaders to expedite the extension of the Metrorail system to Washington Dulles International Airport; and

WHEREAS, the Town of Herndon approved a resolution, dated June 12, 2001, recommending a preferred alternative (Alternative Four) for north-side pedestrian access to the future Herndon-Monroe Transit Station; and

WHEREAS, the Town's preferred alternative for north-side pedestrian access to the future Herndon-Monroe Transit Station emphasizes a walkway extending from the station to Herndon Parkway, with a modal transfer point for persons arriving by bus, car-pool, van-pool, automobile and bicycle; and

WHEREAS, the Town of Herndon now has the opportunity to recommend a Locally Preferred Alternative (LPA) for the Dulles Corridor Transit Project from among the following alternatives: Baseline (No-Build) Alternative, Bus-Rapid Transit Alternative, Metrorail Alternative, Bus- Rapid Transit / Metrorail Alternative and a Phased Alternative; and

WHEREAS, the Town staff has reviewed and reported on the draft Environmental Impact Statement (EIS) and Proposed General Plans of the Dulles Corridor Rapid Transit Project; and

WHEREAS, by the year 2025, population in the Dulles Corridor is projected to increase by 56 percent, along with a 71 percent increase in jobs, and Dulles Airport, currently serving more than 20 million passengers annually, is projected to serve 32 million passengers by 2010; and

WHEREAS, based on local land use and transportation plans, this population and employment growth will lead to increased congestion on primary and local service roads and a need for additional capacity; and

WHEREAS, evaluation of the Dulles Corridor Study area has found that the corridor cannot accommodate additional highway expansion and therefore rapid rail (Metrorail Alternative) is the only mode of transportation that can provide substantial additional capacity in the corridor to meet future travel demand; and

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Herndon that the Metrorail Alternative is the Locally Preferred Alternative, which provides for Metrorail service that would extend the full length of the corridor from a point between the East and West Falls Church Metrorail stations on the Orange Line to Route 772 in Loudoun County.

BE IT FURTHER RESOLVED that:

1. The Town Council requests that the Herndon-Monroe Station construction include necessary facilities for inter-modal transfers and adequate pedestrian facilities on the north-side of the station, and that such facilities be incorporated into the final Environmental Impact Statement for the Dulles Corridor Rapid Transit Project; and

2. The Town of Herndon supports federal, state and local officials working together to achieve full funding for the Metrorail Alternative from federal, state and local sources.

This is certified to be a true and accurate copy of Resolution 02-G-98 adopted at a legally convened meeting of the Town Council of the Town of Herndon on August 13, 2002.

Viki L. Wellershaus

Viki L. Wellershaus, Town Clerk

TOWN OF HERNDON, VIRGINIA

RESOLUTION

JUNE 12, 2001

Resolution- Recommending a Preferred Alternative for Northside Pedestrian Access to the Future Herndon-Monroe Transit Station.

WHEREAS, on July 18, 2000, the Town Council awarded a contract to Parsons Transportation Group to prepare a study of alternatives for northside access to the Herndon-Monroe Transit Station; and

WHEREAS, on November 21, 2000, the Planning Commission and Town Council held a joint work session and heard a presentation by the consultant about the preliminary findings of the study and provided comments to the consultant; and

WHEREAS, the Planning Commission has reviewed the Herndon-Monroe Transit Station Northside Access Study, the staff report and attachments; and

WHEREAS, on March 5, 2001, the Planning Commission held a public hearing on the Herndon-Monroe Transit Station Northside Access Study; and

WHEREAS, the Town Council has reviewed the Herndon-Monroe Transit Station Northside Access Study, the staff report and attachments; and

WHEREAS, on June 12, 2001, the Town Council held a public hearing on the Herndon-Monroe Transit Station Northside Access Study; and

WHEREAS, notice of the public hearing was advertised in accord with Section 15.2-2204 of the Code of Virginia (1950) as amended.

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Herndon that:

1. The Town Council approves the Herndon-Monroe Northside Access Study, dated January 26, 2001, prepared by Parsons Transportation Group, Inc., which recommends Alternative Four as the preferred configuration to be explored in more detail with the Virginia Department of Rail and Public Transportation.

2. The Town Council directs the Town Manager to transmit the Herndon-Monroe Northside Access Study, dated January 26, 2001, to the Virginia Department of Rail and Public Transportation for its reference in preparing the Final Environmental Impact Statement for the study of rail in the Dulles Corridor.

This is certified to be a true and accurate copy of Resolution 01-G-57 adopted at a legally convened meeting of the Town Council of the Town of Herndon on June 12, 2001.

Viki L. Wellershaus

Viki L. Wellershaus, Town Clerk

01-G-57

TOWN OF HERNDON

Richard C. Thoesen, Mayor
Carol A. Bruce, Vice Mayor
John M. De Noyer
Dennis D. Husch
Connie H. Hutchinson
Michael L. O'Reilly
Harlon Reece

P.O. Box 427
HERNDON, VIRGINIA 20172-0427
703-435-6805

Richard C. Thoesen
Mayor

August 26, 2002

VIA: FACSIMILE & US MAIL

Mr. Corey W. Hill, Northern Virginia Regional Manager
Virginia Department of Rail and Public Transportation
1550 Wilson Blvd., Suite 300
Arlington, Virginia 22209

RECEIVED
AUG 27 2002
By 16,462

RE: PUBLIC HEARING RECORD – Docket R02-1
Draft Environmental Impact Statement and Proposed General Plans for the Dulles Corridor Rapid Transit Project (DCRTP).

0409 L

Submission of the Town of Herndon's Locally Preferred Alternative (LPA) resolution and associated resolutions in support of Metrorail

Dear Mr. Hill:

On behalf of the citizens of the Town of Herndon, I am pleased to submit the attached resolutions to be entered into the Public Hearing Record for the Draft Environmental Impact Statement and Proposed General Plans for the Dulles Corridor Rapid Transit Project (DCRTP).

On August 13, 2002, the Town Council of the Town of Herndon unanimously passed the attached resolution recommending the "Metrorail Alternative" as the Locally Preferred Alternative (LPA) to be forwarded to the Virginia Department of Rail and Public Transportation (VDRPT), the Washington Metropolitan Area Transportation Authority (WMATA), and the Commonwealth Transportation Board (CTB).

The Town Council views the near-term implementation of rapid transit in the Dulles Corridor as imperative. The Town Council is in full support of the effort to bring Metrorail to the Dulles Corridor due to the capacity limitations of Bus Rapid Transit and the disruption issues associated with phased implementation. During the past few years, we have been looking closely at the important Herndon-Monroe Station proposal and how to best develop pedestrian and vehicular access to the station from the Town of Herndon. This effort resulted in the Town completing an engineering concept and feasibility study in cooperation with VDRPT as well as other project sponsors.

On June 12, 2001, the Town Council unanimously passed a resolution recommending a preferred alternative for direct access from the Town to the future Herndon-Monroe Transit Station. The Town's selected alternative is referred to as Alternative #4 and, as stated in the attached resolution, it is the preferred configuration to be explored in more detail with Virginia Department of Rail and Public Transportation. This alternative emphasizes a pedestrian walkway extending from the station to the north, directly into Herndon, with a modal transfer point for persons arriving by bus, car-pool, van-pool, automobile and bicycle.

The Town Council believes that enhanced pedestrian and vehicular access on the north side should be a part of the station development scheme from the beginning. Effective north side access to the station will have beneficial impact on Town property values and the quality of life of residents and person working in the Town, over the long term, especially if appropriate redevelopment of the transit station area is implemented during the coming years.

It is my hope that through the auspices of the Virginia Department of Rail and Public Transportation and the Washington Metropolitan Area Transit Authority that the Metrorail Alternative and the Town's preferred Herndon-Monroe station access alternative will maximize transit ridership while contributing to high-quality transit-oriented development within the Town of Herndon.

The Town wishes the Virginia Department of Rail and Public Transportation, the Washington Metropolitan Area Transit Association and the Commonwealth Transportation Board success in submitting the DCRTP - Environmental Impact Statement and Proposed General Plans to the Federal Transit Administration during the coming months.

I would be happy to respond to any questions you may have concerning the Town's position on these or other matters related to the development of the Dulles Corridor Rapid Transit Project.

Sincerely,

Rick Thoesen

Richard C. Thoesen
Mayor

Attachments:

Resolution 02-G-98, August 13, 2002
Recommending the Metrorail Alternative as the Locally Preferred Alternative (LPA)

Resolution 01-G-57, June 12, 2001
Recommending a preferred station access alternative for the Herndon-Monroe Station

Resolution 01-G-119, November 13, 2001
Support to Congress to expedite the extension of Metrorail to Dulles Airport

cc: Members of the Herndon Town Council
The Honorable Christopher J. Riddick & Members of the Herndon Planning Commission
Whittington W. Clement, Chairman, Commonwealth Transportation Board
John Dittmeier, P.E. Acting Project Manager, WMATA
Jim Deuel, Chairman of the Board, Herndon Dulles Chamber of Commerce
John E. Moore, Town Manager
Albert R. Colan, Director of Public Works
Henry G. Bibber, Director of Community Development
Dana E. Heiberg, Senior Comprehensive Planner
Mark E. Duceman, Town of Herndon, Transportation Planner

TOWN OF HERNDON, VIRGINIA

RESOLUTION

AUGUST 13, 2002

Resolution- **Recommending a Locally Preferred Alternative (LPA) and Other Considerations to be Forwarded to the Washington Metropolitan Area Transportation Authority (WMATA), the Virginia Department of Rail and Public Transportation (VDRPT) and the Commonwealth Transportation Board (CTB) as a Response to the Draft Environmental Impact Statement and Proposed General Plans of the Dulles Corridor Rapid Transit Project.**

WHEREAS, the public information and public participation meetings were held concerning the Draft Environmental Impact Statement and Proposed General Plans for the Dulles Corridor Rapid Transit Project on July 29, July 30, and July 31, 2002 at the locations identified in the Notice of Public Hearings for the purpose of identifying issues and concerns of community members and stakeholders likely to be affected by the project, and to describe the purpose of the Study, identify the alternatives, the goals of the Study, and to increase public awareness and to receive citizens comments with regard to the Draft Environmental Impact Statement and Proposed General Plans for the Dulles Corridor Rapid Transit Project which includes Bus Rapid Transit and Metrorail Service in Fairfax and Loudoun Counties, Virginia; and

WHEREAS, the Town of Herndon approved a resolution, dated November 13, 2001, in support of the efforts of Congress and other leaders to expedite the extension of the Metrorail system to Washington Dulles International Airport; and

WHEREAS, the Town of Herndon approved a resolution, dated June 12, 2001, recommending a preferred alternative (Alternative Four) for north-side pedestrian access to the future Herndon-Monroe Transit Station; and

WHEREAS, the Town's preferred alternative for north-side pedestrian access to the future Herndon-Monroe Transit Station emphasizes a walkway extending from the station to Herndon Parkway, with a modal transfer point for persons arriving by bus, car-pool, van-pool, automobile and bicycle; and

WHEREAS, the Town of Herndon now has the opportunity to recommend a Locally Preferred Alternative (LPA) for the Dulles Corridor Transit Project from among the following alternatives: Baseline (No-Build) Alternative, Bus-Rapid Transit Alternative, Metrorail Alternative, Bus- Rapid Transit / Metrorail Alternative and a Phased Alternative; and

WHEREAS, the Town staff has reviewed and reported on the draft Environmental Impact Statement (EIS) and Proposed General Plans of the Dulles Corridor Rapid Transit Project; and

WHEREAS, by the year 2025, population in the Dulles Corridor is projected to increase by 56 percent, along with a 71 percent increase in jobs, and Dulles Airport, currently serving more than 20 million passengers annually, is projected to serve 32 million passengers by 2010; and

WHEREAS, based on local land use and transportation plans, this population and employment growth will lead to increased congestion on primary and local service roads and a need for additional capacity; and

WHEREAS, evaluation of the Dulles Corridor Study area has found that the corridor cannot accommodate additional highway expansion and therefore rapid rail (Metrorail Alternative) is the only mode of transportation that can provide substantial additional capacity in the corridor to meet future travel demand; and

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Herndon that the Metrorail Alternative is the Locally Preferred Alternative, which provides for Metrorail service that would extend the full length of the corridor from a point between the East and West Falls Church Metrorail stations on the Orange Line to Route 772 in Loudoun County.

BE IT FURTHER RESOLVED that:

1. The Town Council requests that the Herndon-Monroe Station construction include necessary facilities for inter-modal transfers and adequate pedestrian facilities on the north-side of the station, and that such facilities be incorporated into the final Environmental Impact Statement for the Dulles Corridor Rapid Transit Project; and

2. The Town of Herndon supports federal, state and local officials working together to achieve full funding for the Metrorail Alternative from federal, state and local sources.

This is certified to be a true and accurate copy of Resolution 02-G-98 adopted at a legally convened meeting of the Town Council of the Town of Herndon on August 13, 2002.

Jessica E. Lynch

Jessica E. Lynch, Deputy Town Clerk

TOWN OF HERNDON, VIRGINIA

RESOLUTION

JUNE 12, 2001

Resolution- Recommending a Preferred Alternative for Northside Pedestrian Access to the Future Herndon-Monroe Transit Station.

WHEREAS, on July 18, 2000, the Town Council awarded a contract to Parsons Transportation Group to prepare a study of alternatives for northside access to the Herndon-Monroe Transit Station; and

WHEREAS, on November 21, 2000, the Planning Commission and Town Council held a joint work session and heard a presentation by the consultant about the preliminary findings of the study and provided comments to the consultant; and

WHEREAS, the Planning Commission has reviewed the Herndon-Monroe Transit Station Northside Access Study, the staff report and attachments; and

WHEREAS, on March 5, 2001, the Planning Commission held a public hearing on the Herndon-Monroe Transit Station Northside Access Study; and

WHEREAS, the Town Council has reviewed the Herndon-Monroe Transit Station Northside Access Study, the staff report and attachments; and

WHEREAS, on June 12, 2001, the Town Council held a public hearing on the Herndon-Monroe Transit Station Northside Access Study; and

WHEREAS, notice of the public hearing was advertised in accord with Section 15.2-2204 of the Code of Virginia (1950) as amended.

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Herndon that:

1. The Town Council approves the Herndon-Monroe Northside Access Study, dated January 26, 2001, prepared by Parsons Transportation Group, Inc., which recommends Alternative Four as the preferred configuration to be explored in more detail with the Virginia Department of Rail and Public Transportation.

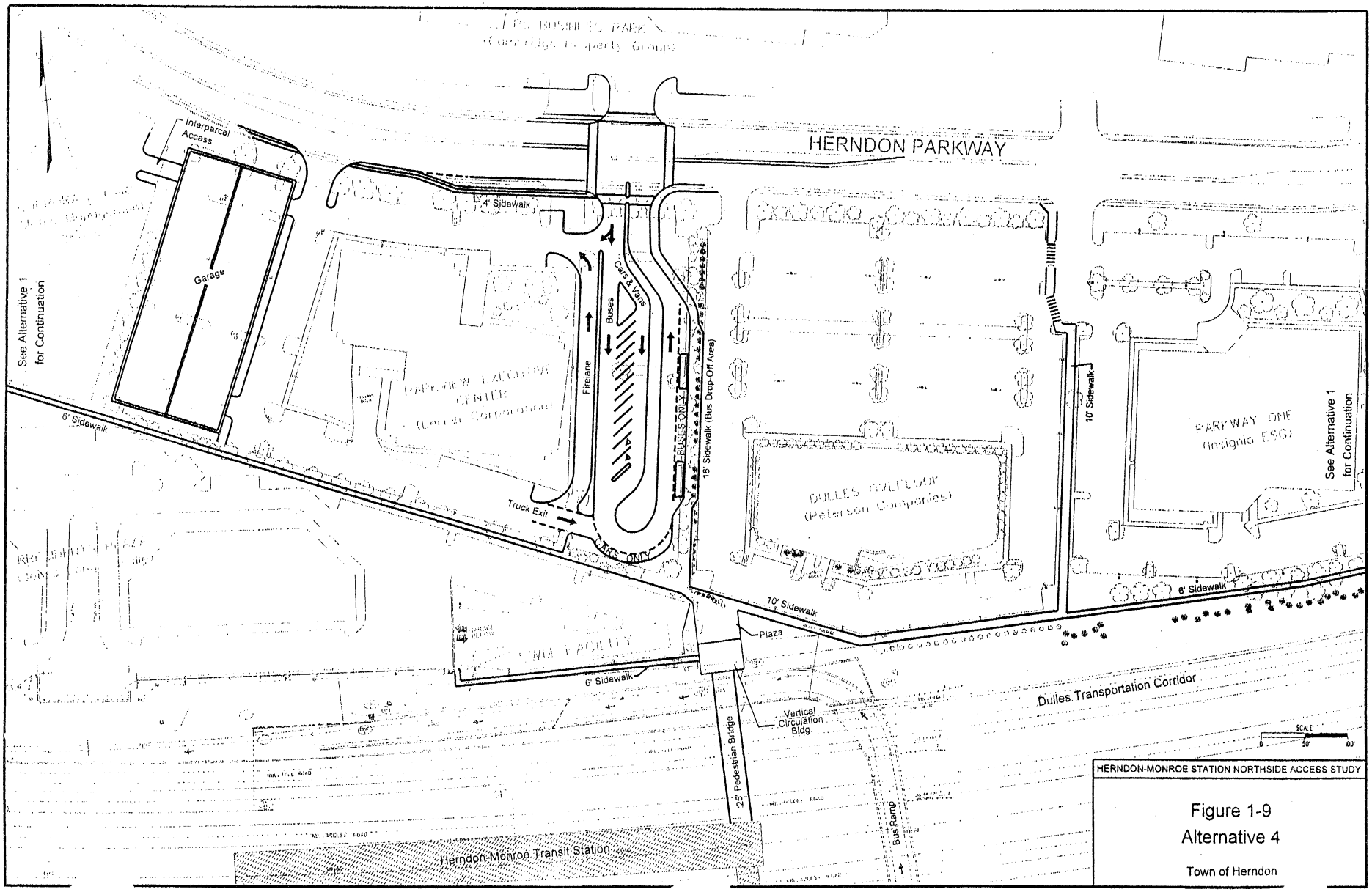
2. The Town Council directs the Town Manager to transmit the Herndon-Monroe Northside Access Study, dated January 26, 2001, to the Virginia Department of Rail and Public Transportation for its reference in preparing the Final Environmental Impact Statement for the study of rail in the Dulles Corridor.

This is certified to be a true and accurate copy of Resolution 01-G-57 adopted at a legally convened meeting of the Town Council of the Town of Herndon on June 12, 2001.

Jessica E Lynch

Jessica E. Lynch, Deputy Town Clerk

01-G-57


HERNDON PARKWAY
Interparcel Access
Garage
4' Sidewalk
Firelane
Cars & Vans
Buses
BUSES ONLY
16' Sidewalk (Bus Drop-Off Area)
10' Sidewalk
6' Sidewalk
Truck Exit
CARS ONLY
See Alternative 1 for Continuation
DULLES CORRIDOR (Peterson Companies)
PARKWAY ONE (Insignia ESG)
Plaza
Vertical Circulation Bldg
25' Pedestrian Bridge
Bus Ramp
Herndon-Monroe Transit Station
Dulles Transportation Corridor
SCALE
0
50'
100'
HERNDON-MONROE STATION NORTHSIDE ACCESS STUDY
Figure 1-9
Alternative 4
Town of Herndon

TOWN OF HERNDON, VIRGINIA

RESOLUTION

NOVEMBER 13, 2001

Resolution– Town of Herndon Support of the Efforts of Congress and Other Leaders to Expedite the Extension of the Metrorail System to Washington Dulles International Airport.

WHEREAS, the Town of Herndon is located along the Dulles Corridor, with Washington Dulles International Airport located two miles to the west and the nation's capital and seat of government located twenty-two miles to the east; and

WHEREAS, Washington Dulles International Airport is an important part of the transportation infrastructure of the National Capital region during times of peace as well as times of crisis; and

WHEREAS, the terrorist attacks of September 11, 2001 threatened the security of the National Capital region and made us aware that we lack adequate mobility to meet emergency circumstances; and

WHEREAS, the national security of the United States requires that the National Capital region function efficiently in times of crisis or emergency; and

WHEREAS, the Metrorail System functioned efficiently in evacuating people from Washington D.C. after the attacks of September 11, 2001; and

WHEREAS, citizens of United States and others from throughout the world need to be able to visit the National Capital region in a safe and efficient manner during times of peace as well as times of crisis; and

WHEREAS, members of Congress and other leaders have determined that it is strongly in the interest of the United States to expedite extension of Metrorail to Dulles Airport and Loudoun County to enhance mobility in the National Capital region.

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Herndon, Virginia that it:

1. Supports the efforts of members of Congress and other leaders to expedite the extension of the rail system to Washington Dulles International Airport.

2. Encourages the Federal Transit Administration to work with the Commonwealth of Virginia and local governing bodies to develop a plan to expedite extension of the rail system to Washington Dulles International Airport.

BE IT FURTHER RESOLVED that the Town of Herndon supports federal, state, and local officials working together to achieve full funding for the Dulles Rail Project from federal, state, and local sources, including proposed federal funding contained in legislation currently under consideration as part of the federal response to the terrorist attacks.

This is certified to be a true and accurate copy of Resolution 01-G-119 adopted at a legally convened meeting of the Town Council of the Town of Herndon on November 13, 2001.

Viki L. Wellershaus, Town Clerk

01-G-119

rol A. Bruce, Mayor
John M. De Neyer, Vice Mayor
Dennis D. Husch
Michael L. O'Reilly
Harlon Reece
Richard C. Thoesen
William B. Tirrell, Sr.

TOWN OF HERNDON

P.O. Box 427
HERNDON, VIRGINIA 20172-0427
(703) 787-7368

April 2, 2002

John E. Moore
Town Manager

Mr. John Dittmeier, P.E.
Acting Project Manager
Washington Metropolitan Area Transit Authority (WMATA)
Dulles Corridor Rapid Transit Project
1550 Wilson Blvd., Suite 300
Arlington, VA 22209

RE: **Town of Herndon Review of the Dulles Corridor Rapid Transit Project (DCRTP), 95% Draft - Environmental Impact Study**

Dear Mr. Dittmeier:

Thank you for the opportunity to review the 95% Draft - Environmental Impact Study for the Dulles Corridor Rapid Transit Project (DCRTP). The Town staff and I are impressed with the comprehensiveness of the EIS evaluation and the many environmental and socioeconomic aspects associated with implementing this project.

I would like to take this opportunity to thank Mr. Neil Nott and Dr. Ramen De for meeting with our Community Development staff on February 26, 2002 to address specific concerns with the Draft EIS and to discuss a few of the transit and pedestrian access design elements of the future Herndon-Monroe Station. Town staff has completed its review of the eleven technical EIS reports and determined that there are two issues that should be clarified; both of which were discussed during the meeting and are further described below:

1. The 'Traffic Analysis and Station Access EIS Technical Report' states: *On the north side of the Dulles Toll Road, it is assumed that the Town of Herndon is providing a small Kiss & Ride and bus transfer facility in what is currently a private parking lot.* However, the Town's position is to convey that there are no current plans to fulfill this assumption.

2. The 'Land Use EIS Technical Report' delineates a Station-Access Study Area whereby it does not accurately represent the Town's recently approved land-use changes. Specifically, Town Council approved a major development project (Quadrangle - Fairbrook Business Park) which, when completed, will have three buildings totaling 525,000 sq.ft. of floor area. This development will be located within 1,500 feet of the Herndon-Monroe station platform (Tax Map: 16-4-010-5B) Consequently, the additional density and it effects on ridership modeling and traffic impact should be considered during final EIS preparation. As discussed during the meeting, redevelopment in the Station-Access Study Area is expected to change dramatically within the next twenty-five to fifty years. Indeed, office development within the Town has outpaced recent rounds of the MWCOG cooperative land use forecasts.

With regard to our discussions concerning Alternative #4 for Herndon's north side access, we have been advocating that enhanced transit, pedestrian and vehicular access on the north side should be a part of the station development from the beginning. Such access would emphasize a modal-transfer point for persons arriving by bus, car-pool, van-pool, automobile and bicycle.

Although, it was disappointing to learn that a transfer facility would not be included in the initial plans, it was nevertheless refreshing to hear positive feedback regarding the potential for a bus-drop off facility, similar to the plans developed for the north access at the Reston Parkway Station. Such an arrangement for a bus-drop off facility along Herndon Parkway will provide a safe, efficient and convenient transit drop-off point for pedestrians wishing to access the station.

The Town Council fully supports the effort to bring bus and rail transit to the Dulles Corridor. Consequently, the Town of Herndon looks forward to the opportunity of constructing a transfer facility in the context of a future public-private redevelopment venture adjacent to the station. Effective north side access to the station will have beneficial impacts on Town property values and the quality of life of residents and person working in the Town, over the long term, especially if appropriate transit oriented redevelopment of the transit station area is implemented during the coming years. With WMATA's expertise the Town will be developing plans to encourage such a TOD redevelopment scenario.

The Town wishes the Washington Metropolitan Area Transit Association success in its endeavors in submitting the DCRTP - Draft EIS Technical Reports to the Federal Transit Authority during April 2002. I would be happy to respond to any questions you may have concerning the Town's position on these or other matters related to the development of the Dulles Corridor Rapid Transit Project.

Sincerely,

John E. Moore
Town Manager

Attachment: Herndon-Monroe Station Northside Access Study, Final Report

cc: Neil Nott, Washington Metropolitan Area Transit Authority (WMATA)
Karl Rohrer, Virginia Department of Rail and Public Transportation (VDRPT)
Carol A. Bruce, Town of Herndon, Mayor
Albert R. Colan, Town of Herndon, Public Works Director
Henry G. Bibber, Town of Herndon , Community Development Director
Mark Duceman, Town of Herndon, Transportation Planner
Micki O'Hare, Town of Herndon, Comprehensive Planner

85 Scoping Comments

8-25-00

TOWN OF HERNDON

P.O. Box 427
HERNDON, VIRGINIA 20172-0427

Thomas Davis Rust, Mayor
Carol A. Bruce
John M. De Noyer
Dennis D. Husch
Michael L. O'Reilly
Harlon Reece
William B. Tirrell, Sr.

August 8, 2000

Leonard Alfredson, Project Manager-WMATA
Dulles Corridor Rapid Transit Project
1550 Wilson Boulevard, Suite 300
Arlington, VA 22209

Subject: Town of Herndon comments for the scoping deadline August 10, 2000

Dear Mr. Alfredson:

We appreciate the opportunity to participate in the Preliminary Engineering–National Environmental Policy Act process for the Dulles Corridor Rapid Transit Project. I offer the following comments on behalf of the Town of Herndon.

The Town of Herndon participated in the Dulles Corridor Transportation Study and continues to participate in the Dulles Corridor Task Force. We support the findings of the original Major Investment Study, namely the extension of a Metro-like rail system in the Dulles Corridor. We also support the MIS Supplement addressing Bus Rapid Transit as part of a phased transition to rail transit. The Town supports the Herndon-Monroe and CIT-Herndon (Route 28) station locations as well as the other stations confirmed in the MIS Supplement. We assert that the Route 28 station would be essential if, for any reason, the system were to develop without the Loudoun County stations. The Town does not support options where Dulles Airport is the system terminus and Herndon-Monroe is the de facto system terminus in terms of Park and Ride and vehicular access facilities.

The Town advocates the provision of enhanced northside access to the Herndon-Monroe Station (BRT and Rail), except under scenarios where the transit system terminates at Dulles Airport and there is no CIT-Herndon (Route 28) station. Good access to all four of the Reston-Herndon stations from both sides of the Toll Road will enhance pedestrian/bicycle use and help distribute and mitigate local traffic impacts in the corridor.

We advocate that a pedestrian entrance be provided at the Herndon-Monroe Station into the Town of Herndon, along with enhanced pedestrian and vehicular access facilities connecting Herndon Parkway and/or Van Buren Street to the station. Given that all of the northside properties bordering the Dulles Toll Road at the station location are fully developed, we request that the Rapid Transit Project undertake the capital improvements to retrofit access facilities into these properties. This may include the

construction of access ramps and structured parking to accommodate the relocation of a modest quantity of existing surface parking. The Town does not support the development of parking facilities to accommodate automobiles on the north side of the Herndon-Monroe Station.

As noted in the Scoping Information Packet, The Town has initiated the Herndon-Monroe Station Northside Access Study. This is a collaborative concept design and feasibility effort that we intend to conclude early in 2001. This effort will devise and evaluate various means of providing enhanced pedestrian, bicycle, automobile and bus access to the station from areas to the north of the Toll Road. This study is expected to result in a decision by the Herndon Town Council on a preferred access alternative and concept design. A formal request for construction of these facilities will be submitted during the "Selection of Viable Alternatives" stage of the PE/NEPA process.

Office development within the Town has outpaced recent rounds of the MWCOG cooperative land use forecast as well as exceeding the projections included in the Major Investment Study. If current data on existing and pipeline development within the Town are needed for this study, please contact Mr. Dana Heiberg, our Transportation Program Manager.

Thank you for considering these comments.

Sincerely,

Henry G. Bibber

Henry G. Bibber
Director of Community Development

Cc: John E. Moore, Town Manager
Young Ho Chang, Director, Fairfax County Department of Transportation
Albert R. Colan, Director of Public Works
Dana E. Heiberg, Transportation Program Manager

K.5.3 Town of Leesburg

- February 25, 2004

The Town of
Leesburg,
Virginia

ROBERT S. NOE, JR.
Town Manager

25 West Market Street ▪ P.O. Box 88 ▪ 20178 ▪ 703-771-2700 ▪ Metro: 703-478-1821 ▪ FAX: 703-771-2727 ▪ www.leesburgva.org

SN 9175

February 25, 2004

Mr. Karl Rohrer
Deputy Project Director
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard, Suite 300
Arlington, Virginia 22209

Dear Mr. Rohrer:

On February 24, 2004, the Leesburg Town Council approved a resolution supporting express bus service among Leesburg, Loudoun County, Washington, DC, and Rosslyn, Virginia. A copy of the resolution is attached.

Transportation is a high priority for the Town of Leesburg. Many residents commute to other areas of Northern Virginia via express buses. The Town Council supports the current express bus service, as well as other alternative forms of transportation to help address Northern Virginia's regional traffic problems.

The Town Council appreciates the public outreach effort of the Virginia Department of Rail and Transportation on the Dulles Corridor Transportation Project. The town respectfully requests correction of error published in the draft EIS stating that premium bus service will replace current express bus service in Loudoun County. We understand from Loudoun County that the error will be corrected in the final publication and will reflect continued express bus service. On behalf of the residents of our town, thank you in advance for your wiliingness to correct that error and support the long-term planning required to address our region's transportation needs.

Very truly yours,

Robert S. Noe, Jr.

Enclosures

cc: County Administrator
Director of Engineering and Public Works
Director of Planning and Zoning

J:executive/public information/letters

The Town of
Leesburg,
Virginia

PRESENTED February 24, 2004

RESOLUTION NO. 2004-27

ADOPTED February 24, 2004

A RESOLUTION: SUPPORTING EXPRESS BUS SERVICE AMONG LEESBURG, LOUDOUN COUNTY, WASHINGTON, DC, AND OTHER PORTIONS OF NORTHERN VIRGINIA

WHEREAS, the Town Council of the Town of Leesburg supports express bus service from Leesburg and Loudoun County to Washington, DC and areas in Northern Virginia; and

WHEREAS, many Leesburg and Loudoun County residents rely on commuter bus service to help reach employment centers throughout the Washington Metropolitan area; and

WHEREAS, alternative modes of transportation like commuter bus service help address the region's transportation needs; and

WHEREAS, the Town Council has supported Bus Rapid Transit west of Leesburg with a station in the Route 7/Route 9 corridor and a station in Leesburg adjacent to the Dulles Greenway; and

WHEREAS, the Town recognizes that an administrative error was made during the publication of the draft Environmental Impact Statement for the Dulles Corridor Transit Project, incorrectly stating that premium bus service would replace the current express bus services in Loudoun County.

WHEREAS, the Town recognizes that Loudoun County has confirmed that the Department of Rail and Public Transportation is aware of the error and committed to make a correction in the final publication, with subsequent County letter confirming that correction.

A RESOLUTION: SUPPORTING EXPRESS BUS SERVICE AMONG LEESBURG, LOUDOUN COUNTY, WASHINGTON, DC, AND OTHER PORTIONS OF NORTHERN VIRGINIA

THEREFORE RESOLVED by the Council of the Town of Leesburg in Virginia as follows:

The Mayor and Town Council of the Town of Leesburg support express bus service among Leesburg, Loudoun County, Washington, DC, and Rosslyn, as a viable alternative to address the region's transportation needs;

THEREFORE FURTHER RESOLVED, that the Mayor and Town Council support the continuation of current express bus service until completion of implementation of future modes of transportation like bus rapid transit and extended Metrorail services outlined in the Dulles Corridor Rapid Transit Project.

PASSED this 24th day of February 2004.

Kristen C. Umstattd, Mayor
Town of Leesburg

ATTEST:

Judith W. Ahart
Clerk of Council

R04:EXPRESSBUS022404

APPENDIX L- FEDERAL CONSISTENCY DETERMINATION

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 10009, Richmond, Virginia 23240
Fax (804) 698-4500 TDD (804) 698-4021
www.deq.state.va.us

Robert G. Burnley
Director

(804) 698-4000
1-800-592-5482

October 27, 2004

Mr. Karl A. Rohrer, AICP
Deputy Project Director, Project Development
Virginia Department of Rail and Public Transportation
1550 Wilson Boulevard, Suite 300
Arlington, Virginia 22209

RE: Federal Consistency Determination for Dulles Corridor Rapid Transit Project
DEQ-04-179F

Dear Mr. Rohrer:

The Commonwealth of Virginia has completed its review of the federal consistency determination listed above. The Department of Environmental Quality is the lead agency for Virginia's review of federal consistency determinations submitted pursuant to the Coastal Zone Management Act. The following agencies joined in this review:

Department of Environmental Quality (hereinafter "DEQ")
Department of Game and Inland Fisheries
Department of Conservation and Recreation
Marine Resources Commission
Department of Historic Resources.

Project Description

The Federal Transit Administration (part of the U.S. Department of Transportation), Washington Metro Area Transit Authority, and Virginia Department of Rail and Public Transportation propose to extend the Metrorail transit system 23 miles west from the West Falls Church station past Dulles Airport into Loudoun County. The project would include the construction of 11 new stations, 23 stormwater facilities, 21 traction power substations, 6 tie-breaker stations, 8 potential staging areas, and six existing and planned parking facilities. This is the Locally Preferred Alternative as described in an earlier Supplemental Draft EIS prepared for this project. DEQ

coordinated previous reviews of the Draft EIS (DEQ-02-124F, comments mailed August 27, 2002) and the Supplemental EIS (DEQ-03-210F, comments mailed December 18, 2003) for this project.

Federal Consistency under the Coastal Zone Management Act

Pursuant to the Coastal Zone Management Act of 1972, as amended, federal activities located inside or outside of Virginia's designated coastal management area that can have reasonably foreseeable effects on coastal resources or coastal uses must, to the maximum extent practicable, be implemented in a manner consistent with the Virginia Coastal Resources Management Program (VCP). The VCP consists of a network of programs administered by several agencies. The DEQ coordinates the review of federal consistency determinations with agencies administering the Enforceable and Advisory Programs of the VCP.

Based on the information submitted and the comments of reviewing agencies, we concur that the proposed activity is consistent with the Virginia Coastal Resources Management Program, provided that the proponent agencies and their contractors comply with all applicable requirements.

The following Enforceable Policies of the Virginia Coastal Resources Management Program do not apply to this project:

Dunes Management
Shellfish Sanitation
Point-Source Pollution Control.

The other Enforceable Policies will, or may, apply to the project according to the following discussions.

1. Fisheries Management. According to the consistency determination (in its discussion of Subaqueous Lands Management; see next item), the alignment of the project would cross ten streams in Fairfax and Loudoun Counties (page 3, item b).

(a) In-stream Project Activities. Project activities taking place in streams should be undertaken in low-flow conditions in accordance with the following guidance, according to the Department of Game and Inland Fisheries:

- Use non-erodible cofferdams to isolate the construction area;

- Block no more than 50% of the streamflow at any given time;

- Stockpile excavated material in a manner that prevents its re-entry into the stream;
- Restore original streambed and streambank contours;
- Re-vegetate barren areas with native vegetation; and
- Implement strict erosion and sediment control measures (see item 4, below).

In addition, the Department of Game and Inland Fisheries prefers stream crossings to be constructed by way of clear-span bridges where possible, in order to reduce future maintenance costs, loss of floodplains, and loss of aquatic habitat attributable to culverts. If the avoidance of culverts is not possible, then culverts should be counter-sunk at least six (6) inches below the streambed to allow passage of aquatic organisms. Alternatively, bottomless culverts could be used.

Most, if not all, of the foregoing practices also serve to protect water quality (see item 3, below).

(b) Mussel Surveys. As a pre-requisite to conducting project activities affecting perennial streams, the Department of Game and Inland Fisheries recommends that the proponent agencies and their contractors undertake mussel surveys. These should be conducted 200 meters upstream and 800 meters downstream of the impact areas. The surveys should be accomplished within 6 months prior to initiation of the project.

All mussels encountered within the impact area must be relocated upstream into suitable habitat. Relocation should occur as close to the time of initiation of the project activity as possible, in order to avoid or minimize the chance that mussels will colonize the work area. Any listed species should be tagged for further monitoring. Before relocating any state-listed or federally listed species, the proponents or their contractors must contact the Department of Game and Inland Fisheries (Brian Watson, mussel biologist, telephone (434) 525-7522) and, in the case of federally listed species, the U.S. Fish and Wildlife Service's Virginia office as well (telephone (804) 693-6694).

(c) Wood Turtle Concerns. The streams affected by the project would include Pimmit Run, Difficult Run, and Sugarland Run in Fairfax County. These streams are designated as Threatened and Endangered Species Waters, according to the Department of Game and Inland Fisheries, because of the occurrence of the wood turtle, which is listed as a threatened species by the Department of Game and Inland Fisheries. See "Advisory Policies and Other Environmental Issues," items 2(b) and 2(c), below.

2. Subaqueous Lands Management. The Marine Resources Commission has jurisdiction over any encroachments in, on, or over state-owned rivers, streams, or creeks. Accordingly, a permit may be required from the Commission (Ben McGinnis, telephone (757) 247-2200) for any such encroachments.

3. Wetlands Management. According to the consistency determination, the project will affect approximately 5.2 acres of wetlands (page 2, "Water Resources" heading). Given the amount of wetland impacts contemplated, an individual Virginia Water Protection Permit may be required from DEQ. Applicability of this permit will depend on not only the types of permits to be issued by the Army Corps of Engineers, Norfolk District ("Corps") pursuant to the Clean Water Act, but also on the phasing of project implementation; more than one permit action may be required for different parts of the Corridor project. DEQ's Division of Water Quality, which has responsibility for permitting of linear projects such as railroads and roads, will work with the Corps, the proponent agencies, and DEQ's Northern Virginia Regional Office to ensure that appropriate permits are secured and that wetland impacts are avoided and minimized to the maximum extent practicable.

The consistency determination also addressed avoidance and minimization of wetlands impacts and committed the proponent agencies to compensatory mitigation measures (page 4, item c). Final determination of the sufficiency of these measures must await the permit process. DEQ's Division of Water Quality recommends strict adherence to erosion and sediment controls and stormwater management practices (see item 4, below) and encourages the proponent agencies to monitor construction activities to make certain that these controls and practices effectively prevent the entry of sediment and pollution into surface waters and wetland areas.

As part of the wetland permitting process, it will be necessary for the proponent agencies to obtain a wetland confirmation letter from the Army Corps of Engineers, Norfolk District. This letter will be valid for five years after it is issued.

To start the permitting process, the proponent agencies must file a Joint Federal-State Permit Application (JPA) with the Marine Resources Commission (2600 Washington Avenue, Newport News, 23607). Questions on this process may be directed to the Corps (above), the Commission (Tony Watkinson, telephone (757) 247-2200), or DEQ's Division of Water Quality (Ellen Gilinsky, telephone (804) 698-4375).

4. Non-point Source Pollution Control. Federal agencies and their authorized agents conducting regulated land-disturbing activities on public and private lands in the Commonwealth of Virginia must comply with the Virginia Erosion and Sediment Control Law, the Virginia Stormwater Management Law, and other applicable federal non-point source pollution control mandates such as section 313 of the Clean Water Act and the

federal consistency requirements of the Coastal Zone Management Act. Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, or other structures, soil/dredge spoil areas, or related land conversion activities that disturb 10,000 square feet or more (2,500 square feet or more in Chesapeake Bay Preservation Areas) are regulated by the Erosion and Sediment Control Law and its implementing regulations. Similar activities that disturb one acre or more are regulated by the Stormwater Management Law and its implementing regulations. Accordingly, the Federal Transit Administration and other project proponents should prepare and implement Erosion and Sediment Control Plans and Stormwater Management Plans that comply with state law. The Federal Transit Administration is ultimately responsible for achieving project compliance through oversight of on-site contractors, regular field inspection, prompt action against non-compliance, and/or other mechanisms consistent with Federal Transit Administration policy. For additional information, the project proponents may contact the Department of Conservation and Recreation's Potomac Watershed Office (Shelby Hertzler, telephone (540) 351-1589) and local authorities (Basant Sood, Fairfax County Department of Public Works and Environmental Services, telephone (703) 324-1950; and Marie Genovese, Loudoun County Department of Planning, telephone (703) 737-8798).

5. Air Pollution Control. DEQ's Air Division reiterates its earlier guidance regarding open burning and fugitive dust emissions, as follows.

(a) Fugitive Dust Control. During construction, fugitive dust must be kept to a minimum by using control methods outlined in 9 VAC 5-50-60 et seq. of the Regulations for the Control and Abatement of Air Pollution. These precautions include, but are not limited to, the following:

- Use, where possible, of water or chemicals for dust control;
- Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials;
- Covering of open equipment for conveying materials; and
- Prompt removal of spilled or tracked dirt or other materials from paved streets and removal of dried sediments resulting from soil erosion.

(b) Open Burning Requirements. In addition, if project activities include the burning of any material, this activity must meet the requirements of the Regulations for open burning (9 VAC 5-40-5600 et seq.), and it may require a permit from DEQ's Northern Virginia Regional Office (Mr. Terry Darton, Air Permits Manager, telephone (703) 583-3845). The Regulations provide for, but do not require, the local adoption of a model ordinance concerning open burning. The project proponents should contact appropriate Loudoun County and/or Fairfax County officials to determine what local

requirements, if any, exist. The model ordinance includes, but is not limited to, the following provisions:

- All reasonable effort shall be made to minimize the amount of material burned, with the number and size of the debris piles;
- The material to be burned shall consist of brush, stumps and similar debris waste and clean-burning demolition material;
- The burning shall be at least 500 feet from any occupied building unless the occupants have given prior permission, other than a building located on the property on which the burning is conducted;
- The burning shall be conducted at the greatest distance practicable from highways and air fields;
- The burning shall be attended at all times and conducted to ensure the best possible combustion with a minimum of smoke being produced;
- The burning shall not be allowed to smolder beyond the minimum period of time necessary for the destruction of the materials; and
- The burning shall be conducted only when the prevailing winds are away from any city, town or built-up area.

6. Coastal Lands Management. According to the Department of Conservation and Recreation's Division of Chesapeake Bay Local Assistance, the project proponents appear cognizant of the requirements of the Chesapeake Bay Preservation Act as locally implemented, and the consistency determination indicates the proponents' intention of complying with these requirements. Provided that this compliance takes place, the project will be consistent with the Chesapeake Bay Preservation Act (*Virginia Code* sections 10.1-2100 et seq.) and the Chesapeake Bay Preservation Area Designation and Management Regulations (9 VAC 10-20-10 et seq.). It should be noted that the Act and the Regulations apply in Fairfax County but not in Loudoun County.

Advisory Policies and Other Environmental Issues

1. Historic Structures and Archaeological Resources. Pursuant to section 106 of the National Historic Preservation Act, the Department of Historic Resources has been consulting with the U.S. Department of Transportation (USDOT) and other agencies on this project. There is a signed Memorandum of Agreement. The Department of Historic Resources asks that the proponent agencies comply with the stipulations of the agreement as the project is implemented. For more information, the project proponents may contact the Department (Marc Holma, telephone (804) 367-2323, extension 114).

2. Wildlife Resources. In general, wood turtles could be encountered throughout the vicinity of the proposed project, particularly in association with streams and riparian

zones. It is a violation of Virginia protected species law to harm, or to keep for personal possession, a wood turtle.

For these reasons, the Department of Game and Inland Fisheries recommends that all project contractors be trained in the identification and natural history of wood turtles prior to the start of the project. If any wood turtles are encountered during the development of the project and jeopardized by it, they should be removed from the project site and returned safely to suitable habitat, i.e., a run or deep pool in a perennial stream with a sandy or muddy bottom and submerged roots, branches, or logs. The stream should be in the same watershed as the place where the turtle was found. The contractors or finders should then contact the Department of Game and Inland Fisheries (telephone (804) 367-8999).

The Department of Game and Inland Fisheries recommends that an information sheet be provided to contractors. The information sheet should include a photograph of a wood turtle and the following text accompanying the photograph (both text and photograph are available on the Department's website; see below):

> The wood turtle is a State Threatened species that may be found in or near the project area.
>
> *Description:* A medium-sized semi-terrestrial turtle, adults are 6-8 inches long. The dull brown upper shell is very rough; each section of the shell is composed of growth rings that form an irregular pyramid. The bottom shell is yellow with black blotches. The turtle has a black head and dark brown extremities. The yellow to burnt orange skin on the neck and in the leg sockets is a distinguishing characteristic.
>
> If one of these turtles is found within the project area, it should be carefully removed to safety in suitable habitat (a run or deep pool with sandy or muddy bottom and submerged roots, branches, or logs) in the same watershed (i.e., Sugarland Run, Pimmit Run, or Difficult Run).
>
> It is a violation of Virginia law to harm, or keep for personal possession, a wood turtle. If you have questions concerning this species, call the Virginia Department of Game and Inland Fisheries at (804) 367-8999.

Additional information on wood turtles, including a photograph, may be found at the following web site:

- http://www.dgif.state.va.us/wildlife/species/display.asp?id030062.

3. Natural Heritage Resources. The Department of Conservation and Recreation has searched its Biotics Data System for occurrences of natural heritage resources in the project area shown on the maps submitted with the consistency determination. "Natural

heritage resources" are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, significant geologic formations, and similar features of scientific interest. The proposed Metrorail corridor crosses the Broad Run-Route 607 Stream Conservation Unit. It also crosses Difficult Creek just upstream from the Difficult Run Stream Valley Park Conservation Site. Discussion of these features, and natural heritage resources documented therein, follows.

(a) Stream Conservation Units. Stream Conservation Units (SCUs) identify stream reaches that contain aquatic natural heritage resources. The units extend 2 miles upstream and 1 mile downstream of documented occurrences, and cover all tributaries within this reach. SCUs are given a bio-diversity significance ranking based on the rarity, quality, and number of occurrences they contain. The Broad Run-Route 607 SCU has been given a bio-diversity ranking of B5, which means a site of general bio-diversity significance. The natural heritage resource associated with this site is the yellow lampmussel (*Lampsilis* cariosa).

The yellow lampmussel averages about 70 millimeters (mm) in length, but can reach 130 mm (Johnson, 1970). This species is found in larger streams and rivers where good currents exist over a sand and gravel substrate, and in small creeks and ponds. The species is known to occur in the Potomac, York, and Chowan river basins (TNC, 1996). The species is classified as a special concern species by the Department of Game and Inland Fisheries.

Freshwater mussels are considered good indicators of the health of aquatic ecosystems. They depend on good water quality, good physical habitat conditions, and an environment that supports populations of host fish species. Mussels, as sedentary organisms, are sensitive to water quality degradation from sedimentation and pollution. They are also sensitive to habitat destruction attributable to dam construction, channelization, and dredging; and they are sensitive to the invasion of exotic mollusk species.

(b) Conservation Sites. Conservation sites are tools for representing key areas of the landscape warranting further review for possible conservation action because of the natural heritage resources they support. Conservation sites are polygons built around one or more rare plant or animal species or natural communities. They are designed to include the resource and, where possible, its associated habitat and a buffer area thought necessary for resource preservation. Conservation sites are given a bio-diversity significance ranking based on the rarity, quality, and number of occurrences they contain. The ranking is from 1 to 5, with 1 being the most significant. The Difficult Run Stream Valley Conservation Site is ranked B5, which represents a site of general bio-diversity significance. The natural heritage resource documented in this site is the wood turtle (*Glyptemys insculpta*) (see item 2, above).

The wood turtle inhabits forested floodplains and nearby fields, wet meadows, and farmlands (Mitchell, 1994). This species spends winters on the bottoms of creeks and streams, so water is a primary habitat requirement. As indicated above, the wood turtle is classified as a threatened species by the Department of Game and Inland Fisheries.

(c) Recommendations. The Department of Conservation and Recreation recommends strict adherence to erosion and sediment control requirements during land-disturbing activities in order to minimize adverse impacts upon the aquatic ecosystem in the vicinity of project activities. In addition, the Department recommends that the proponent agencies contact the Department of Game and Inland Fisheries (telephone (804) 367-8999) for additional guidance on protecting the wood turtle.

(d) Additional Information. The Department of Game and Inland Fisheries also maintains a database of wildlife locations which includes endangered and threatened species, trout streams, and anadromous fish waters. This database may include information not documented by the Department of Conservation and Recreation. The Department of Game and Inland Fisheries maintains this database at the following web site:

- http://www.dgif.virginia.gov/wildlife/info_map/index.html.

Questions on this database may be addressed to the Department of Game and Inland Fisheries (Shirl Dresser, telephone (804) 367-6913).

4. Land Development; Stormwater General Permit. Because the project will disturb more than 1 acre of land area, it will require a Virginia Pollutant Discharge Elimination System (VPDES) Stormwater General Permit for construction activities from DEQ. The project proponents should contact DEQ's Northern Virginia Regional Office (John Bowden, telephone (703) 583-3880) in this regard. It is likely, depending on the timing and implementation of various phases of the project, that multiple permits will be needed.

5. Recreation Resources. The Department of Conservation and Recreation indicates that the Dulles Corridor project will not affect any state recreation resources, Natural Area Preserves, or state scenic areas.

Thank you for the opportunity to review this consistency determination. If you have any questions, please feel free to call me (telephone (804) 698-4325) or Charlie Ellis of this Office (telephone (804) 698-4488).

Sincerely,

Ellie L. Irons
Program Manager
Office of Environmental Impact Review

Enclosures

cc: Andrew K. Zadnik, DGIF
John R. Davy, DCR
Catherine M. Harold, DCR-CBLA
Kotur S. Narasimhan, DEQ-Air
Ellen Gilinsky, DEQ-Water
John D. Bowden, DEQ-NVRO
Ben McGinnis, MRC
Marc E. Holma, DHR
Basant Sood, Fairfax County
Marie Genovese, Loudoun County

MEMORANDUM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER QUALITY
Ellen Gilinsky, Ph.D., Director

TO: Charles H. Ellis, III
Office of Environmental Impact Review

FROM: Michelle Henicheck (MH)
Office of Wetlands, Water Protection and Compliance

DATE: October 22, 2004

SUBJECT: Coastal Consistency Determination (CCD)
Dulles Corridor Rapid Transit Project
04-179F

We have reviewed the information provided concerning the above-referenced project. The purpose of the project is to extend the current Metrorail system 23 miles into the Dulles Corridor of Northern Virginia. The preferred alternative includes the construction of eleven new stations, twenty-three stormwater facilities, twenty-one traction power substations, six tiebreaker stations, eight potential construction staging areas, and six existing and planned parking facilities.

According to the report, (page 2) approximately 5.2 acres of wetlands will be impacted by the project. Given the amount of wetland impacts proposed, an individual Virginia Water Protection permit application may be required. It appears that avoidance and minimization of wetland impacts to the maximum extent practicable were addressed in the report; however, the final determination is made during permit application review. Further, the amount, type, and location of compensatory wetland mitigation is also conducted during permit application review and is based upon the ecologically preferable alternative. A Corps of Engineers wetland confirmation letter needs to be provided during the permitting review process. The wetland confirmation is valid for five years. A Joint Permit Application should be sent to Virginia Marine Resources Commission and the project proponent should coordinate with the DEQ Central Office for final permit determination.

Should the size or scope of the project change, additional review may be necessary. We recommend strict adherence to erosion and stormwater management practices, and further encourage the project proponent to monitor construction activities to make certain that erosion and stormwater management practices are adequately preventing sediment and pollutant migration into surface waters, including wetlands. A VPDES stormwater general permit for construction activities will be required should the project disturb one or more acres of land.

W. Tayloe Murphy, Jr.
Secretary of Natural
Resources

Joseph H. Maroon
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

203 Governor Street
Richmond, Virginia 23219-2010
(804) 786-6124

20 October 2004

Mr. Charles H. Ellis, III
Virginia Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street
Richmond, Virginia 23219

Subject: DEQ# 04-179F: Dulles Corridor Rapid Transit Project

Dear Mr. Ellis:

The Department of Conservation and Recreation (DCR) functions to preserve and protect the environment of the Commonwealth of Virginia and advocate the wise use of its scenic, cultural, recreation and natural heritage resources. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, state unique or exemplary natural communities, significant geologic formations and similar features of scientific interest.

DCR has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. According to the information currently in our files, the proposed metrorail corridor crosses the Broad Run – Route 607 Stream Conservation Unit. Stream Conservation Units (SCUs) identify stream reaches that contain aquatic natural heritage resources, including 2 miles upstream and 1 mile downstream of documented occurrences, and all tributaries within this reach. Stream Conservation Units are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain. The Broad Run – Route 607 SCU has been given a biodiversity ranking of B5, which represents a site of general biodiversity significance. The natural heritage resource associated with this site is the yellow lampmussel (*Lampsilis cariosa*, G3G4/S2/NL/SC).

The yellow lampmussel (*Lampsilis cariosa*, G3G4/S2/NL/SC) averages about 70 mm in length but can reach a length of 130 mm (Johnson, 1970). The yellow lampmussel is found in larger streams and rivers where good currents exist over a sand and gravel substrate and in small creeks and ponds. This species is known to occur in the Potomac, York, and Chowan river basins (TNC, 1996). Please note that this species is currently classified as a special concern species by

the Virginia Department of Game and Inland Fisheries (VDGIF); however, this designation has no official legal status.

Considered good indicators of the health of aquatic ecosystems, freshwater mussels are dependent on good water quality, good physical habitat conditions, and an environment that will support populations of host fish species (Williams et al., 1993). Because mussels are sedentary organisms, they are sensitive to water quality degradation related to increased sedimentation and pollution. They are also sensitive to habitat destruction through dam construction, channelization, and dredging, and the invasion of exotic mollusk species.

Furthermore, the metrorail corridor site crosses Difficult Creek just upstream from the Difficult Run Stream Valley Park Conservation Site. Conservation sites are tools for representing key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources and habitat they support. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. Conservation sites are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. The Difficult Run Stream Valley Conservation Site has been given a biodiversity significance ranking of B5, which represents a site of general biodiversity significance. The natural heritage resource documented at this site is the wood turtle (*Glyptemys insculpta*, G4/S2/NL/LT).

The wood turtle inhabits forested floodplains and nearby fields, wet meadows, and farmlands (Mitchell, 1994). As this species overwinters on the bottoms of creeks and streams, a primary habitat requirement is the presence of water (Mitchell, 1994). Please note that the wood turtle is classified as threatened by the Virginia Department of Game and Inland Fisheries (VDGIF). Due to its protected status, DCR recommends coordination with the VDGIF to ensure compliance with protected species legislation.

To minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities, DCR recommends the implementation of and strict adherence to erosion and sediment control measures during all land disturbing activities.

New and updated information is continually added to biotics. Please contact DCR if a significant amount of time passes before it is utilized.

Please note that the Virginia Department of Game and Inland Fisheries maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from www.dgif.virginia.gov/wildlife/info_map/index.html, or contact Shirl Dressler at (804) 367-6913.

Note that federal agencies and their authorized agents conducting regulated land disturbing activities on private and public lands in the state must comply with the Virginia Erosion and Sediment Control Law and Regulations (VESCL&R), Virginia Stormwater Management Law

and Regulations (VSWML&R), and other applicable federal nonpoint source pollution mandates (e..g, Clean Water Act-Section 313, Federal Consistency under the Coastal Zone Management Act). Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, or other structures, soil/dredge spoil areas, or related land conversion activities that disturb 2,500 square feet or more would be regulated by VESCL&R and those that disturb one acre or greater would be covered by VSWML&R. Accordingly, the sponsoring federal agency should prepare and implement erosion and sediment control (ESC) and stormwater management (SWM) plans to ensure compliance with state law. The sponsoring federal agency is ultimately responsible for achieving project compliance through oversight of on site contractors, regular field inspection, prompt action against non-compliant sites, and/or other mechanisms consistent with agency policy. The Federal Transit Administration is highly encouraged to contact DCR's Potomac Watershed Office and/or the local ESC and SWM authorities to obtain plan development, implementation assistance and to ensure project conformance during and after active construction. *[Reference: VESCL §10.1-567; VSWML §10.1-603.15]*

For your records, no state scenic resources, state recreation resources or state natural area preserves under DCR's jurisdiction will be impacted by this project.

Thank you for the opportunity to offer comments on this project.

Sincerely,

John R. Davy
Director, Planning & Recreation Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR PROGRAM COORDINATION

ENVIRONMENTAL REVIEW COMMENTS APPLICABLE TO AIR QUALITY

TO: Charles H. Ellis III **DEQ - OEIA PROJECT NUMBER: 04 – 179 F**

PROJECT TYPE: ☐ STATE EA / EIR / FONSI **X FEDERAL EA** / EIS ☐ SCC

X CONSISTENCY DETERMINATION/CERTIFICATION

RECEIVED
OCT 0 8 2004
DEQ Office of Environmental Impact Review

PROJECT TITLE: DULLES CORRIDOR RAPID TRANSIT PROJECT

PROJECT SPONSOR: USDOT / FEDERAL TRANSIT ADMINISTRATION / WMATA / DRPT

PROJECT LOCATION: **X OZONE NON ATTAINMENT AREA**

REGULATORY REQUIREMENTSMAY BE APPLICABLE TO: **X** **CONSTRUCTION**
☐ OPERATION

STATE AIR POLLUTION CONTROL BOARD REGULATIONS THAT MAY APPLY:

1. ☐ 9 VAC 5-40-5200 C & 9 VAC 5-40-5220 E – STAGE I
2. ☐ 9 VAC 5-40-5200 C & 9 VAC 5-40-5220 F – STAGE II Vapor Recovery
3. ☐ 9 VAC 5-40-5490 et seq. – Asphalt Paving operations
4. **X** **9 VAC 5-40-5600 et seq. – Open Burning**
5. **X** **9 VAC 5-50-60 et seq. Fugitive Dust Emissions**
6. ☐ 9 VAC 5-50-130 et seq. - Odorous Emissions; Applicable to_____
7. ☐ 9 VAC 5-50-160 et seq. – Standards of Performance for Toxic Pollutants
8. ☐ 9 VAC 5-50-400 Subpart_____, Standards of Performance for New Stationary Sources, designates standards of performance for the_____
9. ☐ 9 VAC 5-80-10 et seq. of the regulations – Permits for Stationary Sources
10. ☐ 9 VAC 5-80-1700 et seq. Of the regulations – Major or Modified Sources located in PSD areas. This rule may be applicable to the _____
11. ☐ 9 VAC 5-80-2000 et seq. of the regulations – New and modified sources located in non-attainment areas
12. ☐ 9 VAC 5-80-800 et seq. Of the regulations – Operating Permits and exemptions. This rule may be applicable to _____

COMMENTS SPECIFIC TO THE PROJECT:

No additional comment.

K.S. Narasimhan

(Kotur S. Narasimhan)
Office of Air Data Analysis

DATE: October 8, 2004

If you cannot meet the deadline, please notify CHARLIE ELLIS at 804/698-4488 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

REVIEW INSTRUCTIONS:

A. Please review the document carefully. If the proposal has been reviewed earlier (i.e. if the document is a federal Final EIS or a state supplement), please consider whether your earlier comments have been adequately addressed.

B. Prepare your agency's comments in a form which would be acceptable for responding directly to a project proponent agency.

C. Use your agency stationery or the space below for your comments. **IF YOU USE THE SPACE BELOW, THE FORM MUST BE SIGNED AND DATED.**

Please return your comments to:

MR. CHARLES H. ELLIS III
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL IMPACT REVIEW
629 EAST MAIN STREET, SIXTH FLOOR
RICHMOND, VA 23219
FAX #804/698-4319

RECEIVED

OCT 13 2004

DEQ-Office of Environmental Impact Review

Charles H. Ellis III

CHARLES H. ELLIS III
ENVIRONMENTAL PROGRAM PLANNER

COMMENTS

This will acknowledge receipt of your transmittal letter with enclosures requesting Commission review of the above-referenced project.

Please be advised that the Marine Resources Commission pursuant to Section 28.2-1204 of the Code of Virginia has jurisdiction over any encroachments in, on, or over any State-owned rivers, streams, or creeks in the Commonwealth. Accordingly, if any portion of the subject projects involves any encroachments channelward of ordinary high water along natural rivers and streams, a permit may be required from our agency.

(signed) Ben McGinnis (date) 09/27/04

(title) Environmental Engineer

(agency) VMRC

PROJECT # 04-179F

8/98

If you cannot meet the deadline, please notify CHARLIE ELLIS at 804/698-4488 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

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OFFICE OF ENVIRONMENTAL IMPACT REVIEW
629 EAST MAIN STREET, SIXTH FLOOR
RICHMOND, VA 23219
FAX #804/698-4319

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OCT 1 : 2004
DEQ-Office of Environmental Impact Review

Charles H. Ellis III
CHARLES H. ELLIS III
ENVIRONMENTAL PROGRAM PLANNER

COMMENTS

We have been consulting under Section 106 w/ USDOT and other agencies. There is a signed Memorandum of Agreement for this project. We ask that USDOT comply w/ the stipulations of this agreement as the project moves forward.

(signed) Richard Holma (date) 12 Oct 04

(title) Architectural Historian

(agency) DHR

PROJECT # 04-179F 8/98

DHR # 2004-1041

SSPR-VDOT-05(B)02

If you cannot meet the deadline, please notify CHARLIE ELLIS at 804/698-4488 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

REVIEW INSTRUCTIONS:

A. Please review the document carefully. If the proposal has been reviewed earlier (i.e. if the document is a federal Final EIS or a state supplement), please consider whether your earlier comments have been adequately addressed.

B. Prepare your agency's comments in a form which would be acceptable for responding directly to a project proponent agency.

C. Use your agency stationery or the space below for your comments. **IF YOU USE THE SPACE BELOW, THE FORM MUST BE SIGNED AND DATED.**

Please return your comments to:

MR.CHARLES H. ELLIS III
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL IMPACT REVIEW
629 EAST MAIN STREET, SIXTH FLOOR
RICHMOND, VA 23219
FAX #804/698-4319

Charles H. Ellis III

CHARLES H. ELLIS III
ENVIRONMENTAL PROGRAM PLANNER

COMMENTS

The project proponent appear cognizant of the requirements of the Chesapeake Bay Preservation Act as locally implemented and the document indicates their intent to comply with these requirements. Provided that they follow through, the project shall by consistent w/ the Bay Act.

(signed) _____ (date) 10/21/04

(title) Manager, Environmental Engineering

(agency) DCR- Chesapeake Bay Local Assistance

PROJECT # 04-179F

FEDERAL TRANSIT ADMINISTRATION • VIRGINIA DEPARTMENT OF RAIL AND PUBLIC TRANSPORTATION

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY • in cooperation with the FEDERAL AVIATION ADMINISTRATION

Dulles Corridor Rapid Transit Project
Final Environmental Impact Statement and Section 4(f) Evaluation






Volume IV- General Plans: Line

- General
- Property Identification Plan
- Plan and Profile
- Curve Tables
- Typical Sections
- TPSS and TBS Location Plans
- Structural

Dulles Corridor Rapid Transit Project

Home

INDEX OF DRAWINGS

SHEET NO.	DRAWING NO.	DESCRIPTION
		GENERAL
		COVER SHEET
001	GPN-G-001	INDEX OF DRAWINGS - GENERAL, PROPERTY IDENTIFICATION, PLAN & PROFILE, AND CURVE TABLES
002	GPN-G-002	INDEX OF DRAWINGS - RAIL-TYPICAL SECTIONS, TPSS, TBS, RTC & STRUCTURAL
003	GPN-G-004	CIVIL/STRUCTURAL - ABBREVIATIONS AND GENERAL NOTES
004	GPN-G-011	CIVIL/STRUCTURAL - SYMBOLS
005	GPN-G-005	KEY PLAN OF SYSTEM AND GENERAL CONSTRUCTION SITE PLAN
		PROPERTY IDENTIFICATION PLAN
006	GPN-R-001	L1 ALIGNMENT, STA. 1920+00 TO 1947+09.36
007	GPN-R-002	L1 ALIGNMENT, ROUTE 772 STATION, STA. 1892+00 TO 1920+00
008	GPN-R-003	L1 ALIGNMENT, STA. 1864+00 TO 1892+00
009	GPN-R-004	L1 ALIGNMENT, STA. 1836+00 TO 1864+00
010	GPN-R-009	L1 ALIGNMENT, ROUTE 606 STATION, STA. 1808+00 TO 1836+00
011	GPN-R-010	L1 ALIGNMENT, STA. 1782+00 TO 1808+00
012	GPN-R-200	L1 ALIGNMENT, YARD 15 CONNECTION, STA. 15716+00 TO 15735+00
013	GPN-R-202	L1 ALIGNMENT, YARD 15 CONNECTION, STA. 15735+00 TO 15763+00
014	GPN-R-203	L1 ALIGNMENT, YARD 15 CONNECTION, STA. 15763+00 TO 15783+81.53
015	GPN-R-205	L1 ALIGNMENT, YARD 15 CONNECTION, STA. 1543+92.92 TO 1575+00
016	GPN-R-011	L1 ALIGNMENT, STA. 1752+00 TO 1782+00
017	GPN-R-012	A1 ALIGNMENT, STA. 1724+00 TO 1752+00
018	GPN-R-013	A1 ALIGNMENT, STA. 1696+00 TO 1724+00
019	GPN-R-014	A1 ALIGNMENT, STA. 1668+00 TO 1696+00
020	GPN-R-016	A1 ALIGNMENT, DULLES AIRPORT STATION, STA. 1640+00 TO 1668+00
021	GPN-R-018	A1 ALIGNMENT, STA. 1612+00 TO 1640+00
022	GPN-R-020	A1 ALIGNMENT, STA. 1584+00 TO 1612+00
023	GPN-R-022	D1 ALIGNMENT, STA. 1556+00 TO 1584+00
024	GPN-R-024	D1 ALIGNMENT, ROUTE 28 STATION, STA. 1528+00 TO 1556+00
025	GPN-R-025	D1 ALIGNMENT, STA. 1500+00 TO 1528+00
026	GPN-R-026	D1 ALIGNMENT, STA. 1472+00 TO 1500+00
027	GPN-R-027	D1 ALIGNMENT, HERNDON-MONROE STATION, STA. 1444+00 TO 1472+00
028	GPN-R-028	D1 ALIGNMENT, STA. 1416+00 TO 1444+00
029	GPN-R-029	D1 ALIGNMENT, STA. 1388+00 TO 1416+00
030	GPN-R-030	D1 ALIGNMENT, RESTON PARKWAY STATION, STA. 1360+00 TO 1388+00
031	GPN-R-031	D1 ALIGNMENT, STA. 1332+00 TO 1360+00
032	GPN-R-032	D1 ALIGNMENT, WIEHLE AVENUE STATION, STA. 1304+00 TO 1332+00
033	GPN-R-033	D1 ALIGNMENT, STA. 1276+00 TO 1304+00
034	GPN-R-034	D1 ALIGNMENT, STA. 1248+00 TO 1276+00
035	GPN-R-035	D1 ALIGNMENT, STA. 1220+00 TO 1248+00
036	GPN-R-036	D1 ALIGNMENT, STA. 1192+00 TO 1220+00
037	GPN-R-037	D1 ALIGNMENT, STA. 1164+00 TO 1192+00
038	GPN-R-039	D1 ALIGNMENT, STA. 1136+00 TO 1164+00
039	GPN-R-041	D1 ALIGNMENT, STA. 1108+00 TO 1136+00
040	GPN-R-042	D1 ALIGNMENT, WOLF TRAP PARK STATION, (TBD), STA. 1080+00 TO 1108+00
041	GPN-R-043	D1 ALIGNMENT, STA. 1052+00 TO 1080+00
042	GPN-R-044	T6 ALIGNMENT, STA. 1026+00 TO 1052+00
043	GPN-R-046	T6 ALIGNMENT, TYSONS WEST STATION, STA. 1003+00 TO 1026+00
044	GPN-R-103	T6 ALIGNMENT, STA. 978+00 TO 1003+00
045	GPN-R-104	T6 ALIGNMENT, STA. 950+00 TO 978+00
046	GPN-R-106	T6 ALIGNMENT, TYSONS CENTRAL 123 STATION, STA. 922+00 TO 950+00
047	GPN-R-108	T6 ALIGNMENT, STA. 904+00 TO 922+00
048	GPN-R-054	T6 ALIGNMENT, TYSONS EAST STATION, STA. 886+00 TO 904+00
049	GPN-R-056	T6 ALIGNMENT, STA. 858+00 TO 886+00
050	GPN-R-058	O1 ALIGNMENT, STA. 830+00 TO 858+00
051	GPN-R-059	O1 ALIGNMENT, STA. 802+00 TO 830+00
052	GPN-R-060	O1 ALIGNMENT, STA. 774+00 TO 802+00
053	GPN-R-061	O1 ALIGNMENT, STA. 746+00 TO 774+00
054	GPN-R-064	O1 ALIGNMENT, STA. 727+00 TO 746+00
		PLAN AND PROFILE
055	GPN-PP-120	KEY PLAN, ALIGNMENT
056	GPN-PP-001	L1 ALIGNMENT, STA. 1920+00 TO 1947+09.36
057	GPN-PP-002	L1 ALIGNMENT, ROUTE 772 STATION, STA. 1892+00 TO 1920+00
058	GPN-PP-003	L1 ALIGNMENT, STA. 1864+00 TO 1892+00
059	GPN-PP-004	L1 ALIGNMENT, PLAN, STA. 1836+00 TO 1864+00
060	GPN-PP-004A	L1 ALIGNMENT, PROFILE, STA. 1836+00 TO 1864+00
061	GPN-PP-009	L1 ALIGNMENT, ROUTE 606 STATION, STA. 1808+00 TO 1836+00
062	GPN-PP-010	L1 ALIGNMENT, STA. 1780+00 TO 1808+00
063	GPN-PP-011	L1 ALIGNMENT, STA. 1752+00 TO 1780+00
064	GPN-PP-193	PLAN, YARD SITE 15
065	GPN-PP-194	L1 ALIGNMENT, YARD 15 CONNECTION, STA. 15716+00 TO 15744+00
066	GPN-PP-195	L1 ALIGNMENT, YARD 15 CONNECTION, STA. 15744+00 TO 15772+00
067	GPN-PP-196	L1 ALIGNMENT, YARD 15 CONNECTION, STA. 15772+00 TO 15783+81.53
068	GPN-PP-197	L1 ALIGN. PLAN, YARD 15 EAST CONN., STA. 1552+00 TO 1580+04.13
069	GPN-PP-198	L1 ALIGNMENT, PROFILE, YARD 15 EAST CONNECTION, STA. 1552+00 TO 1580+04.13
070	GPN-PP-199	L1 ALIGNMENT, YARD 15 EAST CONNECTION, STA. 1543+92.92 TO 1552+00
071	GPN-PP-012	A1 ALIGNMENT, STA. 1724+00 TO 1752+00
072	GPN-PP-013	A1 ALIGNMENT, STA. 1696+00 TO 1724+00
073	GPN-PP-014	A1 ALIGNMENT, PLAN, STA. 1668+00 TO 1696+00
074	GPN-PP-015	A1 ALIGNMENT, PROFILE, STA. 1668+00 TO 1696+00
075	GPN-PP-016	A1 ALIGNMENT, PLAN, DULLES AIRPORT STATION, STA. 1640+00 TO 1668+00
076	GPN-PP-017	A1 ALIGNMENT, PROFILE, DULLES AIRPORT STATION, STA. 1640+00 TO 1668+00
077	GPN-PP-018	A1 ALIGNMENT, PLAN, STA. 1612+00 TO 1640+00
078	GPN-PP-019	A1 ALIGNMENT, PROFILE, STA. 1612+00 TO 1640+00
079	GPN-PP-020	A1 ALIGNMENT, PLAN, STA. 1584+00 TO 1612+00
080	GPN-PP-021	A1 ALIGNMENT, PROFILE, STA. 1584+00 TO 1612+00
081	GPN-PP-022	D1 ALIGNMENT, PLAN, STA. 1556+00 TO 1584+00
082	GPN-PP-023	D1 ALIGNMENT, PROFILE, STA. 1556+00 TO 1584+00
083	GPN-PP-024	D1 ALIGNMENT, ROUTE 28 STATION, STA. 1528+00 TO 1556+00
084	GPN-PP-025	D1 ALIGNMENT, STA. 1500+00 TO 1528+00
085	GPN-PP-026	D1 ALIGNMENT, STA. 1472+00 TO 1500+00
086	GPN-PP-027	D1 ALIGNMENT, HERNDON-MONROE STATION, STA. 1444+00 TO 1472+00
087	GPN-PP-028	D1 ALIGNMENT, STA. 1416+00 TO 1444+00
088	GPN-PP-029	D1 ALIGNMENT, STA. 1388+00 TO 1416+00
090	GPN-PP-030	D1 ALIGNMENT, RESTON PARKWAY STATION, STA. 1360+00 TO 1388+00
091	GPN-PP-031	D1 ALIGNMENT, STA. 1332+00 TO 1360+00
092	GPN-PP-032	D1 ALIGNMENT, WIEHLE AVENUE STATION, STA. 1304+00 TO 1332+00
093	GPN-PP-033	D1 ALIGNMENT, STA. 1276+00 TO 1304+00
094	GPN-PP-034	D1 ALIGNMENT, STA. 1248+00 TO 1276+00
095	GPN-PP-035	D1 ALIGNMENT, STA. 1220+00 TO 1248+00
096	GPN-PP-036	D1 ALIGNMENT, STA. 1192+00 TO 1220+00
097	GPN-PP-037	D1 ALIGNMENT, PLAN, STA. 1164+00 TO 1192+00
098	GPN-PP-038	D1 ALIGNMENT, PROFILE, STA. 1164+00 TO 1192+00
099	GPN-PP-039	D1 ALIGNMENT, PLAN, STA. 1136+00 TO 1164+00
100	GPN-PP-040	D1 ALIGNMENT, PROFILE, STA. 1136+00 TO 1164+00
101	GPN-PP-041	D1 ALIGNMENT, STA. 1108+00 TO 1136+00
102	GPN-PP-042	D1 ALIGNMENT, WOLF TRAP PARK STATION, (FUTURE), STA.1080+00 TO 1108+00
103	GPN-PP-043	D1 ALIGNMENT, STA. 1052+00 TO 1080+00
104	GPN-PP-044	T6 ALIGNMENT, PLAN, STA. 1026+00 TO 1052+00
105	GPN-PP-045	T6 ALIGNMENT, PROFILE, STA. 1026+00 TO 1052+00
106	GPN-PP-046	T6 ALIGNMENT, PLAN, TYSONS WEST STATION, STA. 998+00 TO 1026+00
107	GPN-PP-047	T6 ALIGNMENT, PROFILE, TYSONS WEST STATION, STA. 998+00 TO 1026+00
108	GPN-PP-103	T6 ALIGNMENT, PLAN, TYSON CENTRAL 7 STATION, STA. 970+00 TO 998+00
109	GPN-PP-103A	T6 ALIGNMENT, PROFILE, TYSON CENTRAL 7 STATION, STA. 970+00 TO 998+00
110	GPN-PP-050	T6 ALIGNMENT, PLAN, STA. 942+00 TO 970+00
111	GPN-PP-051	T6 ALIGNMENT, PROFILE, STA. 942+00 TO 970+00
112	GPN-PP-052	T6 ALIGNMENT, PLAN, TYSONS CENTRAL 123 STATION, STA. 914+00 TO 942+00
113	GPN-PP-053	T6 ALIGNMENT, PROFILE, TYSONS CENTRAL 123 STATION, STA. 914+00 TO 942+00
114	GPN-PP-108	T6 ALIGNMENT, PLAN, TYSONS EAST STATION, STA. 886+00 TO 914+00
115	GPN-PP-109	T6 ALIGNMENT, PROFILE, TYSONS EAST STATION, STA. 886+00 TO 914+00
116	GPN-PP-056	T6 ALIGNMENT, PLAN, STA. 858+00 TO 886+00
117	GPN-PP-057	T6 ALIGNMENT, PROFILE, STA. 858+00 TO 886+00
118	GPN-PP-058	O1 ALIGNMENT, STA. 830+00 TO 858+00
119	GPN-PP-059	O1 ALIGNMENT, STA. 802+00 TO 830+00
120	GPN-PP-060	O1 ALIGNMENT, STA. 774+00 TO 802+00
121	GPN-PP-061	O1 ALIGNMENT, (OB) & (IB) PLAN, STA. 746+00 TO 774+00
122	GPN-PP-062	O1 ALIGNMENT, (OB) PROFILE, STA. 746+00 TO 774+00
123	GPN-PP-066	O1 ALIGNMENT, (IB) PROFILE, STA. 746+00 TO 774+00
124	GPN-PP-064	O1 ALIGNMENT, (OB), STA. 727+00 TO 746+00
125	GPN-PP-067	O1 ALIGNMENT, (IB), STA. 727+00 TO 746+00
126	GPN-PP-50	EXISTING K ALIGNMENT - PLAN & PROFILE, STA. 474+00 TO 500+00
127	GPN-PP-168	PLAN - WEST FALLS YARD SITE
128	GPN-PP-063	O1 ALIGNMENT, YARD CONNECTION, PLAN & PROFILE, STA. 555+00 TO 578+96.54
		CURVE TABLES
129	GPN-PP-200	OUTBOUND ALIGNMENT L1 DATA, CURVE L1-O 1 TO L1-O 7
130	GPN-PP-201	OUTBOUND ALIGNMENT L1 DATA, CURVE L1-O 8 TO L1-O 12
131	GPN-PP-202	OUTBOUND ALIGNMENT Y15 DATA, CURVE Y15-O 1 TO Y15-O 5
132	GPN-PP-203	OUTBOUND ALIGNMENT A1 DATA, CURVE A1-O 1 TO A1-O 7
133	GPN-PP-204	OUTBOUND ALIGNMENT D1 DATA, CURVE D1-O 1 TO D1-O 7
134	GPN-PP-212	OUTBOUND ALIGNMENT D1 DATA, CURVE D1-O 8 TO D1-O 14
135	GPN-PP-206	OUTBOUND ALIGNMENT D1 DATA, CURVE D1-O 15 TO D1-O 22
136	GPN-PP-207	OUTBOUND ALIGNMENT D1 DATA, CURVE D1-O 23 TO D1-O 25
137	GPN-PP-208	OUTBOUND ALIGNMENT T6 DATA, CURVE T6-O 1 TO T6-O 7
138	GPN-PP-209	OUTBOUND ALIGNMENT T6 DATA, CURVE T6-O 8 TO T6-O 12
139	GPN-PP-210	OUTBOUND ALIGNMENT O1 AND WFY YARD DATA, CURVE O1-O 1 TO O1-O 6, WFY-O 1 & WFY-O 2
140	GPN-PP-211	INBOUND ALIGNMENT L1 CURVE DATA, CURVE L1-I 1 TO L1-I 8
141	GPN-PP-212	INBOUND ALIGNMENT L1 DATA, CURVE L1-I 9 TO L1-O 12
142	GPN-PP-213	INBOUND ALIGNMENT Y15 DATA, CURVE Y15-I 1 TO Y15-I 7
143	GPN-PP-214	INBOUND ALIGNMENT A1 DATA, CURVE A1-I 1 TO A1-I 5
144	GPN-PP-215	INBOUND ALIGNMENT D1 DATA, CURVE D1-I 1 TO D1-I 7
145	GPN-PP-216	INBOUND ALIGNMENT D1 DATA, CURVE D1-I 8 TO D1-I 15
146	GPN-PP-217	INBOUND ALIGNMENT D1 DATA, CURVE D1-I 16 TO D1-I 23
147	GPN-PP-218	INBOUND ALIGNMENT D1 DATA, CURVE D1-I 24
148	GPN-PP-219	INBOUND ALIGNMENT T6 DATA, CURVE T6-I 1 TO T6-I 7
149	GPN-PP-220	INBOUND ALIGNMENT T6 DATA, CURVE T6-I 8 TO T6-I 14
150	GPN-PP-221	INBOUND ALIGNMENT O1 DATA, CURVE O1-I 1 TO O1-I 4
151	GPN-PP-222	INBOUND ALIGNMENT O1 DATA, CURVE O1-I 5

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. NANA 9/03 DATE
DRAWN: D. NANA 9/03 DATE
CHECKED: R. KASHIF 10/03 DATE
APPROVED: P. ELMAN 10/03 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

INDEX OF DRAWINGS
GENERAL / CIVIL - PROPERTY IDENTIFICATION PLAN, PLAN & PROFILE AND CURVE TABLES

SCALE: NONE

DRAWING NO.: GPN-G-001

001

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SHEET NO.	DRAWING NO.	DESCRIPTION
		TYPICAL SECTIONS
152	GPN-C-059	DULLES GREENWAY, ROUTE 772 STATION
153	GPN-C-250	DULLES GREENWAY, ROUTE 607 BRIDGE
154	GPN-C-001	DULLES GREENWAY, STA 1858+00
155	GPN-C-060	DULLES GREENWAY, ROUTE 606 STATION
156	GPN-C-020	DULLES AIRPORT ACCESS ROAD , ROUTE 28 STATION
157	GPN-C-036	DULLES AIRPORT ACCESS ROAD (FUTURE), ROUTE 28 STATION
158	GPN-C-021	DULLES AIRPORT ACCESS ROAD, HERNDON-MONROE STATION
159	GPN-C-037	DULLES AIRPORT ACCESS ROAD (FUTURE), HERNDON-MONROE STATION
160	GPN-C-022	DULLES AIRPORT ACCESS ROAD, HERNDON-MONROE PARK AND RIDE BRIDGE
161	GPN-C-038	DULLES AIRPORT ACCESS ROAD (FUTURE), HERNDON-MONROE PARK AND RIDE BRIDGE
162	GPN-C-023	DULLES AIRPORT ACCESS ROAD, STA 1430+00
163	GPN-C-039	DULLES AIRPORT ACCESS ROAD (FUTURE), STA 1430+00
164	GPN-C-024	DULLES AIRPORT ACCESS ROAD, RESTON PARKWAY STATION
165	GPN-C-040	DULLES AIRPORT ACCESS ROAD (FUTURE), RESTON PARKWAY STATION
166	GPN-C-025	DULLES AIRPORT ACCESS ROAD, RESTON PARKWAY BRIDGE
167	GPN-C-041	DULLES AIRPORT ACCESS ROAD (FUTURE), RESTON PARKWAY BRIDGE
168	GPN-C-026	DULLES AIRPORT ACCESS ROAD, STA 1330+00
169	GPN-C-042	DULLES AIRPORT ACCESS ROAD (FUTURE), STA 1330+00
170	GPN-C-027	DULLES AIRPORT ACCESS ROAD, WIEHLE AVENUE STATION
171	GPN-C-043	DULLES AIRPORT ACCESS ROAD (FUTURE), WIEHLE AVENUE STATION
172	GPN-C-028	DULLES AIRPORT ACCESS ROAD, WIEHLE AVENUE BRIDGE
173	GPN-C-044	DULLES AIRPORT ACCESS ROAD (FUTURE), WIEHLE AVENUE BRIDGE
174	GPN-C-050	WFC SERVICE & INSPECTION YARD IMPROVEMENT
		TPSS & TBS/RTC LOCATION PLANS
175	GPN-C-101	L1 ALIGNMENT – TBS 8, RTC11, TPSS 19, TBS 10
176	GPN-C-102	L1 & A1 ALIGNMENTS – TPSS 18, RTC 9, TPSS 17, RTC 8
177	GPN-C-103	A1 & D1 ALIGNMENTS – TPSS 15, TPSS 14
178	GPN-C-104	D1 ALIGNMENT – TBS 6, RTC 7
179	GPN-C-106	D1 ALIGNMENT – TPSS 10, RTC 6, TPSS 9
180	GPN-C-107	D1 ALIGNMENT – TPSS 8, RTC 5, TPSS 7
181	GPN-C-108	D1 ALIGNMENT – TPSS 6, RTC 4
182	GPN-C-109	O1 ALIGNMENT – TPSS 2, TBS 2, RTC 3
183	GPN-C-110	O1 ALIGNMENT – TBS 1, RTC 2, RTC 1
		STRUCTURAL
300	GPN-S-001	AT GRADE STRUCTURES, TYPICAL SECTIONS.
301	GPN-S-002	AT GRADE STRUCTURES, TYPICAL SECTIONS AT UNDERPASS
302	GPN-S-003	AERIAL STRUCTURES, TYPICAL BALLASTED BRIDGE, SECTIONS
303	GPN-S-004	AERIAL STRUCTURES, SEGMENTAL GIRDER, PLAN & ELEVATION
304	GPN-S-005	AERIAL STRUCTURES, TYPICAL SEGMENTAL GIRDER, SECTION
305	GPN-S-045	AERIAL STRUCTURES, POCKET TRACK, SECTION
306	GPN-S-006	AERIAL STRUCTURES, DOUBLE TRACK ON SINGLE COLUMN
307	GPN-S-007	AERIAL STRUCTURES, SINGLE TRACK ON SINGLE COLUMN
308	GPN-S-008	AERIAL STRUCTURES, TYPICAL BENT STRUCTURE
309	GPN-S-009	AERIAL STRUCTURES, CANTILEVER COLUMN
310	GPN-S-010	UNDERGROUND STRUCTURES, O1 ALIGNMENT YARD CONNECTOR CUT AND COVER BOX, PLAN AND SECTION
311	GPN-S-046	UNDERGROUND STRUCTURES, AIRPORT ALIGNMENT CUT AND COVER BOX, PLAN
312	GPN-S-047	UNDERGROUND STRUCTURES, AIRPORT ALIGNMENT CUT AND COVER BOX, SECTIONS
313	GPN-S-011	UNDERGROUND STRUCTURES, WEST TUNNEL PORTAL, PLAN AND ELEVATION
314	GPN-S-012	UNDERGROUND STRUCTURES, WEST TUNNEL PORTAL, SECTIONS
315	GPN-S-013	UNDERGROUND STRUCTURES, TYPICAL CIRCULAR TUNNEL, CROSS SECTION
316	GPN-S-048	UNDERGROUND STRUCTURES, NATM TUNNEL, CROSS SECTION
317	GPN-S-042	INTERCHANGES, RYAN ROAD (ROUTE 772) OVER DULLES GREENWAY, PLAN, ELEVATION AND SECTION
318	GPN-S-041	INTERCHANGES, ROUTE 607 OVER DULLES GREENWAY, PLAN, ELEVATION AND SECTION
319	GPN-S-039	INTERCHANGES, DULLES GREENWAY OVER BROAD RUN, PLAN AND ELEVATION
320	GPN-S-040	INTERCHANGES, DULLES GREENWAY OVER BROAD RUN, SECTION
321	GPN-S-037	INTERCHANGES, OLD OX ROAD (ROUTE 606) OVER DULLES GREENWAY, PLAN AND ELEVATION
322	GPN-S-038	INTERCHANGES, OLD OX ROAD (ROUTE 606) OVER DULLES GREENWAY, SECTION
323	GPN-S-036	INTERCHANGES, DULLES ACCESS ROAD OVER HORSEPEN RUN, PLAN, ELEVATION AND SECTION
324	GPN-S-035	INTERCHANGES, SULLEY ROAD (RTE 28) OVER DULLES ACCESS ROAD, PLAN, ELEVATION AND SECTION
325	GPN-S-034	INTERCHANGES, ROUTE 28 INTERCHANGE, RAMP B OVER DULLES ACCESS ROAD, PLAN, ELEVATION AND SECTION
326	GPN-S-033	INTERCHANGES, ROUTE 28 INTERCHANGE, RAMP A OVER DULLES ACCESS ROAD, PLAN, ELEVATION AND SECTION
327	GPN-S-032	INTERCHANGES, DULLES ACCESS ROAD OVER CENTREVILLE ROAD, PLAN, ELEVATION AND SECTION
328	GPN-S-031	INTERCHANGES, MONROE STREET OVER DULLES ACCESS ROAD, PLAN, ELEVATION AND SECTION
329	GPN-S-029	INTERCHANGES, HERNDON – MONROE PARK AND RIDE OVER DULLES ACCESS ROAD, PLAN, ELEVATION AND SECTION, EXISTING
330	GPN-S-030	INTERCHANGES, HERNDON – MONROE PARK AND RIDE OVER DULLES ACCESS ROAD, PLAN, ELEVATION AND SECTION, PROPOSED
331	GPN-S-027	INTERCHANGES, FAIRFAX COUNTY PARKWAY (RTE. 7100) OVER DULLES ACCESS ROAD, PLAN AND ELEVATION
332	GPN-S-028	INTERCHANGES, FAIRFAX COUNTY PARKWAY (RTE. 7100) OVER DULLES ACCESS ROAD, SECTION
333	GPN-S-026	INTERCHANGES, RESTON PARKWAY (RTE. 602) OVER DULLES ACCESS ROAD, PLAN, ELEVATION AND SECTION
334	GPN-S-025	INTERCHANGES, WIEHLE AVENUE (RTE. 828) OVER DULLES ACCESS ROAD, PLAN, ELEVATION AND SECTION
335	GPN-S-024	INTERCHANGES, DULLES ACCESS ROAD OVER W & OD BIKE TRAIL, PLAN, ELEVATION AND SECTION
336	GPN-S-023	INTERCHANGES, DULLES ACCESS ROAD OVER HUNTER MILL ROAD, PLAN, ELEVATION AND SECTION
337	GPN-S-022	INTERCHANGES, DULLES ACCESS ROAD OVER DIFFICULT RUN, PLAN, ELEVATION AND SECTION
338	GPN-S-021	INTERCHANGES, BEULAH ROAD (RTE. 675) OVER DULLES ACCESS ROAD, PLAN, ELEVATION AND SECTION
339	GPN-S-020	INTERCHANGES, TRAP ROAD (RTE. 5020) OVER DULLES ACCESS ROAD, PLAN, ELEVATION AND SECTION
340	GPN-S-019	INTERCHANGES, DULLES CONNECTOR ROAD OVER CHAIN BRIDGE, PLAN, ELEVATION AND SECTION
341	GPN-S-018	INTERCHANGES, DULLES ACCESS ROAD OVER MAGARITY ROAD, PLAN, ELEVATION AND SECTION
342	GPN-S-017	INTERCHANGES, DULLES ACCESS ROAD OVER PIMMIT RUN, PLAN, ELEVATION AND SECTION
343	GPN-S-016	INTERCHANGES, IDYLWOOD ROAD OVER DULLES CONNECTOR ROAD, PLAN, ELEVATION AND SECTION
344	GPN-S-015	INTERCHANGES, HAYCOCK ROAD OVER ROUTE 66, PLAN, ELEVATION AND SECTION
345	GPN-S-014	INTERCHANGES, GREAT FALLS ROAD OVER ROUTE 66, PLAN, ELEVATION AND SECTION

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED:	D. NANA	9/03 DATE
DRAWN:	D. NANA	9/03 DATE
CHECKED:	R. KASHIF	10/03 DATE
APPROVED:	P. ELMAN	01/04 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

INDEX OF DRAWINGS
CIVIL – TYPICAL SECTIONS / TPSS, TBS, RTC LOCATION PLANS / STRUCTURAL

SCALE: NONE

DRAWING NO.: GPN-G-002

002

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\General\Dulles_Civil-Struct_Drawing_Index_GPN-G-001_to_003.dwg, GPN-G-002, 11/30/04 03:27:43 PM, Kolenam

ABBREVIATIONS:

A.D.	ALGEBRAIC DIFFERENCE
AHD	AHEAD
ALIGN.	ALIGNMENT
AVE	AVENUE
BK	BACK
BLDG	BUILDING
BLVD	BOULEVARD
℄	BASELINE
BMP	BEST MANAGEMENT PRACTICES
BR	BRICK
BRT	BUS RAPID TRANSIT
BSMT	BASEMENT
CATV	CABLE TV
℄ /CL	CENTERLINE
CCS	POINT OF – CURVE TO COMBINING SPIRAL
CLF	CHAIN LINK FENCE
CLR.	CLEAR, CLEARANCE
COMM.	COMMUNICATIONS
CONC	CONCRETE
CONN	CONNECTION
CS	POINT OF – CURVE TO SPIRAL
CSC	POINT OF – COMBINING SPIRAL TO CURVE
DAAR	DULLES AIRPORT ACCESS ROAD
DCR	DULLES CONNECTOR ROAD
DIA.	DIAMETER
DO	DESIGN OPTION
DR	DRIVE
DRWY	DRIVEWAY
DTR	DULLES TOLL ROAD
DXO	DOUBLE CROSSOVER
DWG.	DRAWING
E	EAST
EA	EMERGENCY ACCESS
EB, E.B.	EASTBOUND
E.B.L.	EASTBOUND LANE
ELEC.	ELECTRIC
EL., ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
ETS	EMERGENCY TRIP STATION
EX.	EXISTING
EXP.	EXPANSION
EXIST.	EXISTING
FT.	FEET, FOOT
IB, I.B.	INBOUND
KV	KILOVOLTS
L	LENGTH
LCSA	LOUDOUN COUNTY SANATATION AUTHORITY
LS	LENGTH OF SPIRAL
LT	LEFT
MAC	MACADAM
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MPH	MILES PER HOUR
MSE	MECHANICALLY STABILIZED EARTH
N	NORTH
NB, N.B.	NORTH BOUND
NIC	NOT IN CONTRACT
NO.	NUMBER
OB, O.B.	OUTBOUND
OH	OVERHEAD
PC	POINT OF CURVATURE
PGL, P.G.L.	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
PKWY	PARKWAY
PS	POINT OF SWITCH
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS, RADIUS OF CIRCULAR CURVE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
RTC	REMOTE TRAIN CONTROL ROOM
RTE	ROUTE
RT	RIGHT
SAN.	SANITARY SEWER
SB, S.B.	SOUTHBOUND
S.B.L.	SOUTHBOUND LANE
SC	POINT OF – SPIRAL TO CURVE
S.E.	SUPER ELEVATION
SHLDR.	SHOULDER
SS	POINT OF – SPIRAL TO SPIRAL
ST	POINT OF – SPIRAL TO TANGENT
STA	STATION, STATIONING
STY	STORY
SWM	STORM WATER MANAGEMENT
TBD	TO BE DETERMINED
TBS	TIE BREAKER STATION
TEL.	TELEPHONE
T/TG, T/TG	EXISTING TELEPHONE/TELEGRAPH
T/LR	TOP OF LOW RAIL
T/R	TOP OF RAIL
TPSS	TRACTION POWER SUBSTATION
TS	POINT OF – TANGENT TO SPIRAL
TYP	TYPICAL
UG	UNDERGROUND
V	DESIGN VELOCITY
VC	VERTICAL CURVE
VERT.	VERTICAL
W	WATER
WB, W.B.	WESTBOUND
W.B.L.	WESTBOUND LANE
W.P.	WORK POINT
YC	YARD CONNECTOR

GENERAL NOTES:

1. Aerial base mapping furnished under license from VARGIS, LLC, Herndon, Virginia, Copyright 2002.
2. All utilities shown in profile on plan and profile drawings have been compiled from best available information furnished by various utility owners and survey information. Locations are approximate and will be field verified during engineering development.
3. The profile stationing and elements are shown for outbound track unless otherwise noted.
4. Property information shown on Property Identification Plans was compiled from recent public tax records of Fairfax and Loudoun Counties.
5. Horizontal alignments were created graphically on the aerial background base, and are subject to further refinement when developed using the controlled topographic survey that will be completed during the preliminary engineering phase of this project. Vertical alignments were developed using best available topographic information and will also be subject to further refinement during preliminary engineering.

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADSEN 07–09–01 DATE
DRAWN: D. MADSEN 09–08–01 DATE
CHECKED: R. KASHIF 09–2003 DATE
APPROVED: P. ELMAN 01–2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

CIVIL / STRUCTURAL
ABBREVIATIONS
AND GENERAL NOTES

SCALE: NONE

DRAWING NO.: GPN–G–004

003

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SYMBOLS:

- 2 STY BR — BUILDING
- STREAM OR SHORELINE
- HEDGE
- PORTAL
- E MH G MH S MH / W MH T MH — MANHOLES
- CATCH BASIN
- DROP INLET
- UTILITY POLE
- UTILITY & LIGHT POLE
- LIGHT POLE
- T L — TRAFFIC LIGHT
- SIGN
- CULVERT
- TRAVELED ROAD
- DIRT ROAD
- TRAIL
- CURB LINE
- CURB & GUTTER
- BRIDGE
- GUARD RAIL WITH STEEL SIDES
- GUARD POSTS & CABLE
- 6' CONC. W — WALL
- 3' WIRE — FENCE
- FENCE ON WALL
- WALK
- RAILROAD
- BILLBOARDS
- FOUNDATIONS OR RUINS
- T.T. — TRAFFIC TREADLES
- C B — CALL BOX
- EA — EMERGENCY ACCESS
- PROPERTY LINE
- LIMIT OF RIGHT-OF-WAY
- SUBDIVISION LINE
- HORIZONTAL OR VERTICAL POINT OF INTERSECTION
- DTS — DIGITAL TRANSMISSION SYSTEM, REMOTE TERMINAL
- FS — FIRE ALARM DEVICE, AUTOMATIC
- W M G M E M — METERS

- INTRUSION ALARM DEVICE
- CTS — COMM. CARRIER TRANSMISSION SYSTEM
- FOS — COMM. FIBER OPTIC SYSTEM
- SAS — COMM. SUPERVISORY ALARM SYSTEM
- TV — CCTV MONITOR
- CCTV CAMERA
- C — COMM. EQUIPMENT ROOM
- DISP — DISPATCHER ROOM
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- PERMANENT SURFACE EASEMENT
- SS — SUBSTATION
- TB — TIE BREAKER STATION
- TURNOUT
- POINT OF SWITCH
- BUMPING POST
- TURNOUT - TRAIN CONTROL
- 13.8 KV POWER CO. SERVICE (NO. OF LINES INDICATES NO. OF INCOMING SERVICES)
- OTHER VOLTAGE SERVICE (EXAMPLE: 480Y/277 VOLTS)
- INTERLOCKED SIGNAL
- MARKER (BUMPER POST) SIGNAL
- IMPEDANCE BOND
- INSULATED JOINT
- TC/I C — TRAIN CONTROL (WITH INTERLOCKING) & COMMUNICATIONS ROOMS
- TC C — TRAIN CONTROL & COMMUNICATIONS ROOMS
- TELEPHONE, PABX
- E — TELEPHONE, EMERGENCY
- TELEPHONE, PUBLIC
- MRS — MOBILE RADIO SYSTEM
- PA — P.A. SYSTEM
- PERS — PASSENGER EMERGENCY REPORTING STATION
- APAAS — COMM. AUTO. PA ANNOUNCEMENT SYSTEM
- POWER OPERATED SWITCH MECHANISM
- DERAIL
- SINGLE CROSSOVER
- DOUBLE CROSSOVER
- LIMIT OF 100-YR. FLOOD PLAIN
- LIMIT OF WETLANDS OR WATERS OF U.S.
- 72 dBA — NOISE CONTOUR
- LIMIT OF DISTURBANCE

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADSEN	01-21-04 DATE	
DRAWN: D. MADSEN	01-21-04 DATE	
CHECKED: R. KASHIF	09-2003 DATE	
APPROVED: P. ELMAN	01-2004 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED — PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

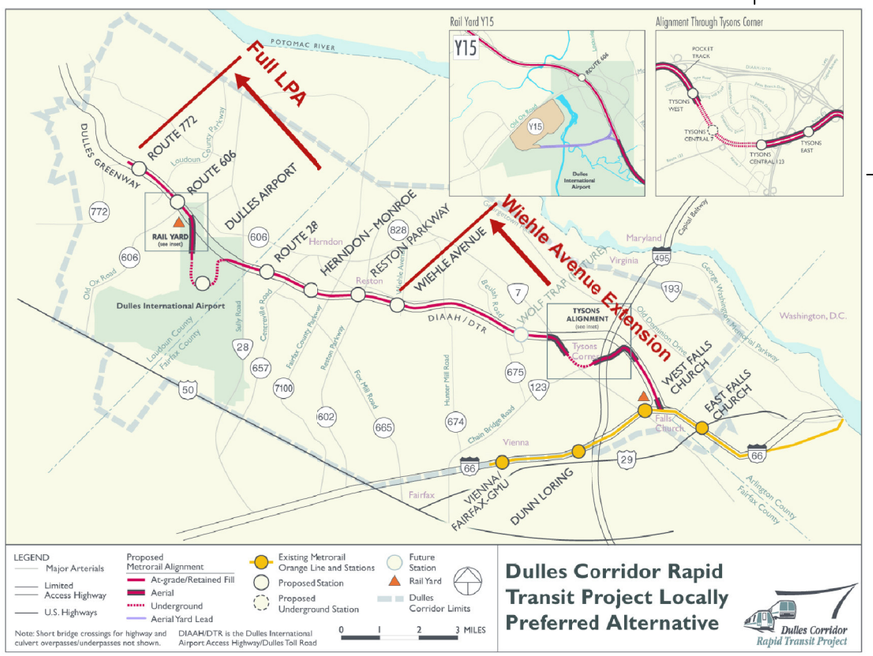
CIVIL / STRUCTURAL SYMBOLS

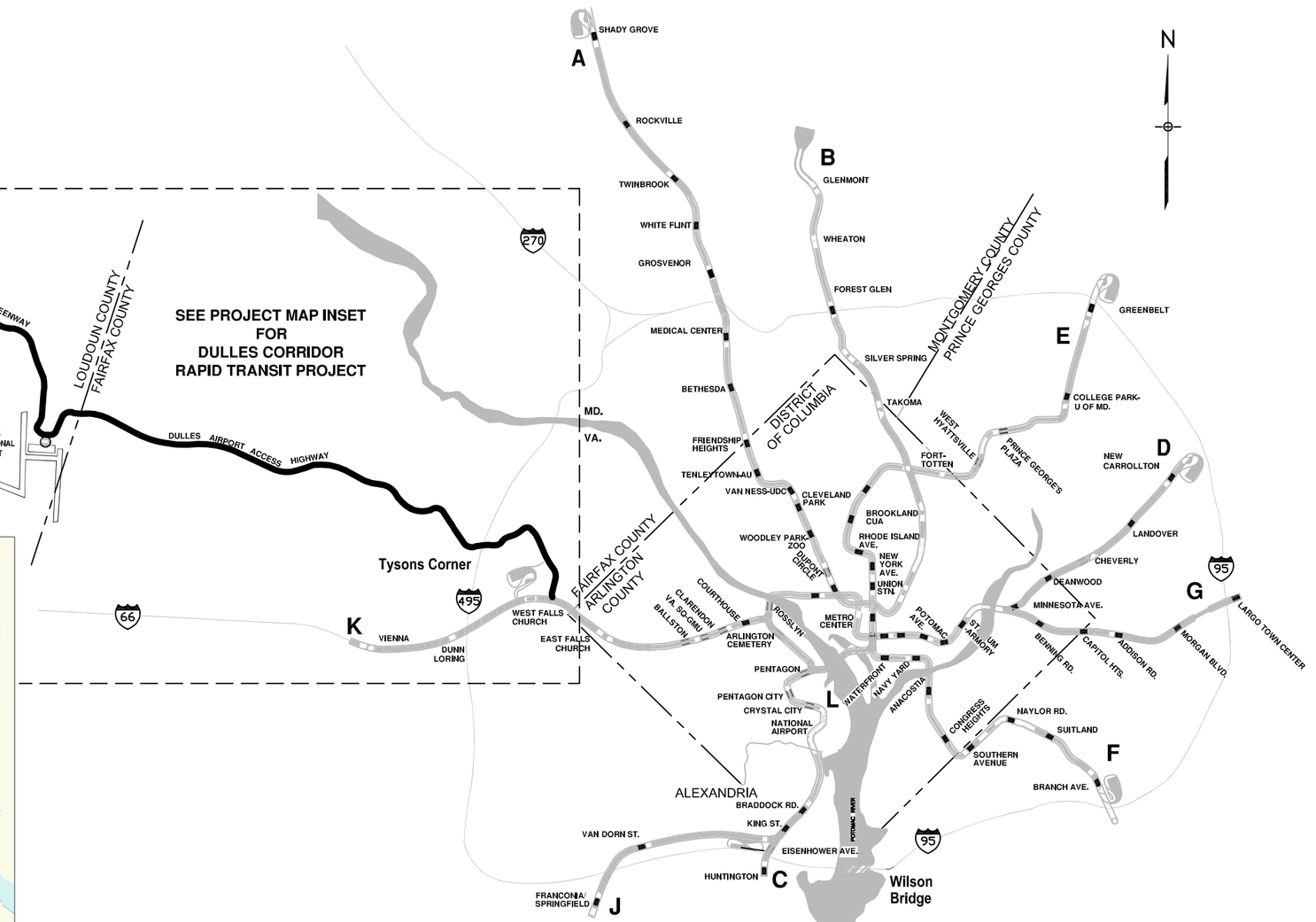
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004

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SYSTEM MAP

SCALE: NONE

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADSEN 06/05/02	REFERENCE DRAWINGS	REVISIONS
DRAWN: D. MADSEN 06/07/02	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. KASHIF 05/2002		
APPROVED: P. ELMAN 05/2002		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

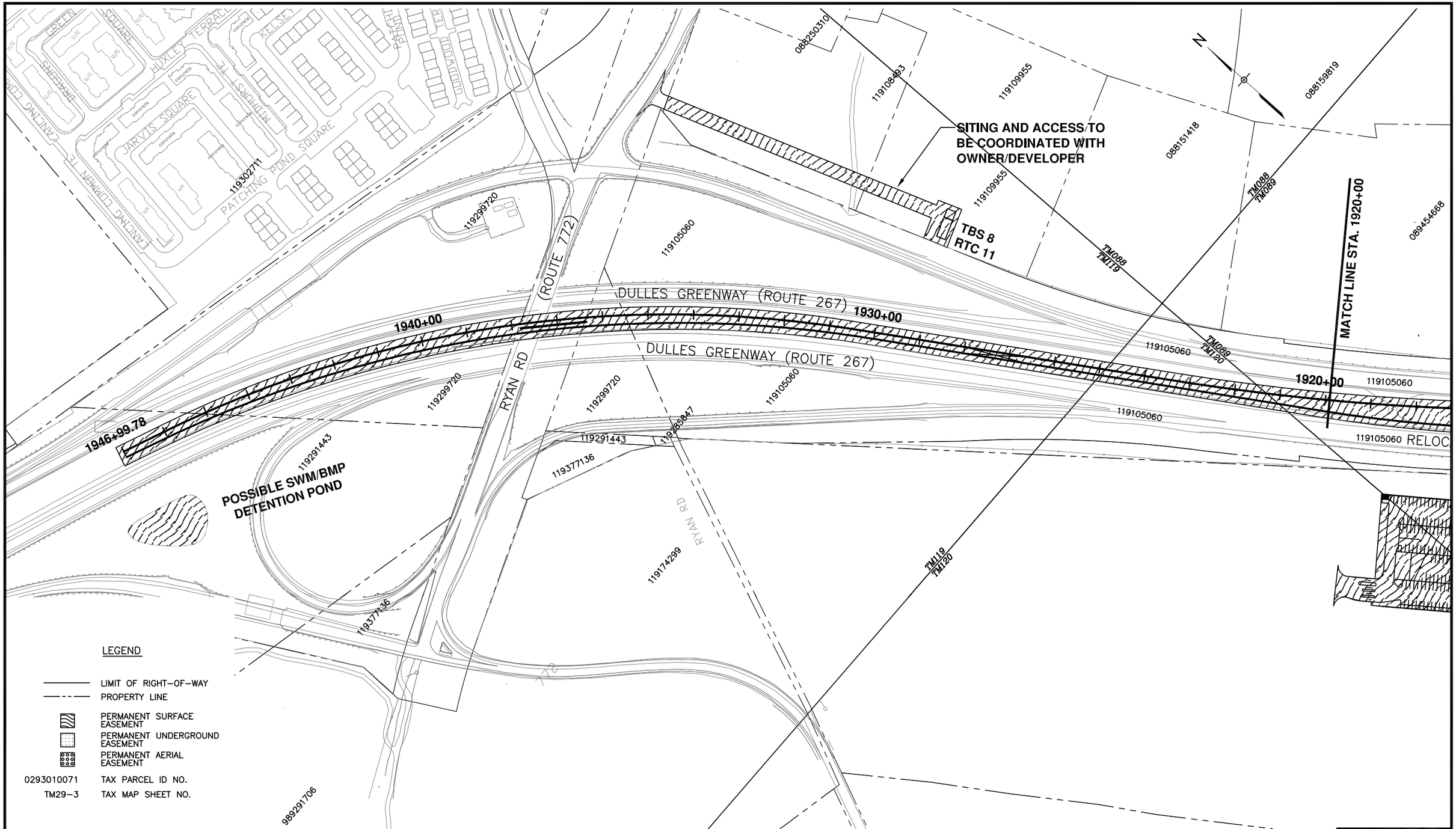
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SCALE: NONE

DRAWING NO.: GPN-G-005

005

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LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29-3 TAX MAP SHEET NO.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS 10-12-01 DATE
DRAWN: D. MADSEN 10-15-01 DATE
CHECKED: R. BERMUDEZ 9-23-03 DATE
APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

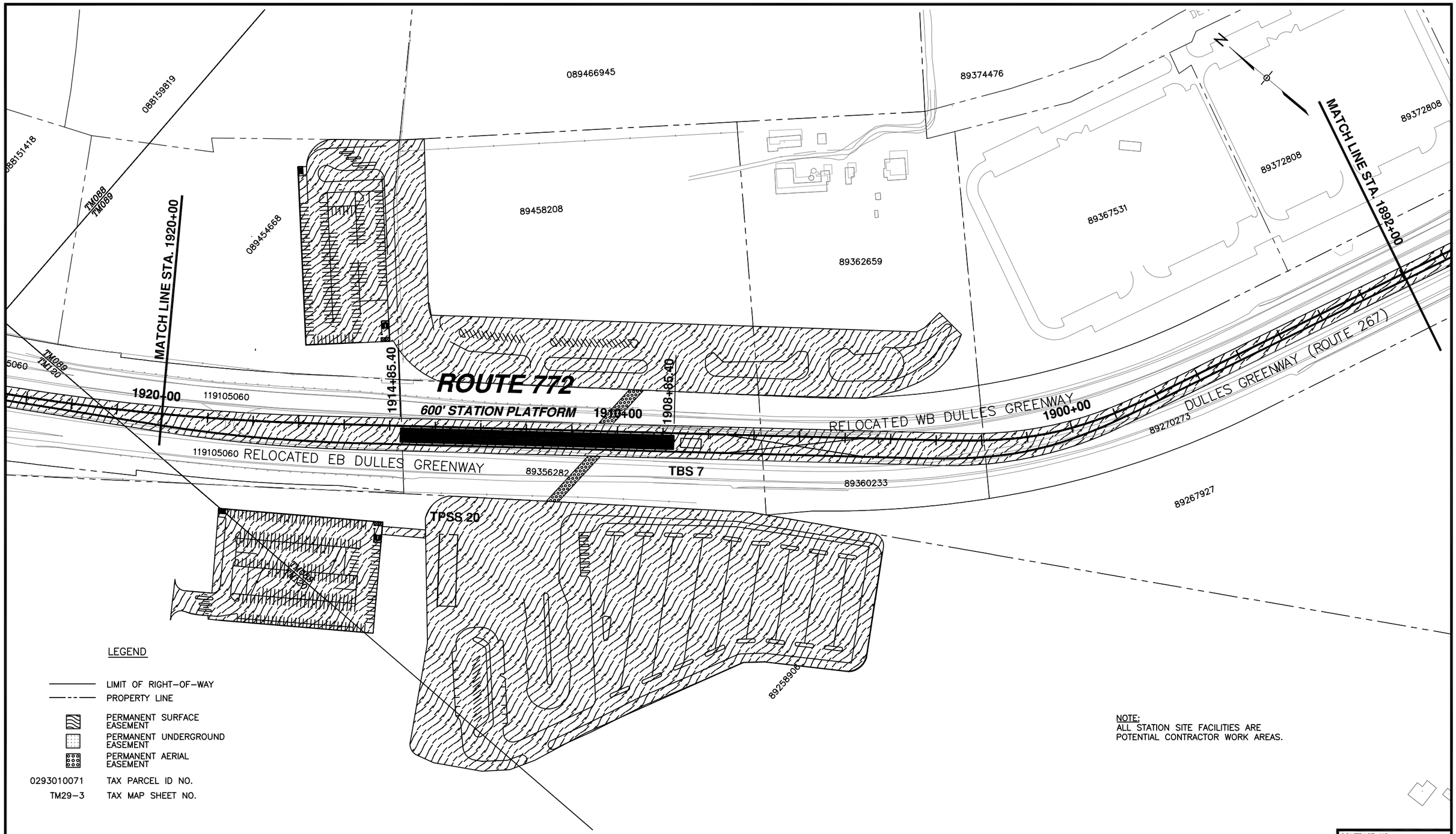
PROPERTY IDENTIFICATION PLAN
DULLES GREENWAY
L1 ALIGNMENT
STATION 1920+00 TO 1947+09.36

SCALE: 1"=100' 50 0 50 100

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006

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LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29-3 TAX MAP SHEET NO.

NOTE:
ALL STATION SITE FACILITIES ARE POTENTIAL CONTRACTOR WORK AREAS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS	10-12-01 DATE	
DRAWN: D. MADSEN	10-15-01 DATE	
CHECKED: R. BERMUDEZ	9-23-03 DATE	
APPROVED: P. ELMAN	01-2004 DATE	

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

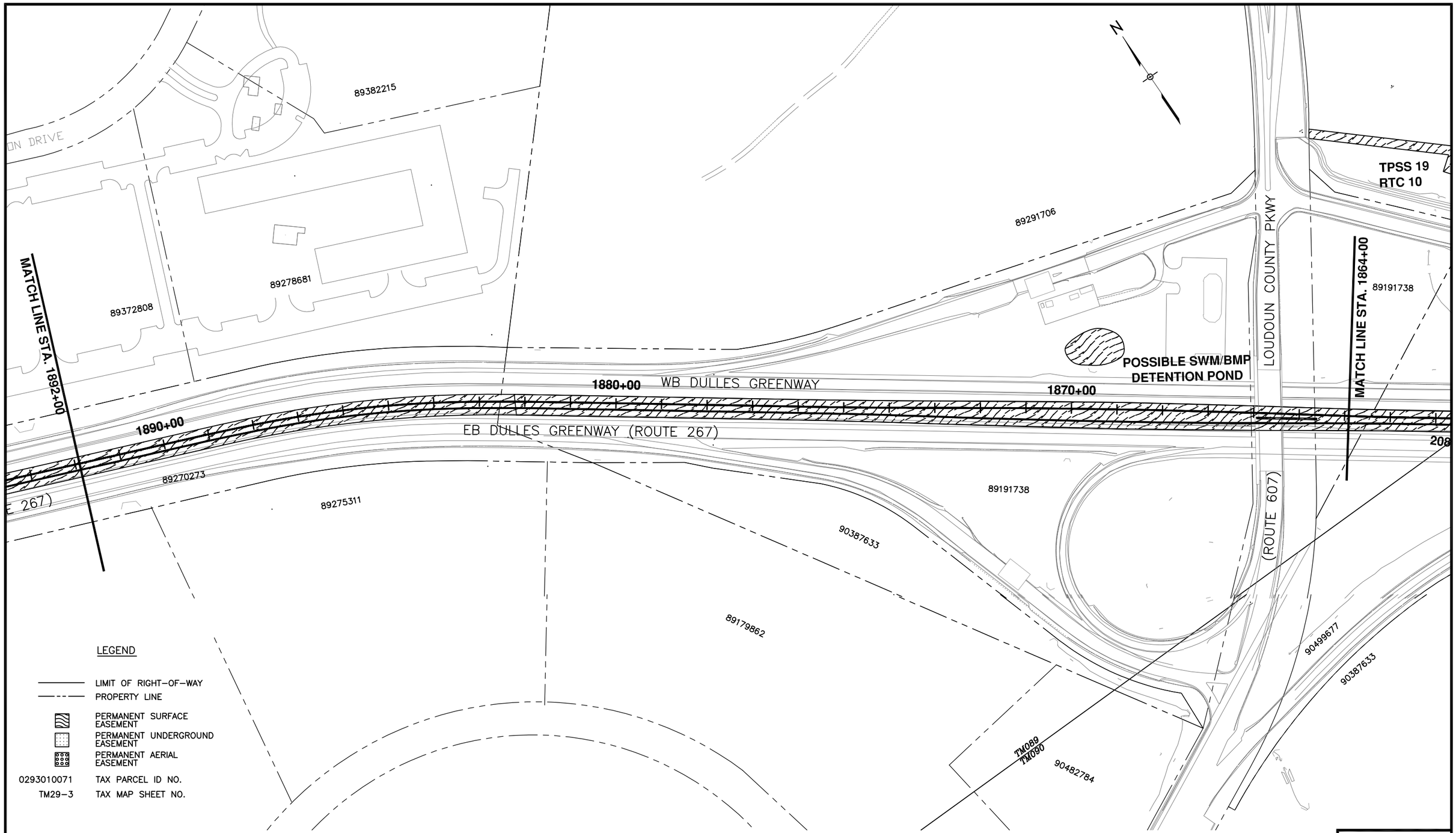
CAPITAL TRANSIT CONSULTANTS
SUBMITTED
Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PROPERTY IDENTIFICATION PLAN
DULLES GREENWAY
L1 ALIGNMENT – ROUTE 772 STATION
STATION 1892+00 TO 1920+00

SCALE: 1"=100' (50 0 50 100)
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LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29-3 TAX MAP SHEET NO.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS 10-12-01 DATE
DRAWN: D. MADSEN 10-15-01 DATE
CHECKED: R.BERMUDEZ 9-23-03 DATE
APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

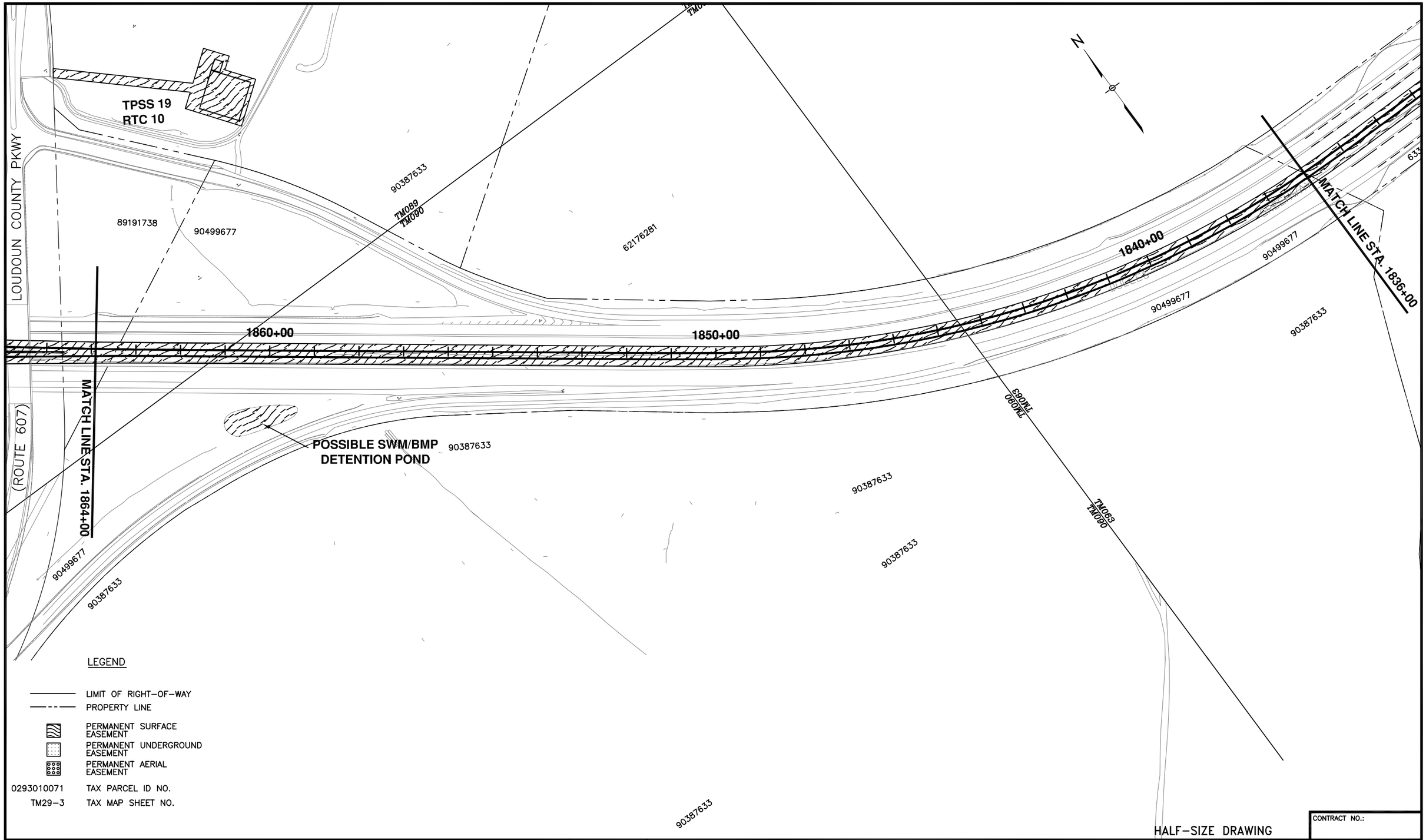
PROPERTY IDENTIFICATION PLAN
DULLES GREENWAY
L1 ALIGNMENT
STATION 1864+00 TO 1892+00

SCALE: 1"=100' 50 0 50 100

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LEGEND

- LIMIT OF RIGHT–OF–WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29–3 TAX MAP SHEET NO.

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS 10–12–01
DRAWN: D. MADSEN 10–15–01
CHECKED: R. BERMUDEZ 9–23–03
APPROVED: P. ELMAN 01–2004
DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

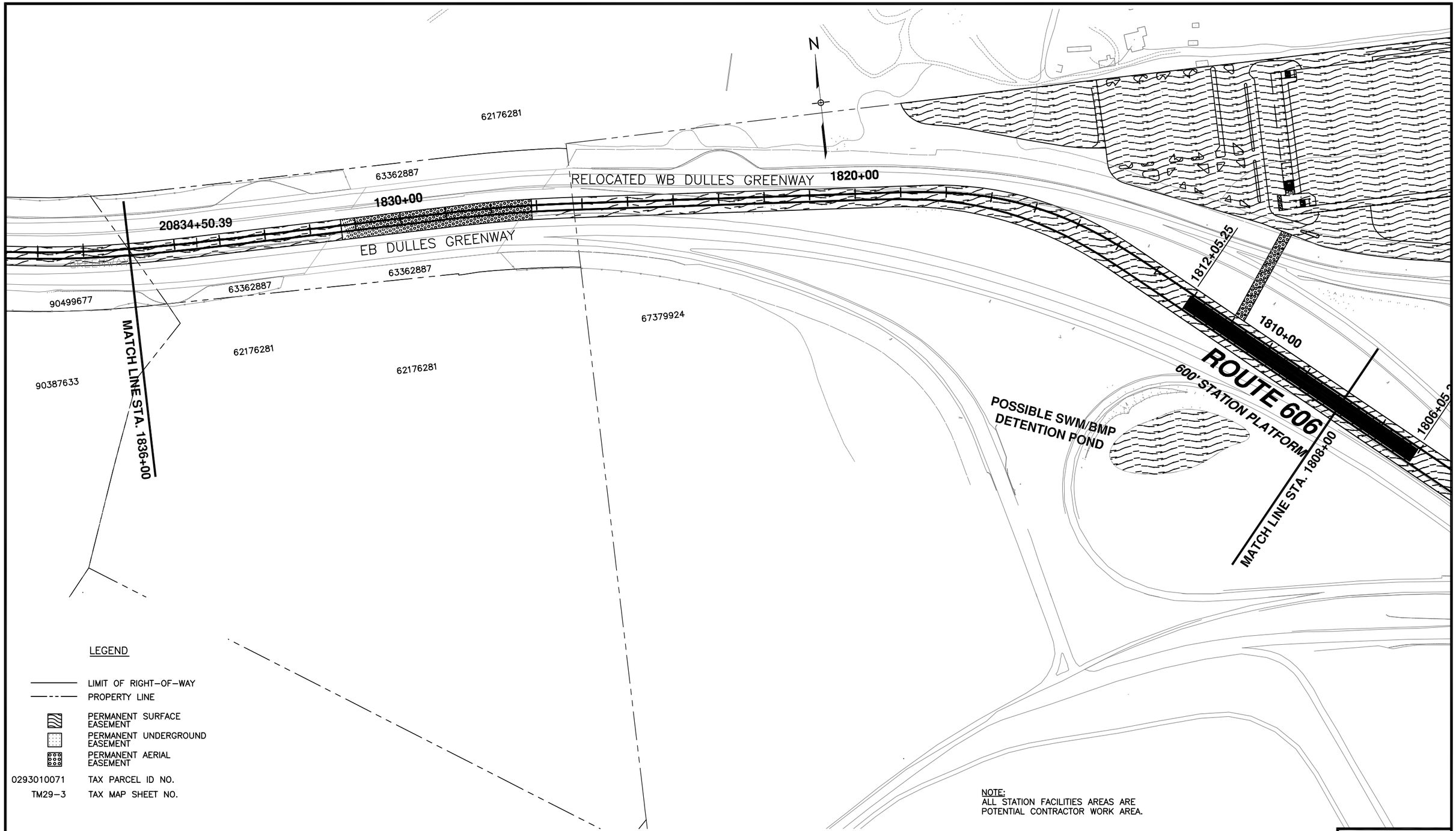
CAPITAL TRANSIT CONSULTANTS
SUBMITTED
Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PROPERTY IDENTIFICATION PLAN
DULLES GREENWAY
L1 ALIGNMENT
STATION 1836+00 TO 1864+00

SCALE: 1"= 00' 50 0 50 100
DRAWING NO.: GPN–R–004
009

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LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29-3 TAX MAP SHEET NO.

NOTE:
ALL STATION FACILITIES AREAS ARE POTENTIAL CONTRACTOR WORK AREA.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS	10-12-01 DATE	
DRAWN: D. MADSEN	10-15-01 DATE	
CHECKED: R. BERMUDEZ	9-23-03 DATE	
APPROVED: P. ELMAN	9-2003 DATE	

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PROPERTY IDENTIFICATION PLAN
DULLES GREENWAY
L1 ALIGNMENT – ROUTE 606 STATION
STATION 1808+00 TO 1836+00

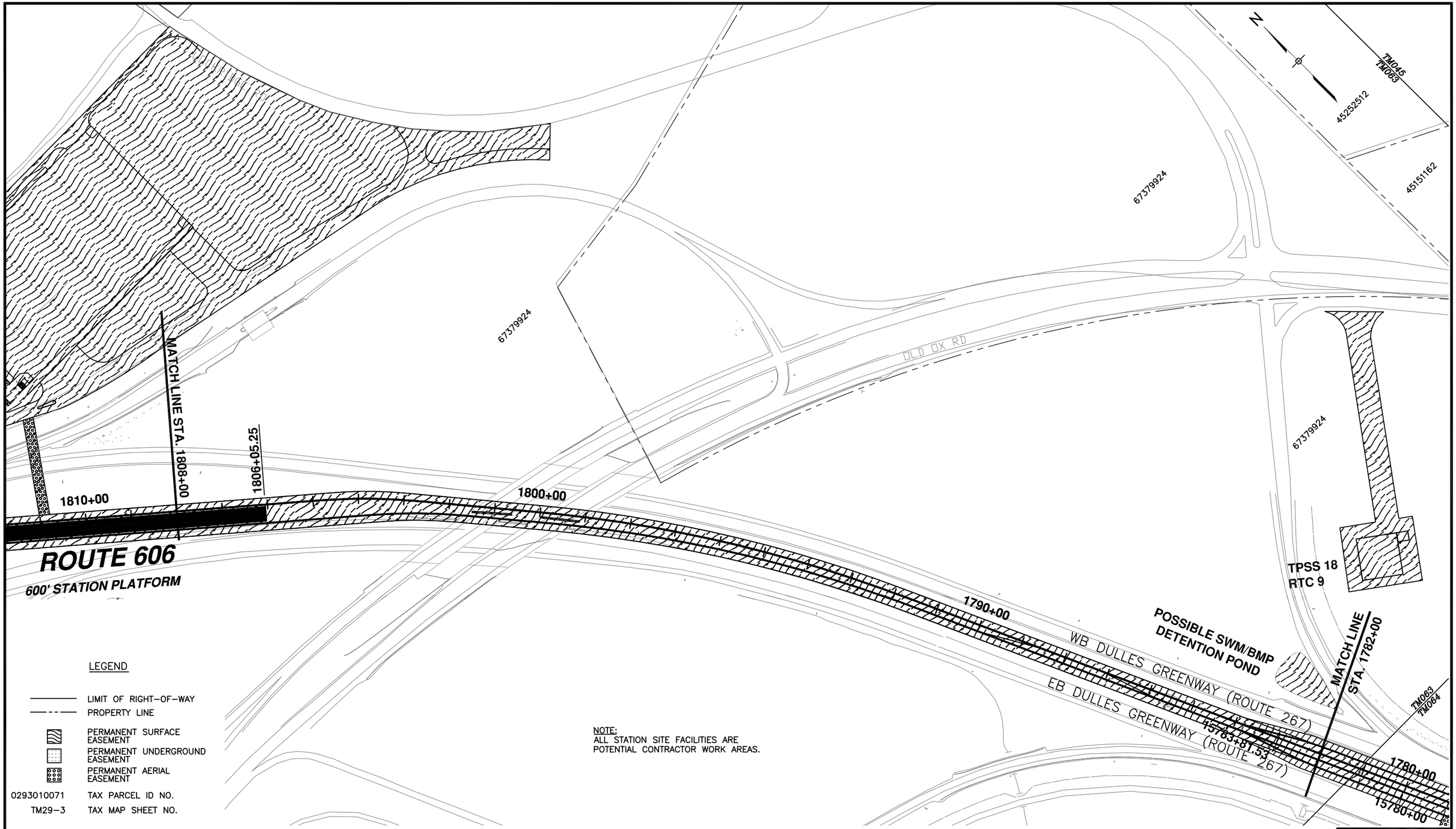
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LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29-3 TAX MAP SHEET NO.

NOTE:
ALL STATION SITE FACILITIES ARE POTENTIAL CONTRACTOR WORK AREAS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS 10-12-01 DATE
DRAWN: D. MADSEN 10-15-01 DATE
CHECKED: R. BERMUDEZ 9-23-03 DATE
APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

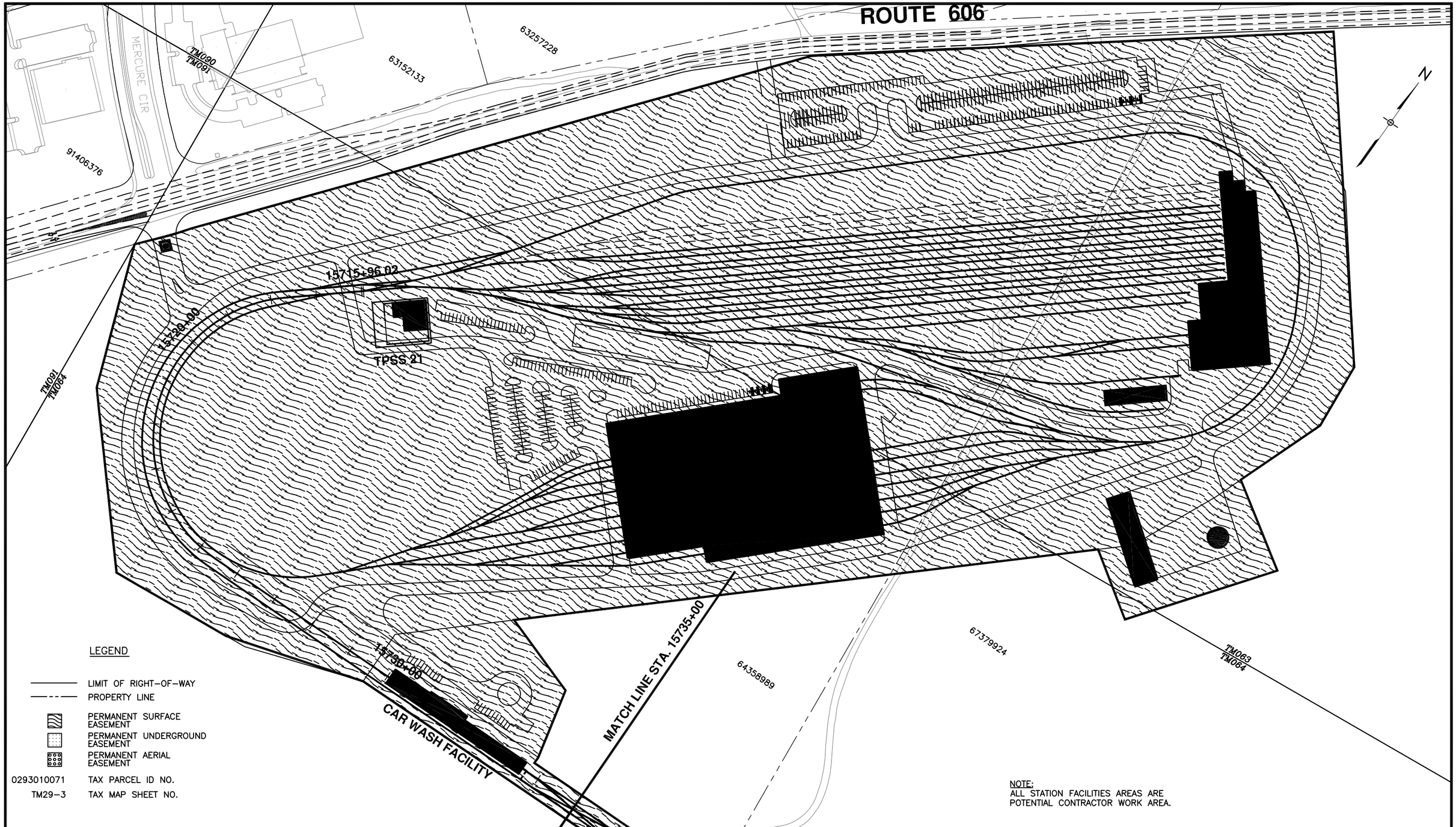
DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS
SUBMITTED Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PROPERTY IDENTIFICATION PLAN
DULLES GREENWAY
L1 ALIGNMENT
STATION 1782+00 TO 1808+00

SCALE: 1"=100' 50 0 50 100
DRAWING NO.: GPN-R-010
011



HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. KASHIF	02-10-02 DATE		
DRAWN: D. MADSEN	02-20-02 DATE		
CHECKED: R. BERMUDEZ	9-23-03 DATE		
APPROVED: P. ELMAN	01-2004 DATE		

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

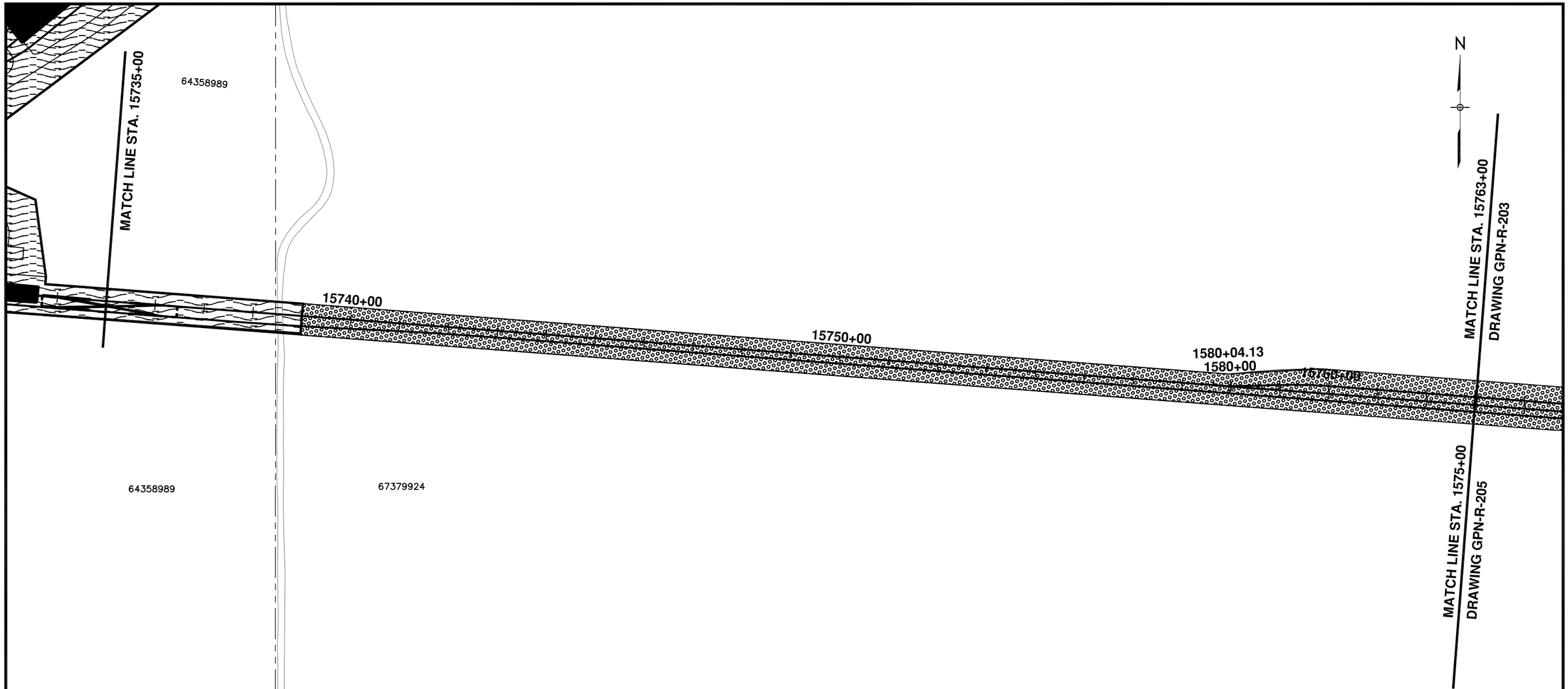
PROPERTY IDENTIFICATION PLAN
DULLES GREENWAY
L1 ALIGNMENT – YARD 15 CONNECTION
STATION 15716+00 TO 15735+00

SCALE: 1"=100' 50 0 50 100

DRAWING NO.: GPN-R-200

012

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LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29-3 TAX MAP SHEET NO.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. KASHIF 02-10-02 DATE
DRAWN: D. MADSEN 02-20-02 DATE
CHECKED: R. BERMUDEZ 9-23-03 DATE
APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

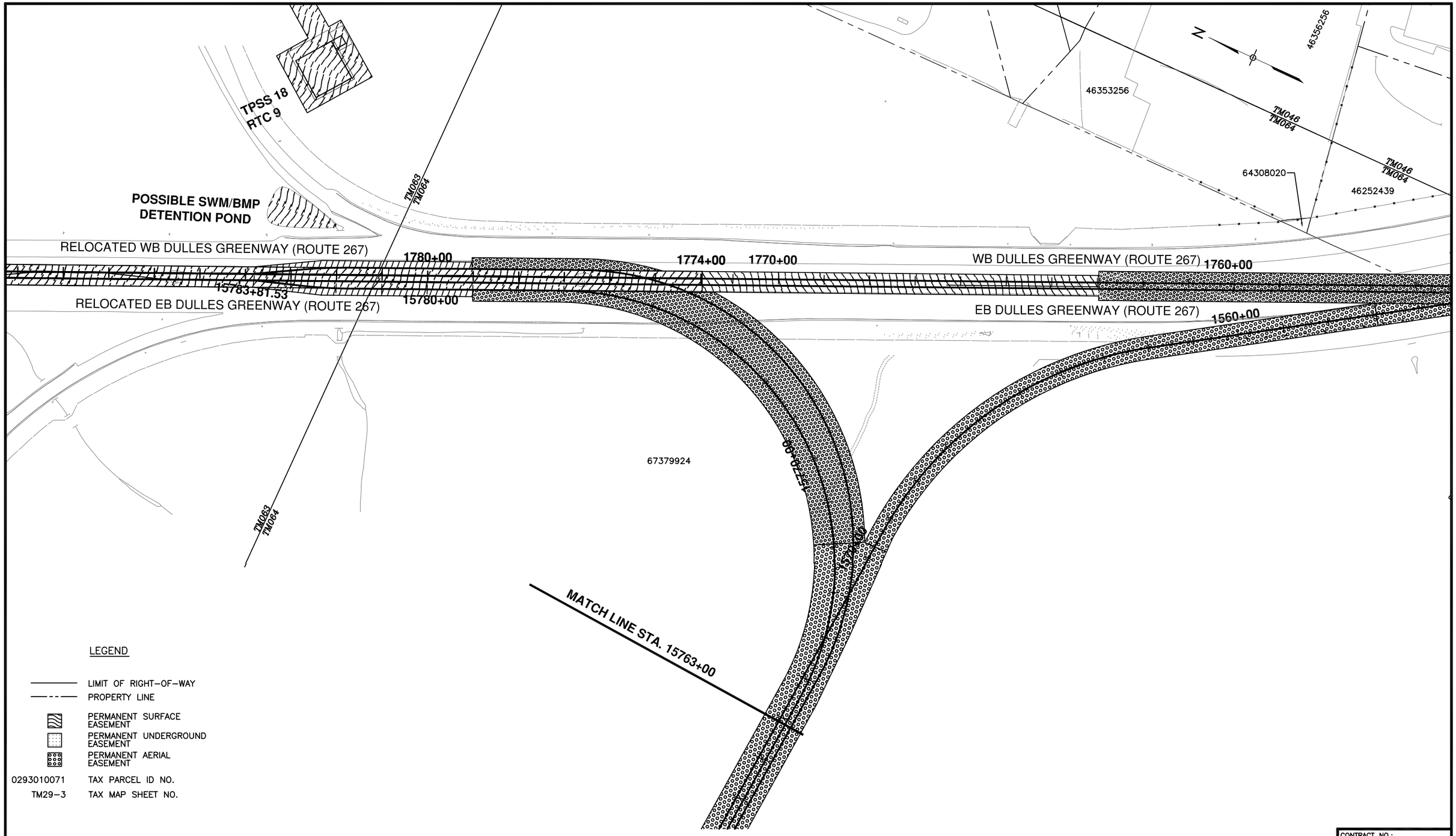
CAPITAL TRANSIT CONSULTANTS
SUBMITTED
Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PROPERTY IDENTIFICATION PLAN
DULLES GREENWAY
L1 ALIGNMENT – YARD 15 CONNECTION
STATION 15735+00 TO 15763+00

SCALE: 1"=100' (50 0 50 100)
DRAWING NO.: GPN-R-202
013

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LEGEND

———	LIMIT OF RIGHT–OF–WAY
—– – —–	PROPERTY LINE
▨	PERMANENT SURFACE EASEMENT
⬚	PERMANENT UNDERGROUND EASEMENT
▩	PERMANENT AERIAL EASEMENT
0293010071	TAX PARCEL ID NO.
TM29–3	TAX MAP SHEET NO.

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. KASHIF	02–10–02 DATE		
DRAWN: D. MADSEN	02–20–02 DATE		
CHECKED: R. BERMUDEZ	9–23–03 DATE		
APPROVED: P. ELMAN	01–2004 DATE		

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PROPERTY IDENTIFICATION PLAN
DULLES GREENWAY
L1 ALIGNMENT – YARD 15 CONNECTION
STA. 15763+00 TO 15783+81.53

SCALE: 1"=100' (50 0 50 100)

DRAWING NO.: GPN–R–203

014

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LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT

0293010071 TAX PARCEL ID NO.

TM29-3 TAX MAP SHEET NO.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. KASHIF	02-10-02 DATE	
DRAWN: D. MADSEN	02-20-02 DATE	
CHECKED: R. BERMUDEZ	9-23-03 DATE	
APPROVED: P. ELMAN	01-2004 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

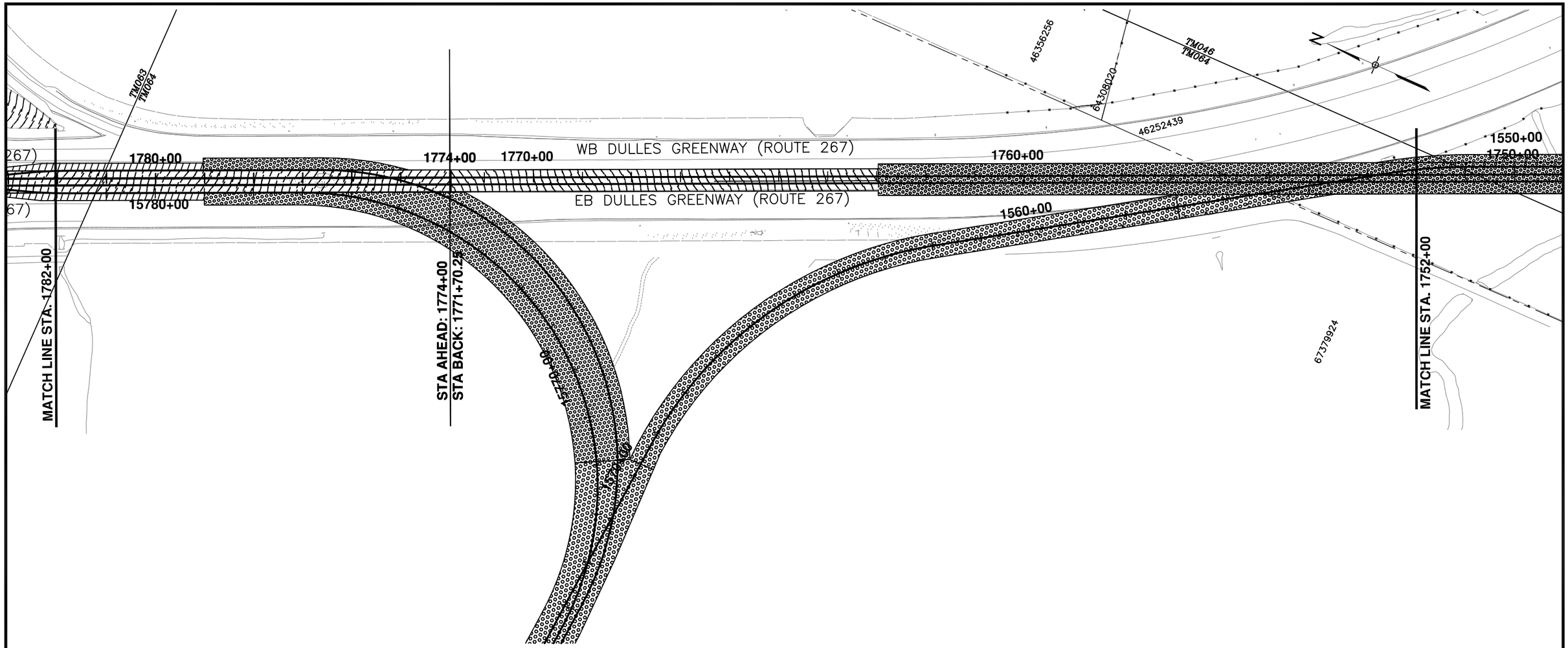
PROPERTY IDENTIFICATION PLAN
DULLES GREENWAY
L1 ALIGNMENT – YARD 15 CONNECTION
STATION 1543+92.92 TO 1575+00

SCALE: 1"=100' 50 0 50 100

DRAWING NO.: GPN-R-205

015

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Property_ID\RW-SHEETS-LY15.dwg, GPN-R-205, 07/30/04 09:25:06 AM, Kolenam



LEGEND

———	LIMIT OF RIGHT–OF–WAY
—— - - ——	PROPERTY LINE
▨	PERMANENT SURFACE EASEMENT
⬚	PERMANENT UNDERGROUND EASEMENT
▩	PERMANENT AERIAL EASEMENT
0293010071	TAX PARCEL ID NO.
TM29–3	TAX MAP SHEET NO.

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS	10–12–01	DATE
DRAWN: D. MADSEN	10–15–01	DATE
CHECKED: R. BERMUDEZ	9–23–03	DATE
APPROVED: P. ELMAN	01–2004	DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

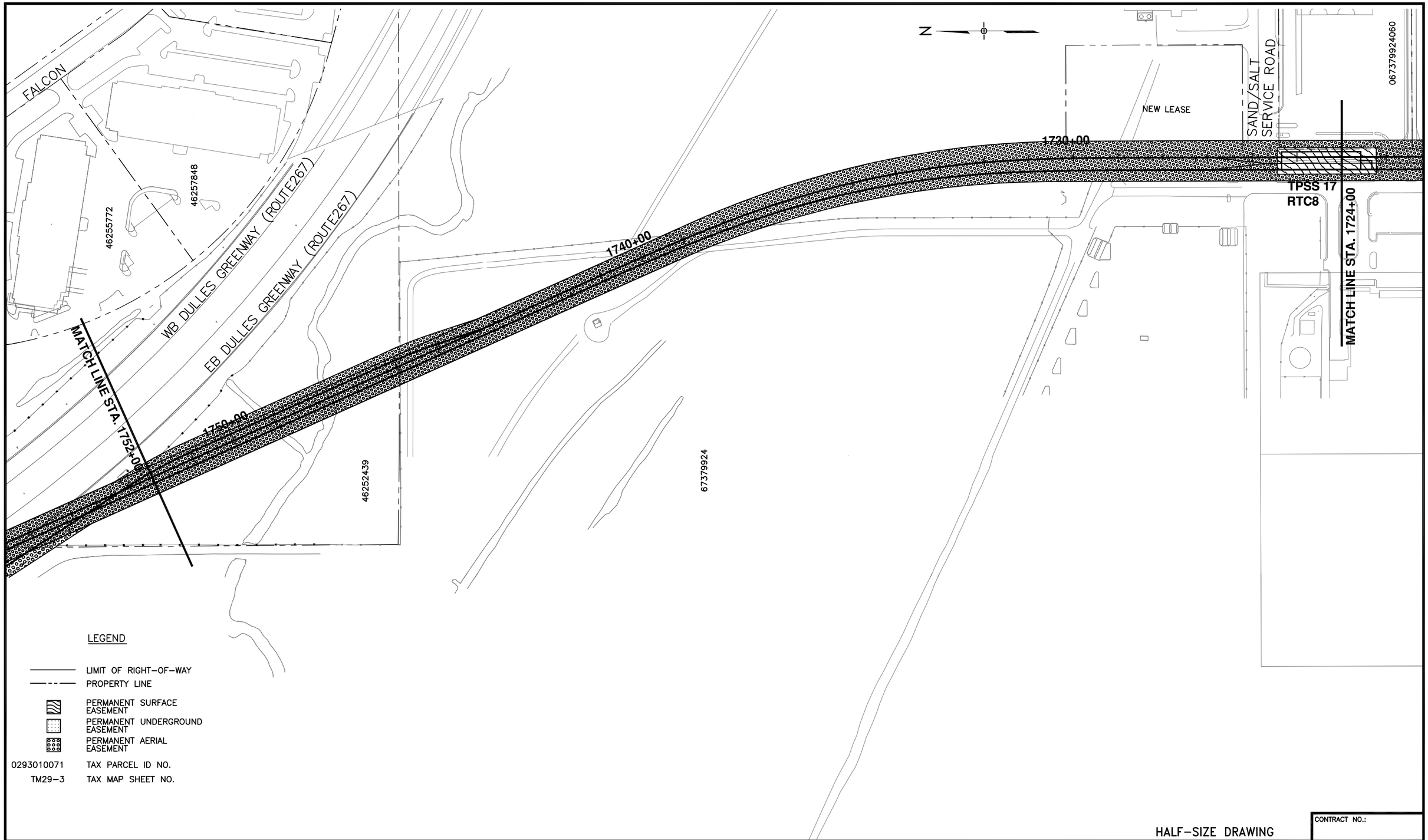
PROPERTY IDENTIFICATION PLAN
DULLES GREENWAY
L1 ALIGNMENT
STATION 1752+00 TO 1782+00

SCALE: 1"=100' (50 0 50 100)

DRAWING NO.: GPN–R–011

016

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LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT

0293010071 TAX PARCEL ID NO.

TM29-3 TAX MAP SHEET NO.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS 10-12-01 DATE
DRAWN: D. MADSEN 10-15-01 DATE
CHECKED: R.BERMUDEZ 9-23-02 DATE
APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

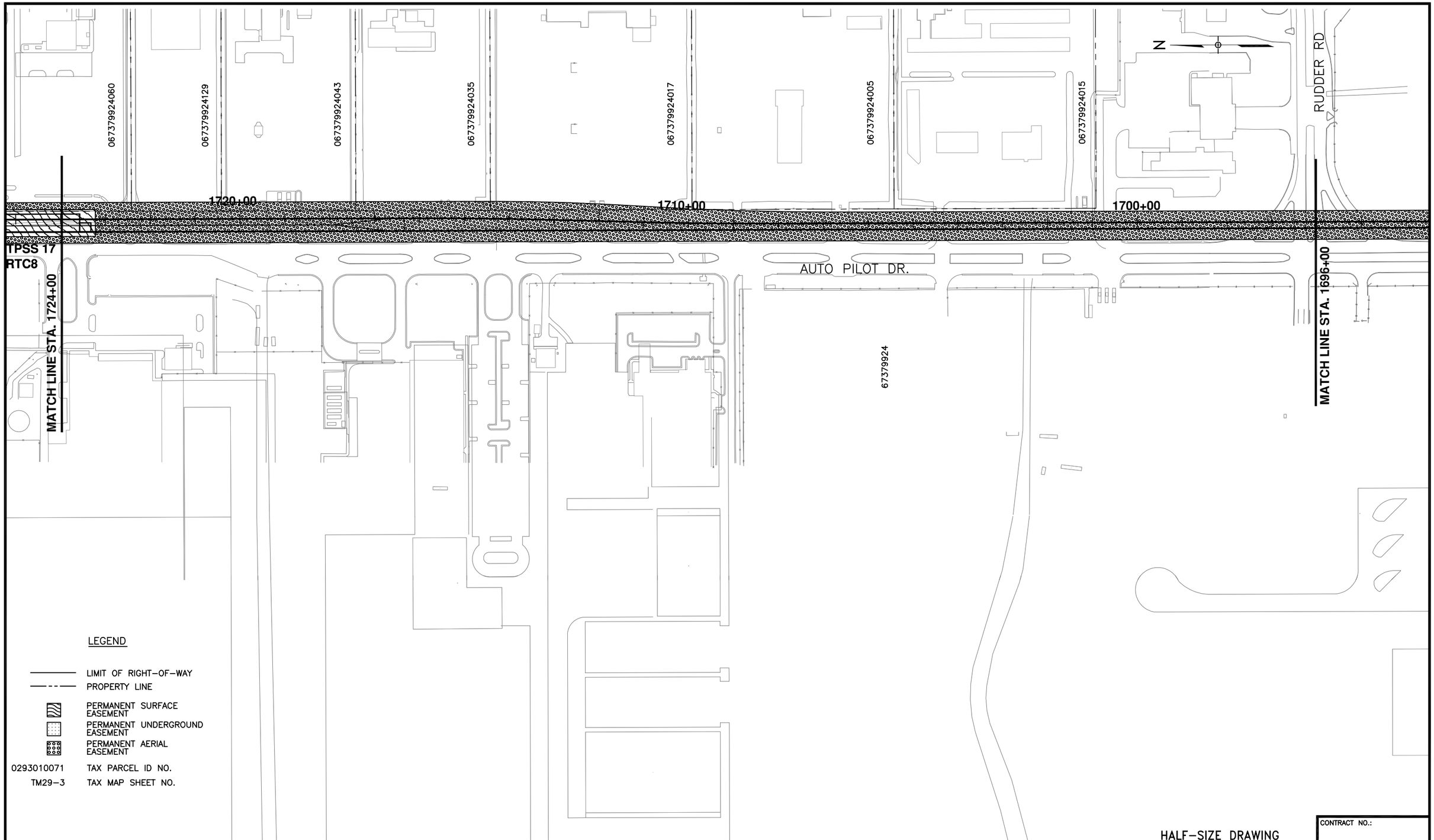
PROPERTY IDENTIFICATION PLAN
DULLES AIRPORT
A1 ALIGNMENT
STATION 1724+00 TO 1752+00

SCALE: 1"=100' 50 0 50 100

DRAWING NO.: GPN-R-012

017

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LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29-3 TAX MAP SHEET NO.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS 10-08-01 DATE
DRAWN: D. MADSEN 10-10-01 DATE
CHECKED: R. BERMUDEZ 9-23-02 DATE
APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

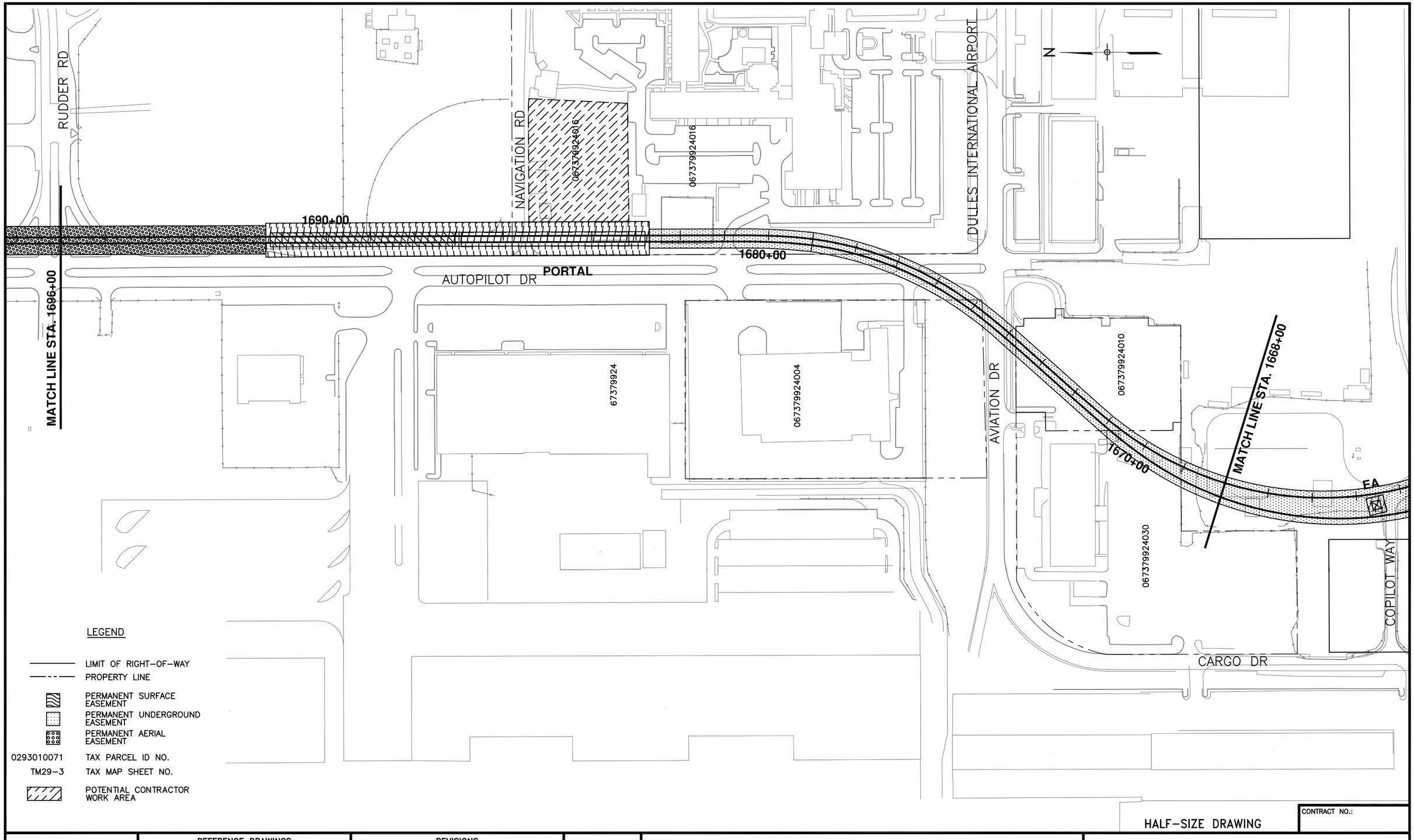
CAPITAL TRANSIT CONSULTANTS
SUBMITTED
Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PROPERTY IDENTIFICATION PLAN
DULLES AIRPORT
A1 ALIGNMENT
STATION 1696+00 TO 1724+00

SCALE: 1"=100' 50 0 50 100
DRAWING NO.: GPN-R-013
018

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS 10-08-01 DATE
DRAWN: D. MADSEN 10-10-01 DATE
CHECKED: R. BERMUDEZ 9-23-02 DATE
APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS
SUBMITTED
Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

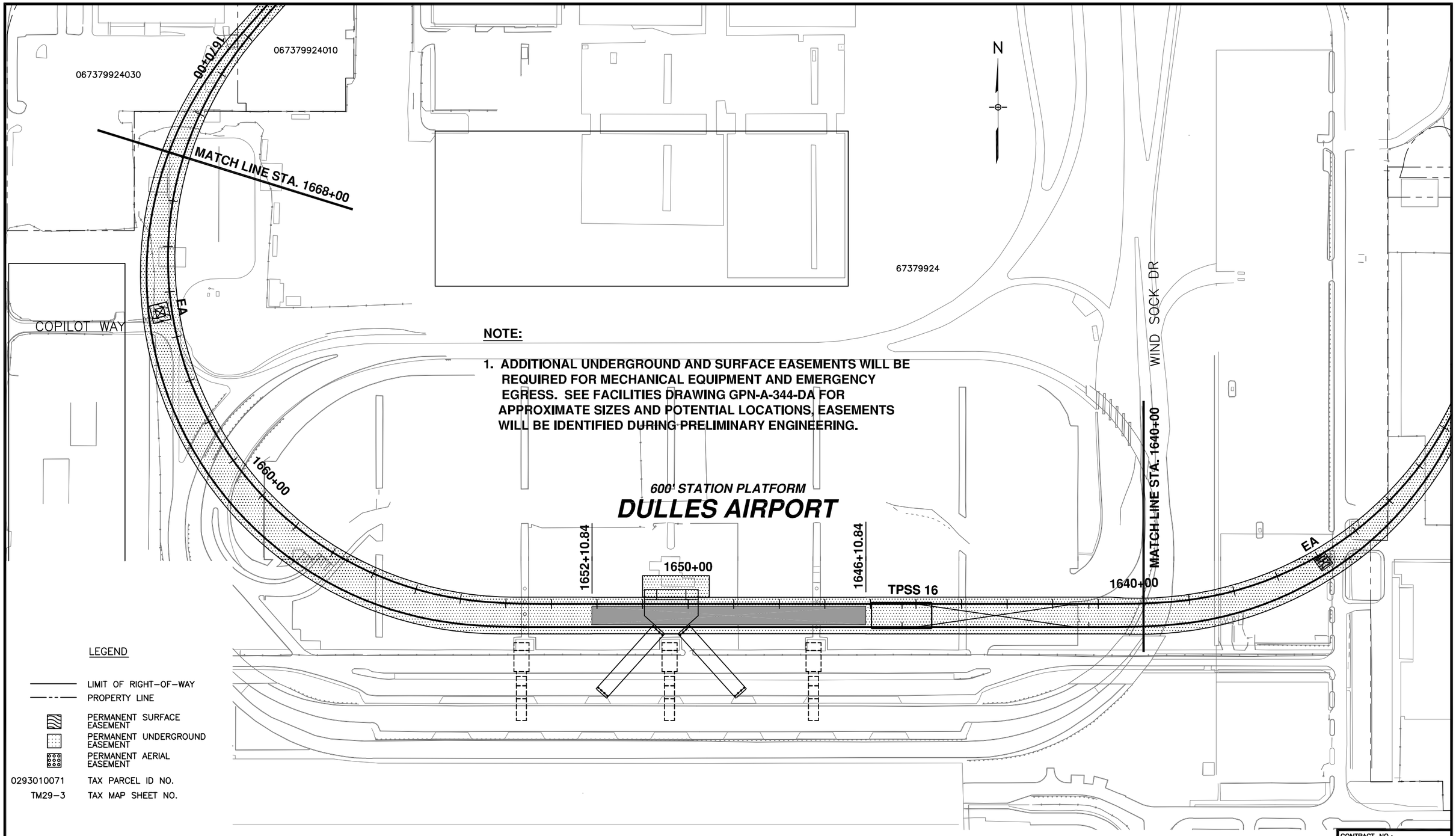
PROPERTY IDENTIFICATION PLAN
DULLES AIRPORT
A1 ALIGNMENT
STATION 1668+00 TO 1696+00

SCALE: 1"=100' 50 0 50 100

DRAWING NO.: GPN-R-014

019

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NOTE:

1. ADDITIONAL UNDERGROUND AND SURFACE EASEMENTS WILL BE REQUIRED FOR MECHANICAL EQUIPMENT AND EMERGENCY EGRESS. SEE FACILITIES DRAWING GPN-A-344-DA FOR APPROXIMATE SIZES AND POTENTIAL LOCATIONS. EASEMENTS WILL BE IDENTIFIED DURING PRELIMINARY ENGINEERING.

600' STATION PLATFORM

DULLES AIRPORT

LEGEND

- LIMIT OF RIGHT–OF–WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29–3 TAX MAP SHEET NO.

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS 10–08–01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: D. MADSEN 10–10–01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. BERMUDEZ 9–23–03 DATE		
APPROVED: P. ELMAN 9–2003 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

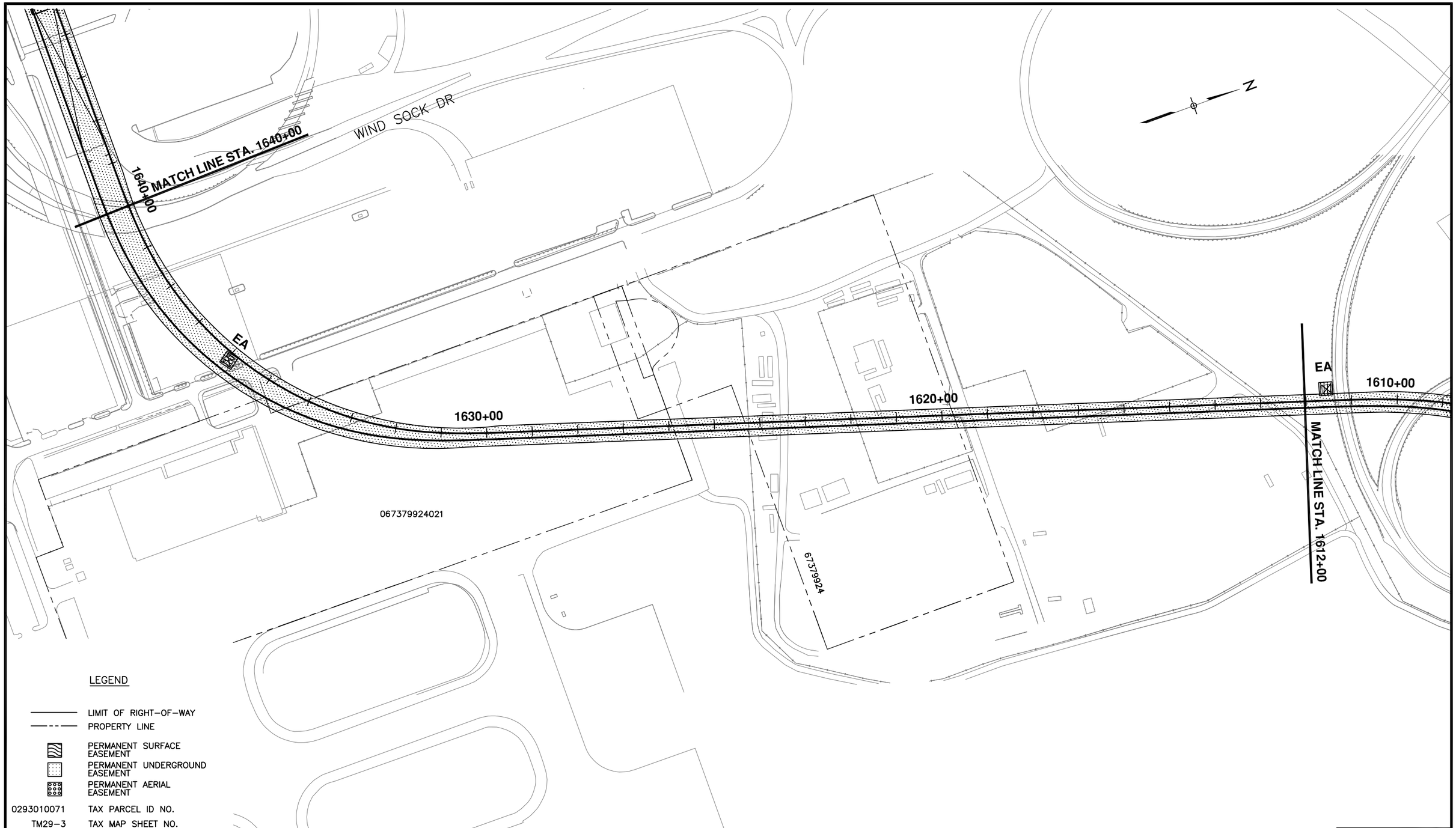
PROPERTY IDENTIFICATION PLAN
DULLES AIRPORT
A1 ALIGNMENT–DULLES AIRPORT STATION
STATION 1640+00 TO 1668+00

SCALE: 1"=100' (50 0 50 100)

DRAWING NO.: GPN–R–016

020

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LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29-3 TAX MAP SHEET NO.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS 10-08-01	REFERENCE DRAWINGS	REVISIONS
DRAWN: D. MADSEN 10-10-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. BERMUDEZ 9-23-02		
APPROVED: P. ELMAN 01-2004		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

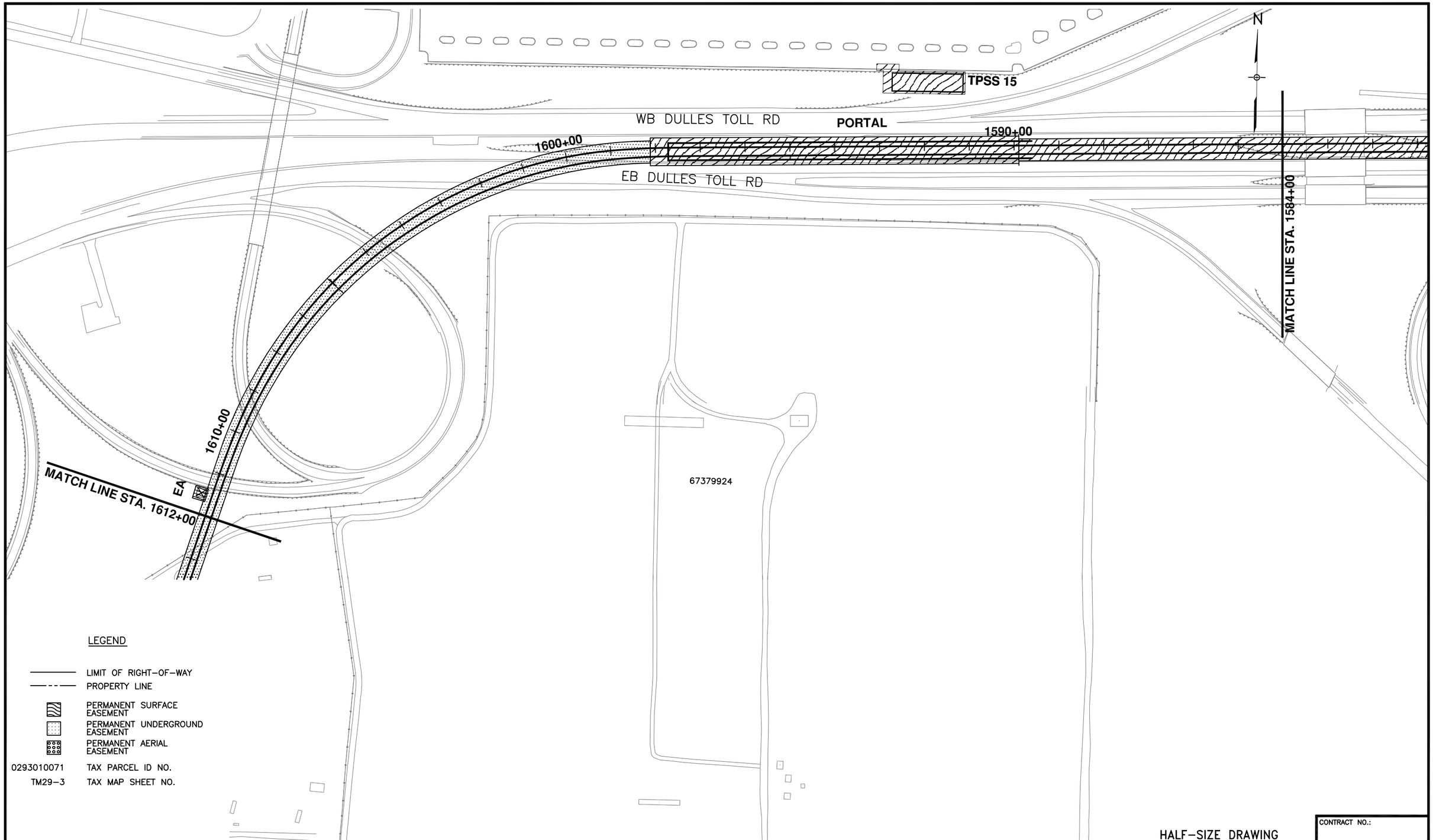
PROPERTY IDENTIFICATION PLAN
DULLES AIRPORT
A1 ALIGNMENT
STATION 1612+00 TO 1640+00

SCALE: 1"=100' (50 0 50 100)

DRAWING NO.: GPN-R-018

021

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LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29-3 TAX MAP SHEET NO.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS 10-08-01 DATE
DRAWN: D. MADSEN 10-10-01 DATE
CHECKED: R. BERMUDEZ 9-23-02 DATE
APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

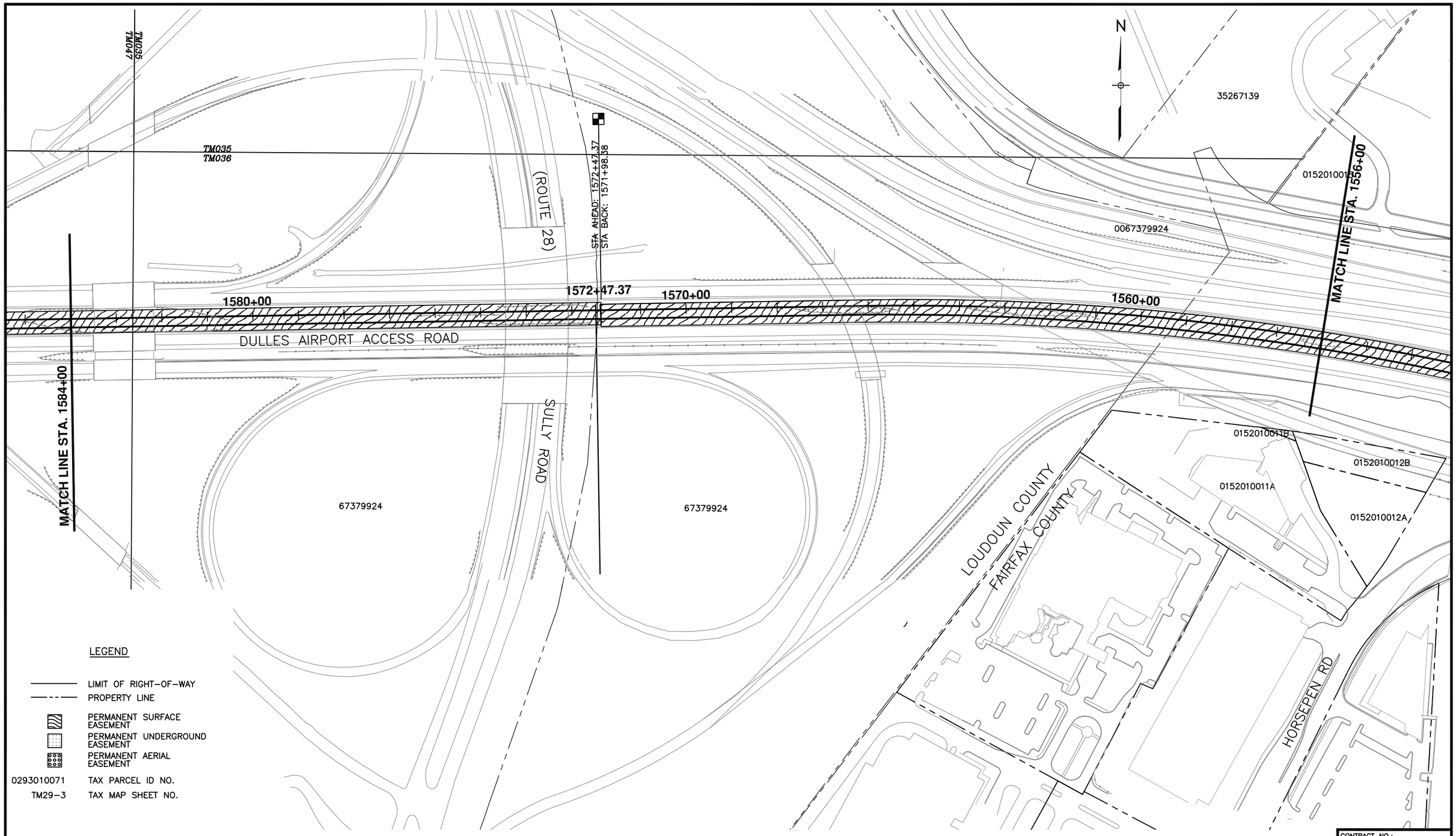
CAPITAL TRANSIT CONSULTANTS
SUBMITTED
Diana C Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PROPERTY IDENTIFICATION PLAN
DULLES AIRPORT
A1 ALIGNMENT
STATION 1584+00 TO 1612+00

SCALE: 1"=100' (50 0 50 100)
DRAWING NO.: GPN-R-020
022

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LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29-3 TAX MAP SHEET NO.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS 10-05-01	REFERENCE DRAWINGS	REVISIONS
DRAWN: D. MADSEN 10-09-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. BERMUDEZ 9-23-03		
APPROVED: P. ELMAN 01-2004		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

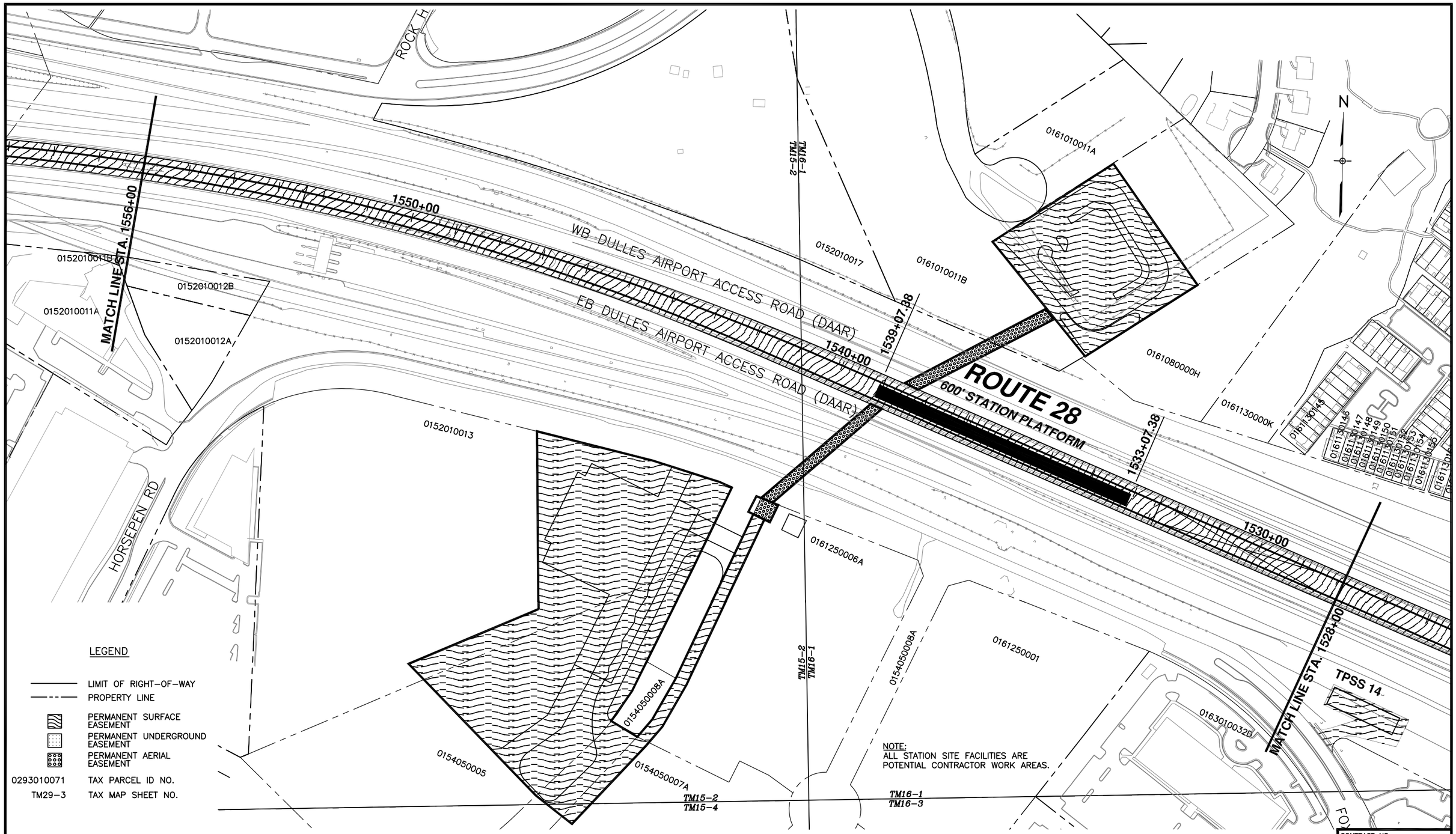
PROPERTY IDENTIFICATION PLAN
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1556+00 TO 1584+00

SCALE: 1"=100' (50 0 50 100)

DRAWING NO.: GPN-R-022

023

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HALF-SIZE DRAWING

CONTRACT NO.:

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DRAWN: D. MADSEN 10-09-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. BERMUDEZ 9-23-03		
APPROVED: P. ELMAN 01-2004		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

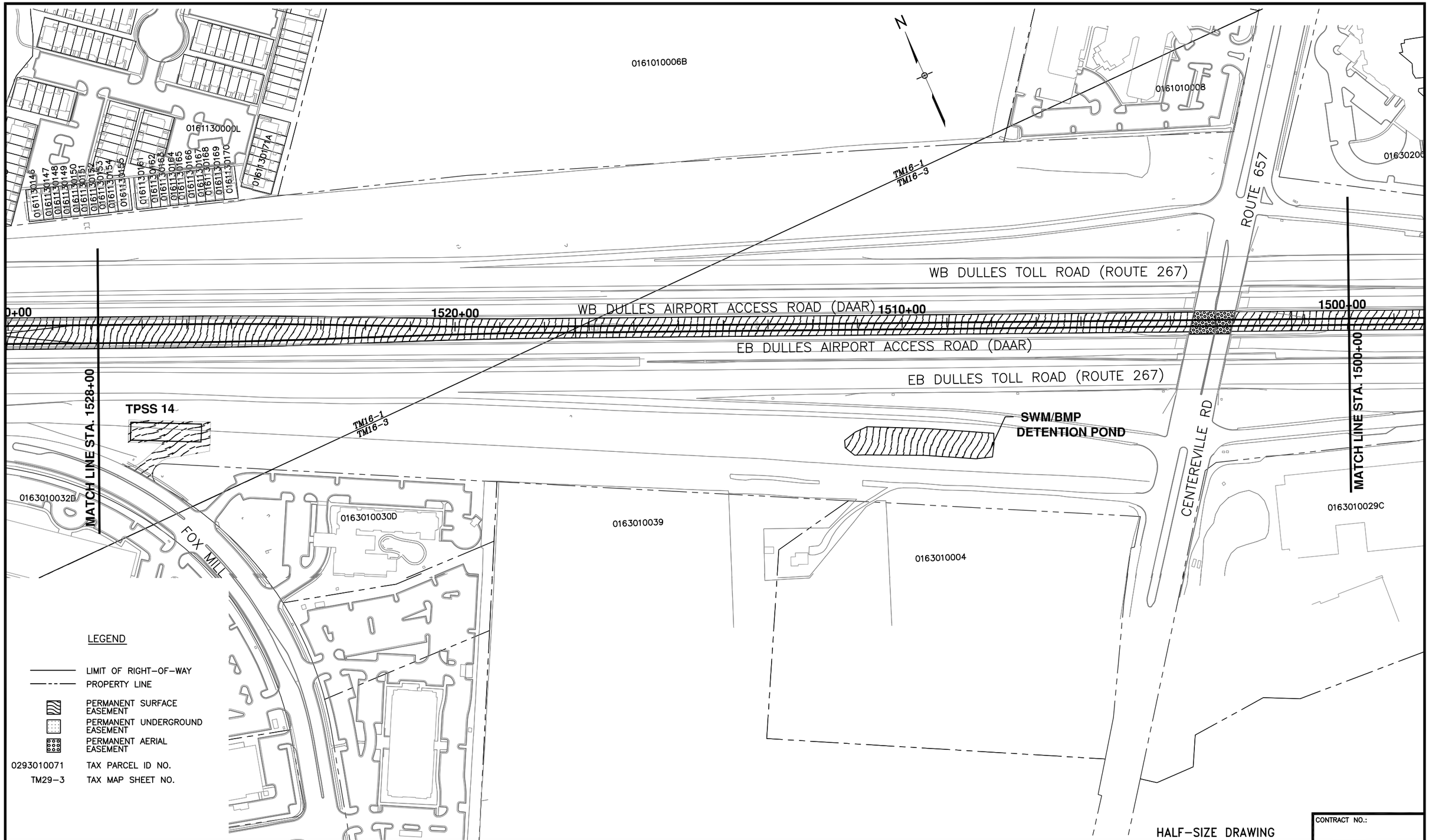
PROPERTY IDENTIFICATION PLAN
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT – ROUTE 28 STATION
STATION 1528+00 TO 1556+00

SCALE: 1"=100' (50 0 50 100)

DRAWING NO.: GPN-R-024

024

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LEGEND

- LIMIT OF RIGHT–OF–WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29–3 TAX MAP SHEET NO.

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS	10–05–01 DATE	
DRAWN: D. MADSEN	10–09–01 DATE	
CHECKED: R. BERMUDEZ	9–23–03 DATE	
APPROVED: P. ELMAN	01–2004 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

Diana C Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

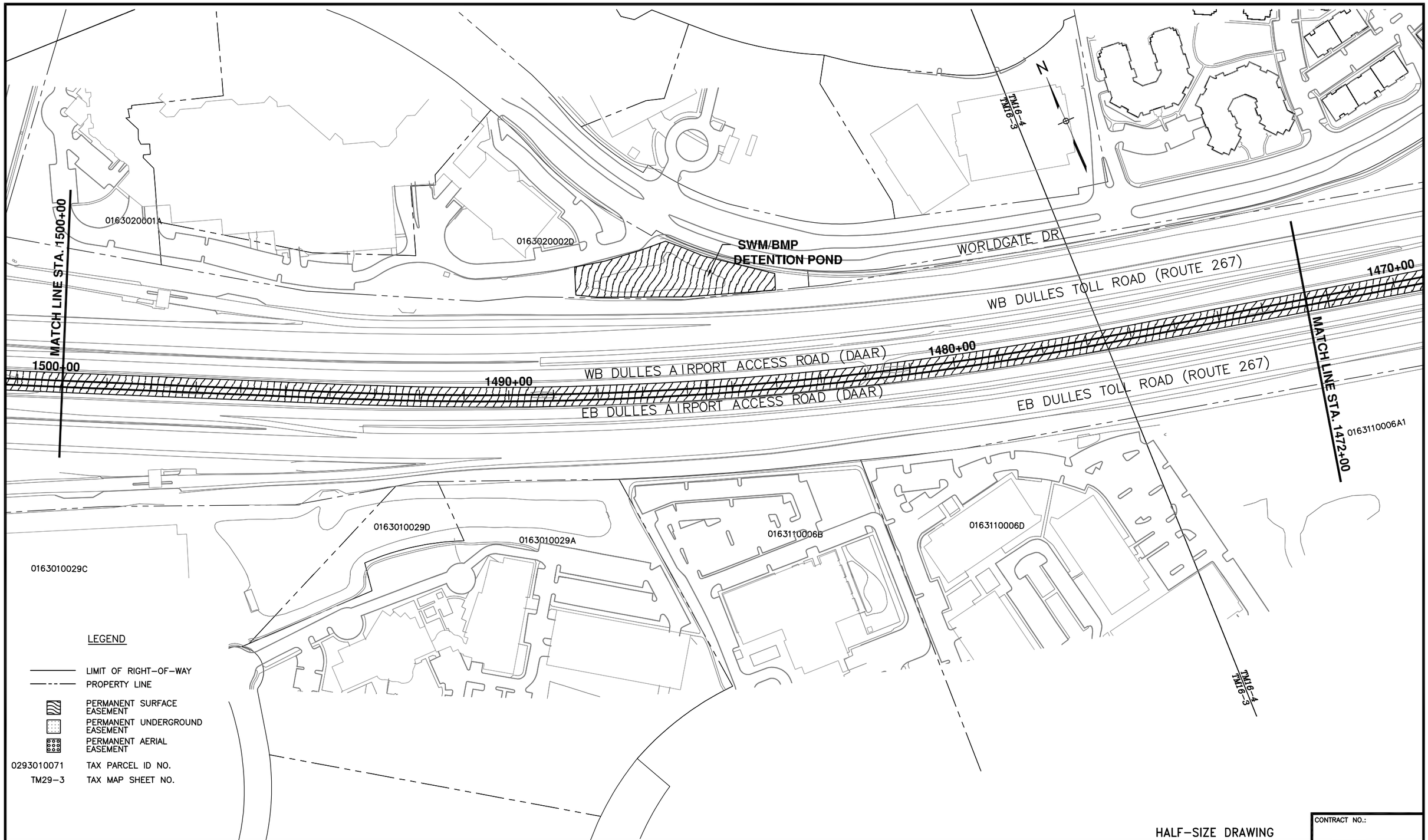
PROPERTY IDENTIFICATION PLAN
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1500+00 TO 1528+00

SCALE: 1"=100' (50 0 50 100)

DRAWING NO.: GPN–R–025

025

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS 10-05-01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: D. MADSEN 10-09-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. BERMUDEZ 9-23-03 DATE		
APPROVED: P. ELMAN 01-2004 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

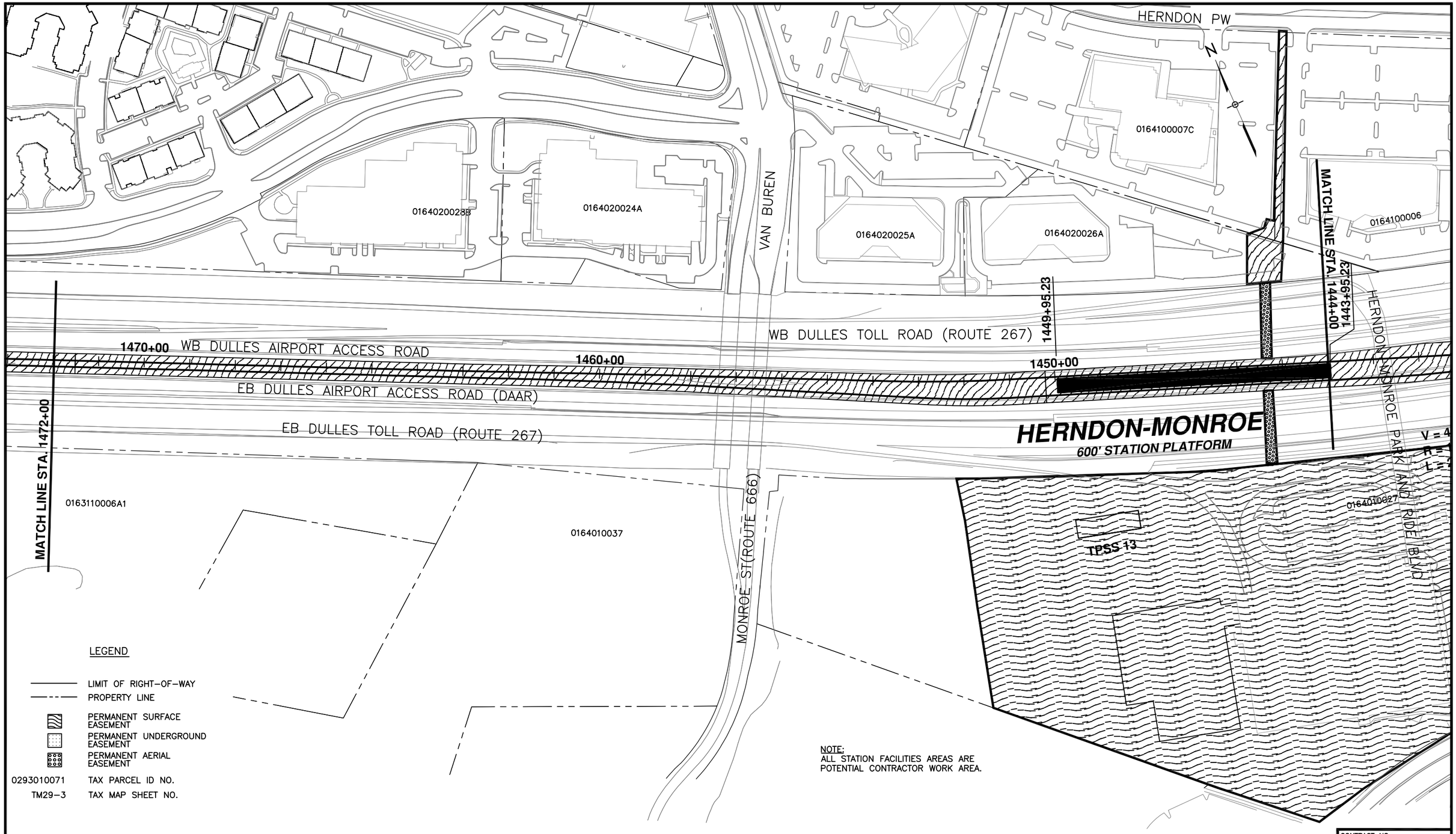
PROPERTY IDENTIFICATION PLAN
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1472+00 TO 1500+00

SCALE: 1"=100' 50 0 50 100

DRAWING NO.: GPN-R-026

026

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS 10-05-01 DATE	REFERENCE DRAWINGS	REVISIONS	DULLES CORRIDOR RAPID TRANSIT PROJECT
DRAWN: D. MADSEN 10-09-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION	CAPITAL TRANSIT CONSULTANTS
CHECKED: R. BERMUDEZ 9-23-03 DATE			SUBMITTED Diana C Mendes PROJECT MANAGER
APPROVED: P. ELMAN 01-2004 DATE			FINAL GENERAL PLANS JULY 2004

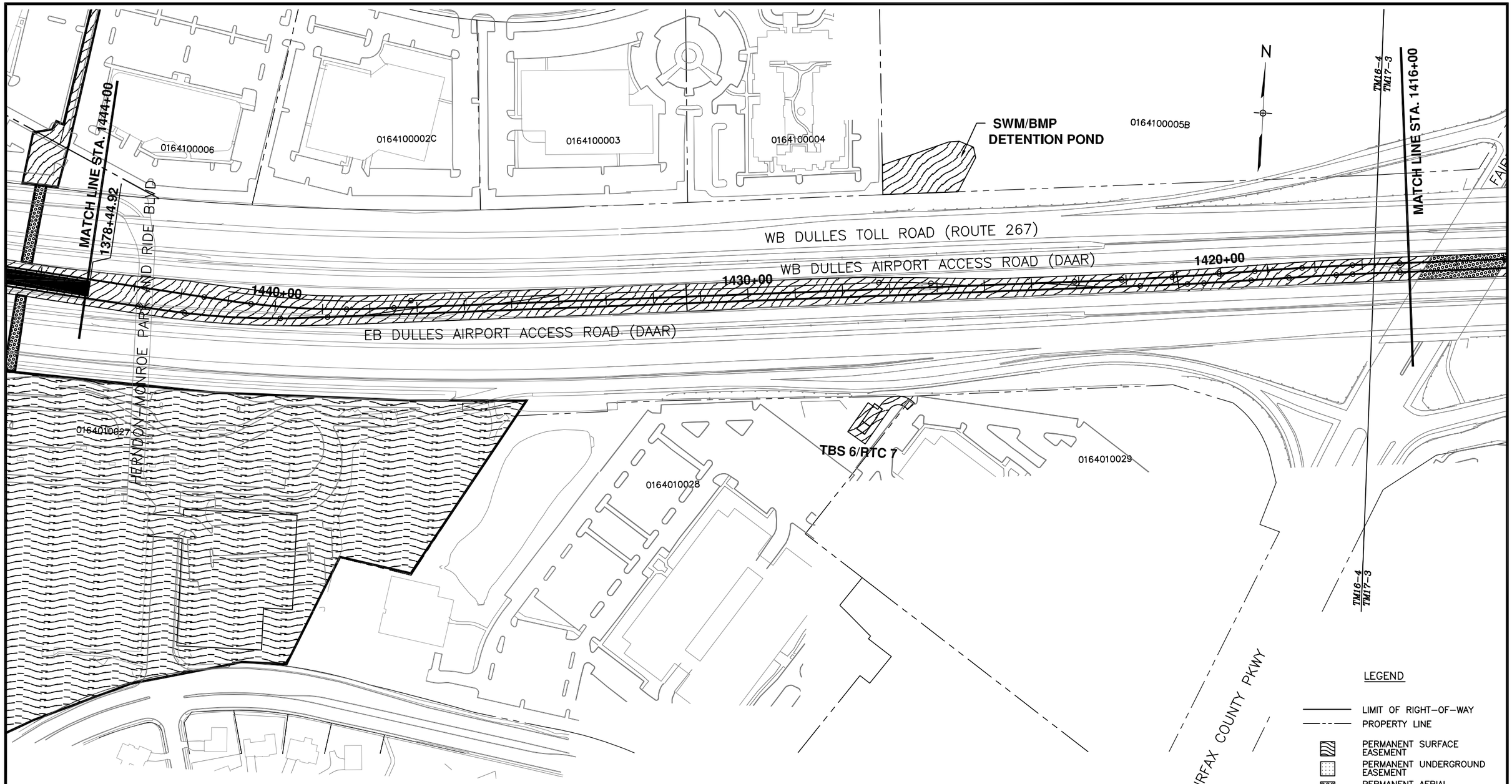
PROPERTY IDENTIFICATION PLAN
DULLES AIRPORT
D1 ALIGNMENT – HERNDON-MONROE STATION
STATION 1444+00 TO 1472+00

SCALE: 1"=100' (50 0 50 100)

DRAWING NO.: GPN-R-027

027

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HALF-SIZE DRAWING

CONTRACT NO.:

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DRAWN: D. MADSEN 10-09-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. BERMUDEZ 9-23-03 DATE		
APPROVED: P. ELMAN 01-2004 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

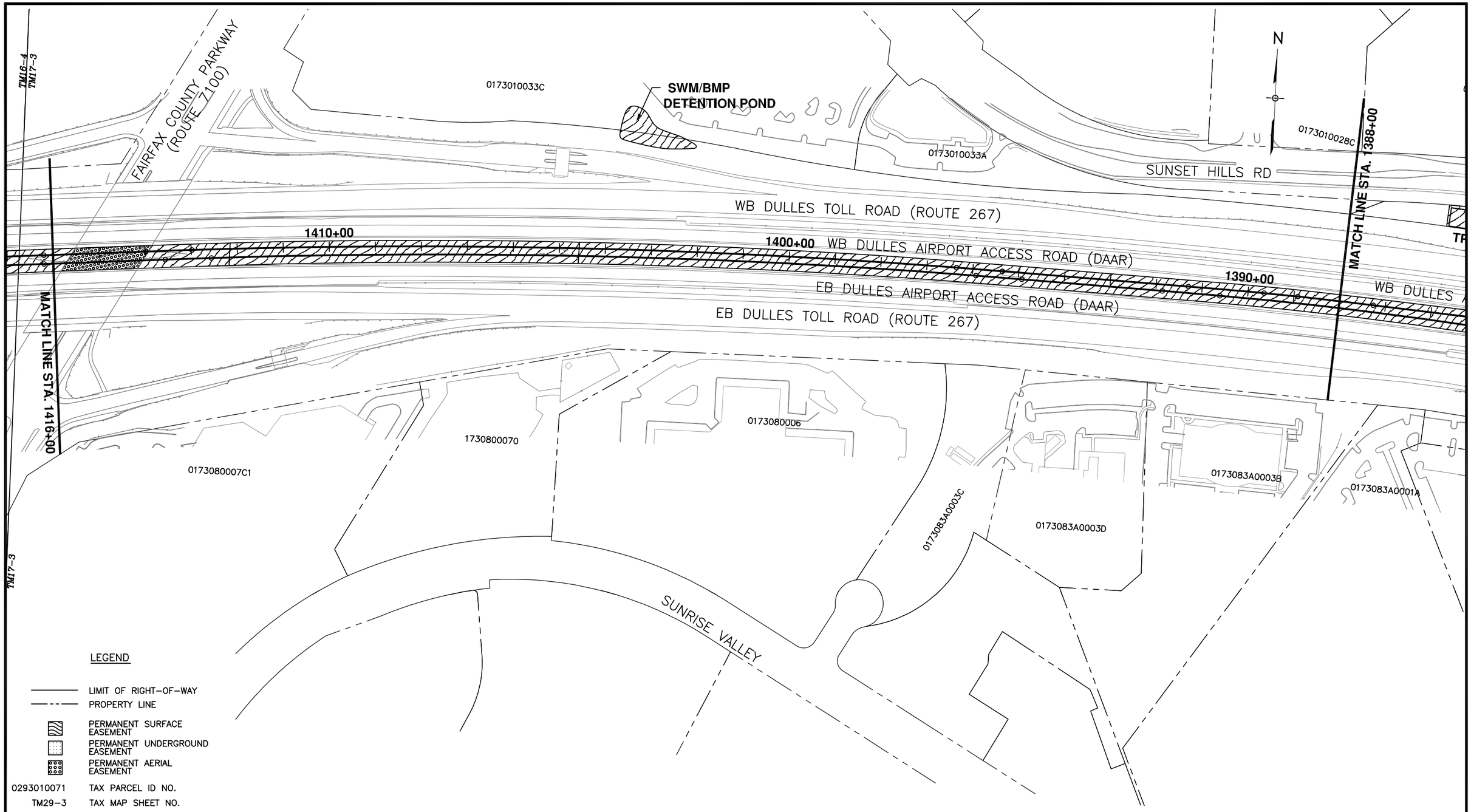
PROPERTY IDENTIFICATION PLAN
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1416+00 TO 1444+00

SCALE: 1"=100' 50 0 50 100

DRAWING NO.: GPN-R-028

028

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LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29-3 TAX MAP SHEET NO.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS 10-05-01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: D. MADSEN 10-09-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. BERMUDEZ 9-23-03 DATE		
APPROVED: P. ELMAN 01-2004 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

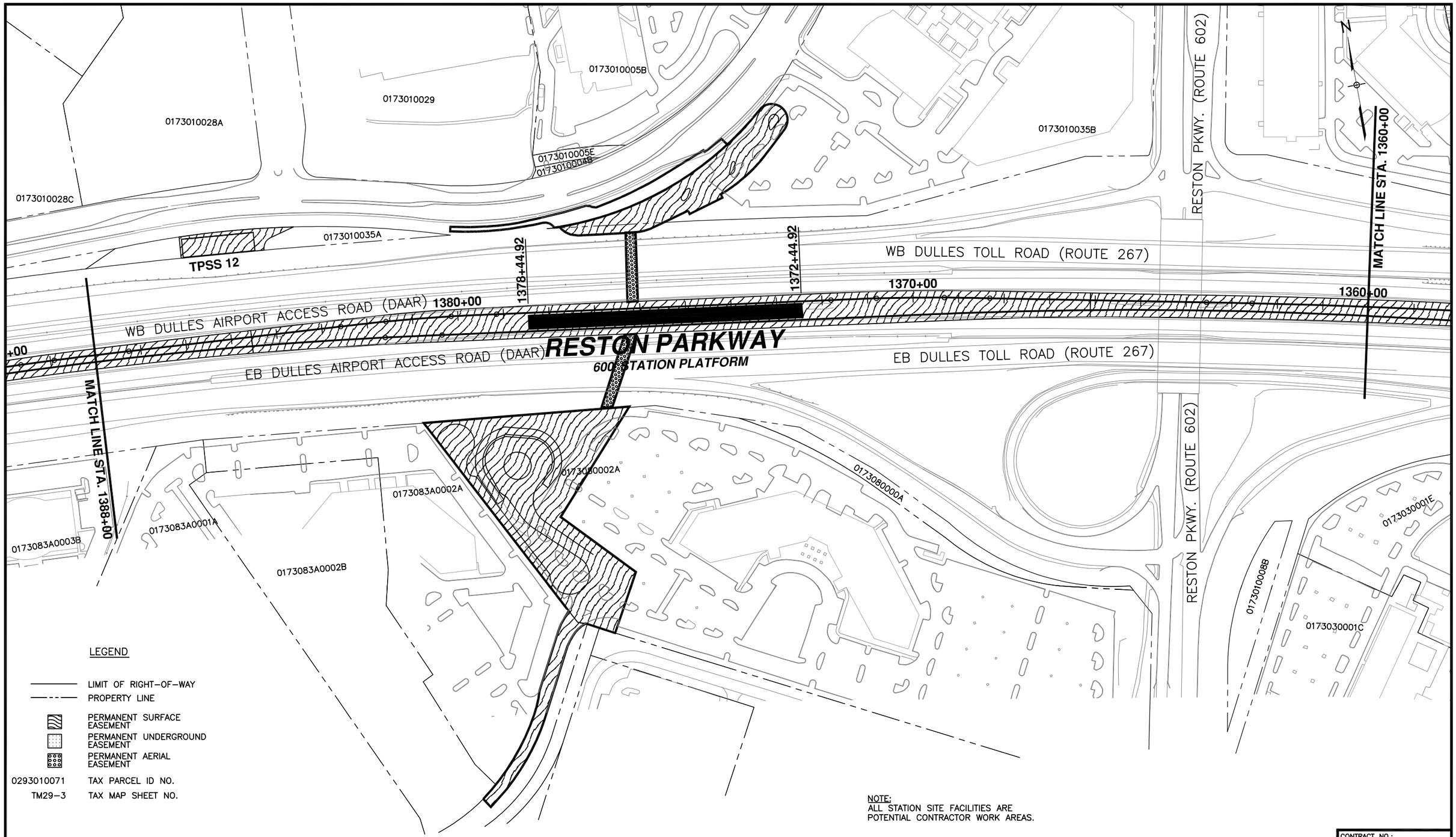
PROPERTY IDENTIFICATION PLAN
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1388+00 TO 1416+00

SCALE: 1"=100' 50 0 50 100

DRAWING NO.: GPN-R-029

029

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LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29-3 TAX MAP SHEET NO.

NOTE:
ALL STATION SITE FACILITIES ARE POTENTIAL CONTRACTOR WORK AREAS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS	10-05-01	DATE
DRAWN: D. MADSEN	10-09-01	DATE
CHECKED: R. BERMUDEZ	9-23-03	DATE
APPROVED: P. ELMAN	01-2004	DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

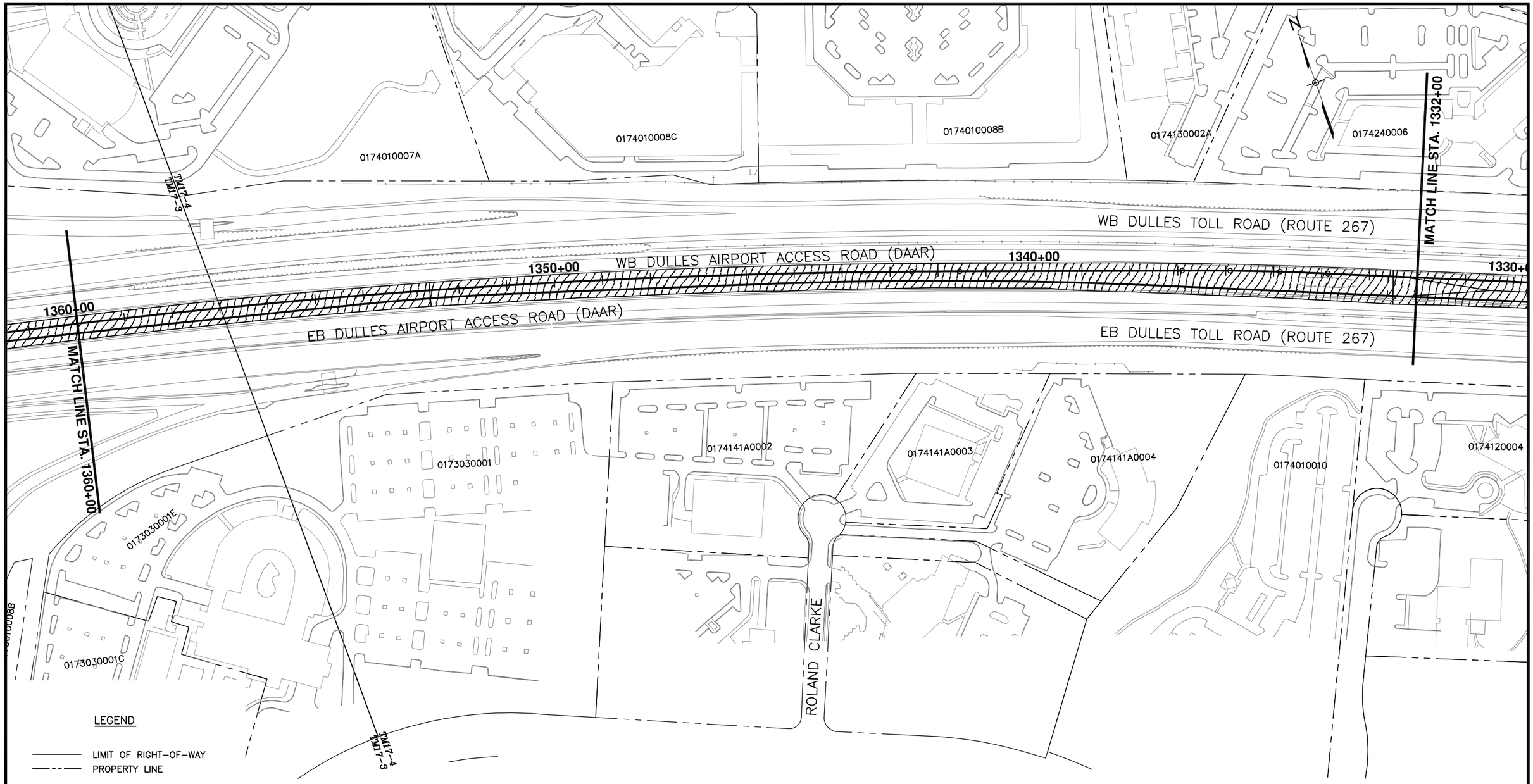
PROPERTY IDENTIFICATION PLAN
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT – RESTON PARKWAY STATION
STATION 1360+00 TO 1388+00

SCALE: 1"=100' (50 0 50 100)

DRAWING NO.: GPN-R-030

030

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS 10-05-01 DATE	REFERENCE DRAWINGS	REVISIONS	
DRAWN: D. MADSEN 10-09-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION	DULLES CORRIDOR RAPID TRANSIT PROJECT
CHECKED: R. BERMUDEZ 9-23-03 DATE			CAPITAL TRANSIT CONSULTANTS
APPROVED: P. ELMAN 01-2004 DATE			SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

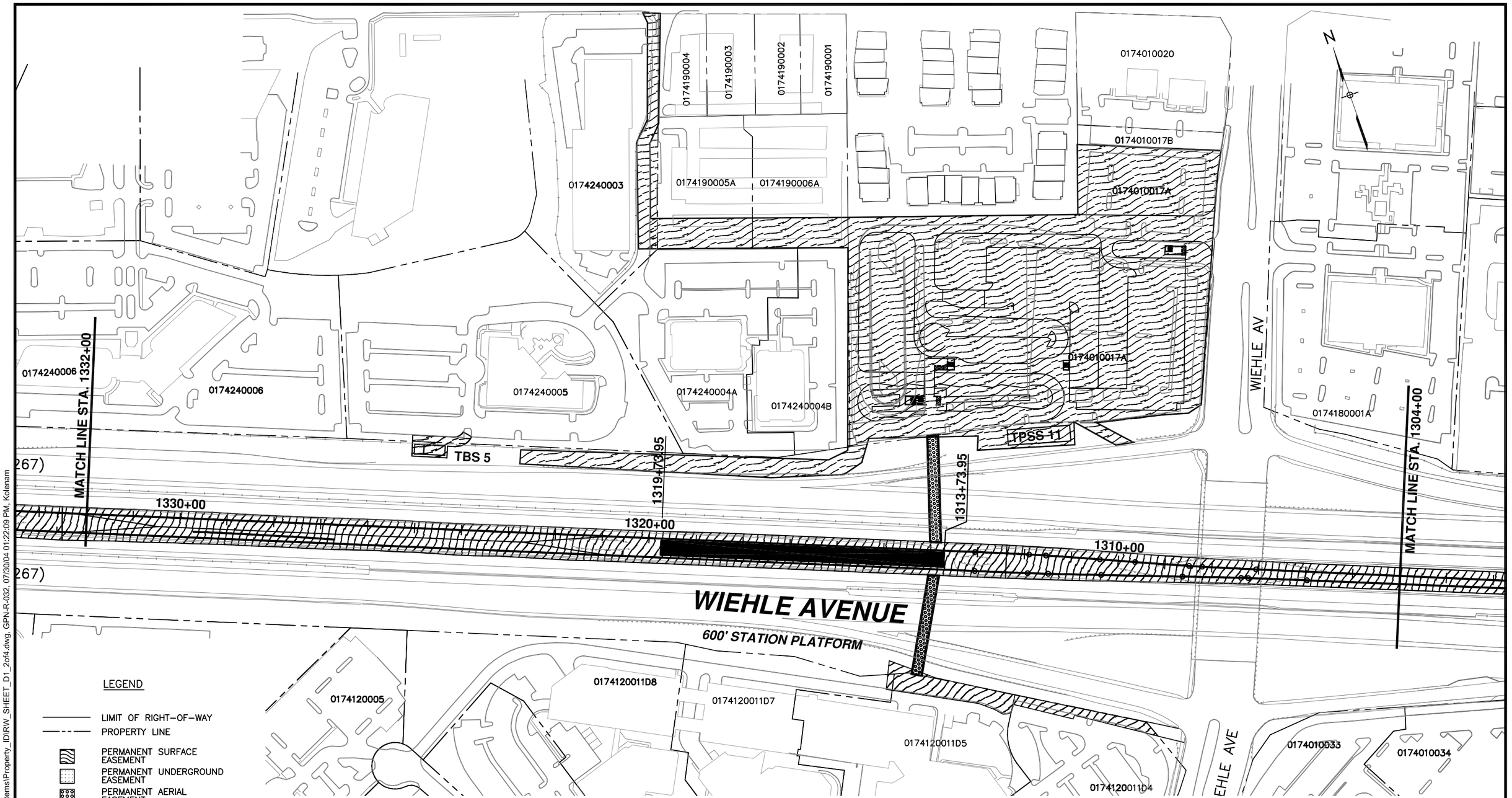
PROPERTY IDENTIFICATION PLAN
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1332+00 TO 1360+00

SCALE: 1"=100' (50 0 50 100)

DRAWING NO.: GPN-R-031

031

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LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29-3 TAX MAP SHEET NO.

NOTE:
ALL STATION SITE FACILITIES ARE POTENTIAL CONTRACTOR WORK AREAS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS 10-05-01
DRAWN: D. MADSEN 10-09-01
CHECKED: R. BERMUDEZ 9-23-03
APPROVED: P. ELMAN 01-2004

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS
SUBMITTED
Diana C Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PROPERTY IDENTIFICATION PLAN
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT – WIEHLE AVENUE STATION
STATION 1304+00 TO 1332+00

SCALE: 1"=100' (50 0 50 100)
DRAWING NO.: GPN-R-032
032

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MATCH LINE STA. 1304+00

0174180001A

0174180003

TM18-3
TM17-4

0183060006

Open Storage

0183060008

0183060009

0183060010

N

1300+00

WB DULLES AIRPORT ACCESS ROAD (DAAR)

1290+00

EB DULLES AIRPORT ACCESS ROAD (DAAR)

1280+00

MATCH LINE STA. 1276+00

0174010034

0174010034

TM18-3
TM27-1

SWM/BMP
DETENTION POND

0262010009D

TM17-4
TM26-2

27116030002

27116040001

27116050009

27116050011

TM18-3
TM17-4

LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29-3 TAX MAP SHEET NO.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS 10-05-01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: D. MADSEN 10-09-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. BERMUDEZ 9-23-03 DATE		
APPROVED: P. ELMAN 01-2004 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

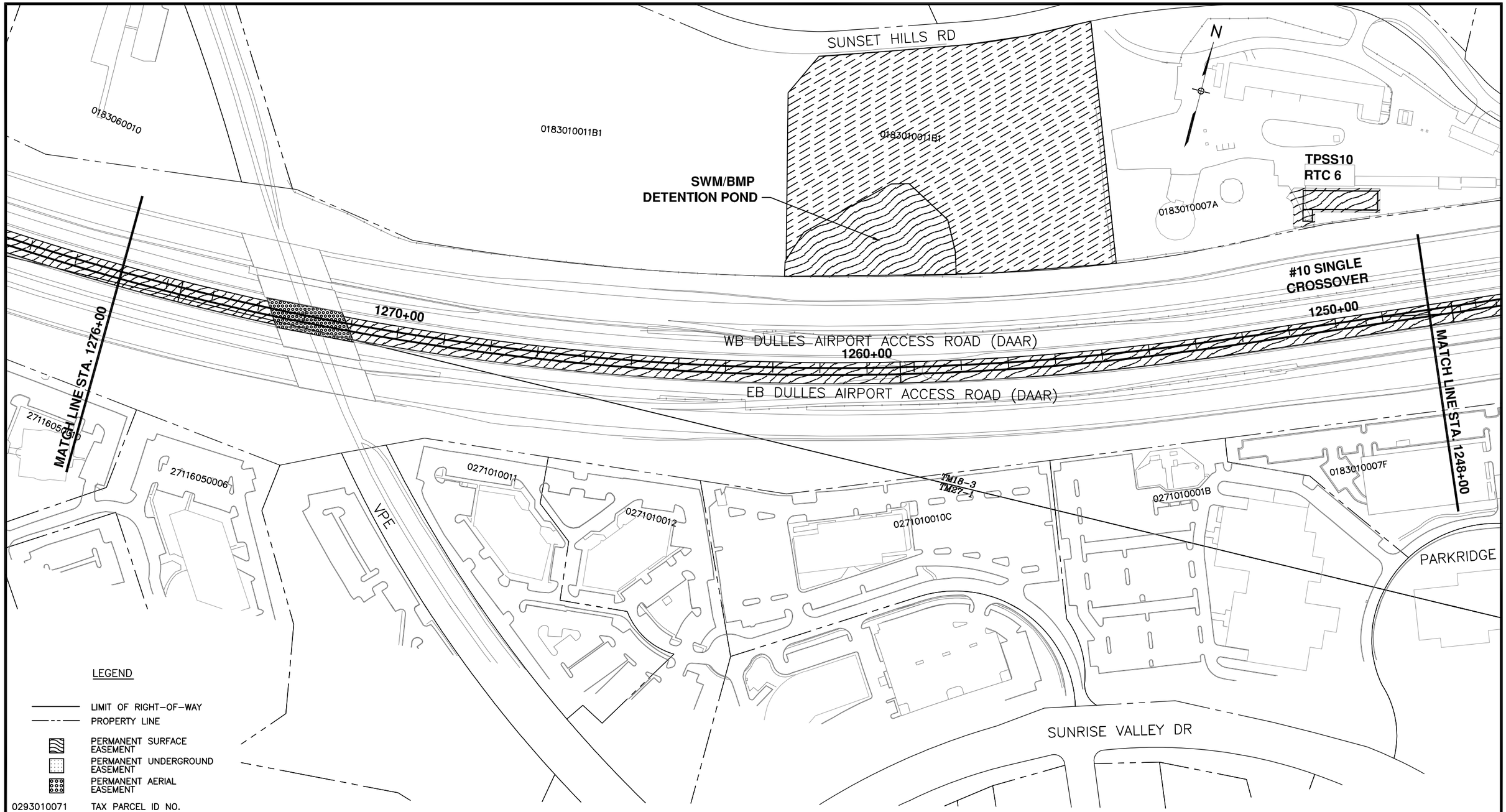
FINAL GENERAL PLANS
JULY 2004

PROPERTY IDENTIFICATION PLAN
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1276+00 TO 1304+00

SCALE: 1"=100'

DRAWING NO.: GPN-R-033

033



LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29-3 TAX MAP SHEET NO.
- POTENTIAL CONTRACTOR WORK AREA

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS 10-05-01	REFERENCE DRAWINGS	REVISIONS
DRAWN: D. MADSEN 10-09-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. BERMUDEZ 9-23-03		
APPROVED: P. ELMAN 01-2004		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PROPERTY IDENTIFICATION PLAN
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1248+00 TO 1276+00

SCALE: 1"=100'

DRAWING NO.: GPN-R-034

034

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0183010006

0183030004A

SWM/BMP DETENTION POND

0784010023

0184010026

N

STA AHEAD: 1223+54.28
STA BACK: 1223+52.03

MATCH LINE STA. 1220+00

0183010007A

WB DULLES TOLL ROAD (ROUTE 267)

1230+00

WB DULLES AIRPORT ACCESS ROAD (DAAR)

1240+00

EB DULLES AIRPORT ACCESS ROAD (DAAR)

1220+00

EB DULLES TOLL ROAD (ROUTE 267)

#10 SINGLE CROSSOVER

MATCH LINE STA. 1248+00

0183010007F

0183010007G

0183010007B

SWM/BMP DETENTION POND

HUNTER MILL RD

0184130142

0184130000R

0184130069

0184130000F

0184130000F

0184130068

PARKRIDGE BLVD

TM18-4

TM18-3

LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT

0293010071 TAX PARCEL ID NO.

TM29-3 TAX MAP SHEET NO.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS 10-05-01 DATE

DRAWN: D. MADSEN 10-09-01 DATE

CHECKED: R. BERMUDEZ 9-23-03 DATE

APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

Diana C Mendes

PROJECT MANAGER

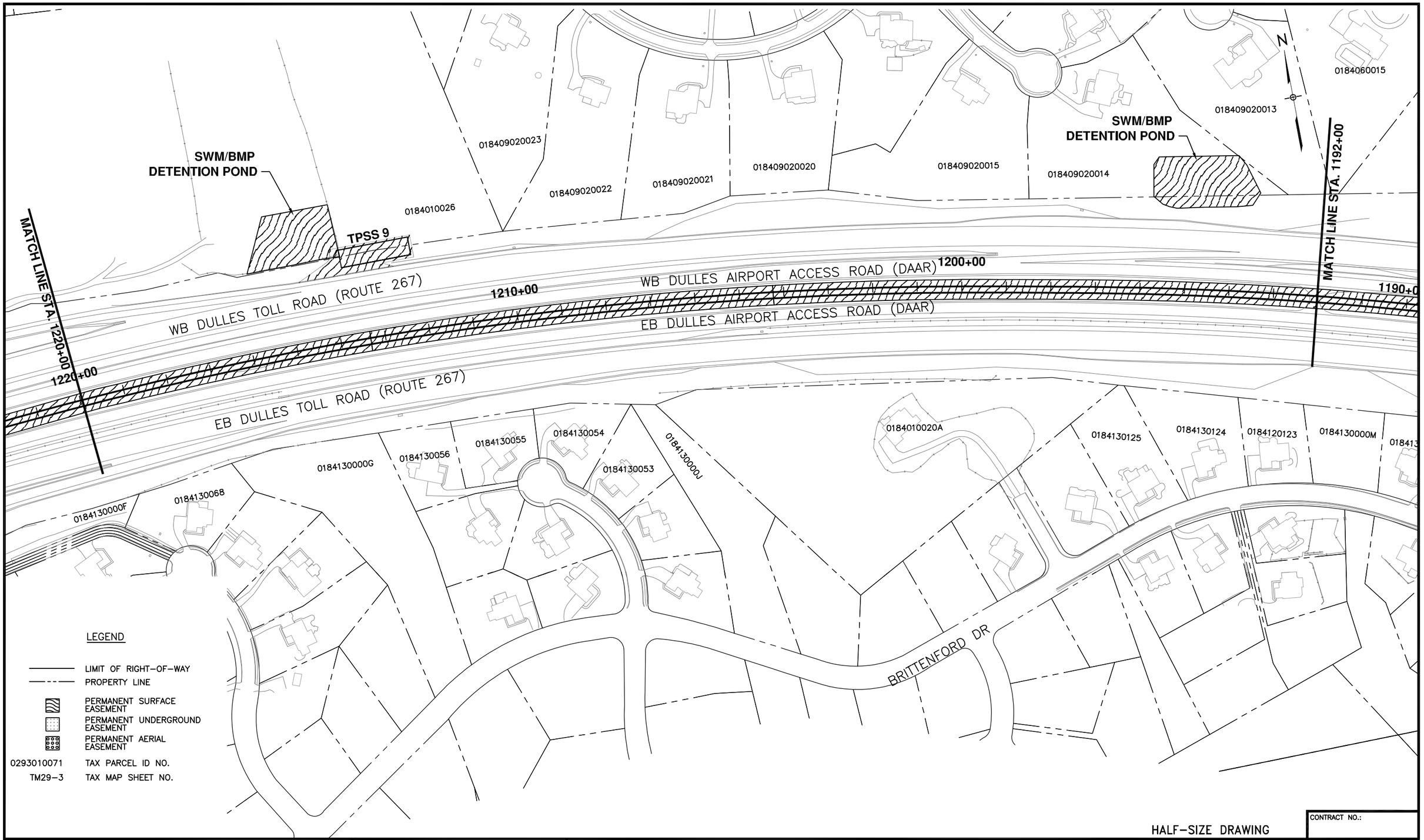
FINAL GENERAL PLANS
JULY 2004

PROPERTY IDENTIFICATION PLAN
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1220+00 TO 1248+00

SCALE: 1"=100'

DRAWING NO.: GPN- R-035

035



HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS	10-05-01	
DRAWN: D. MADSEN	10-09-01	
CHECKED: R. BERMUDEZ	9-23-03	
APPROVED: P. ELMAN	01-2004	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

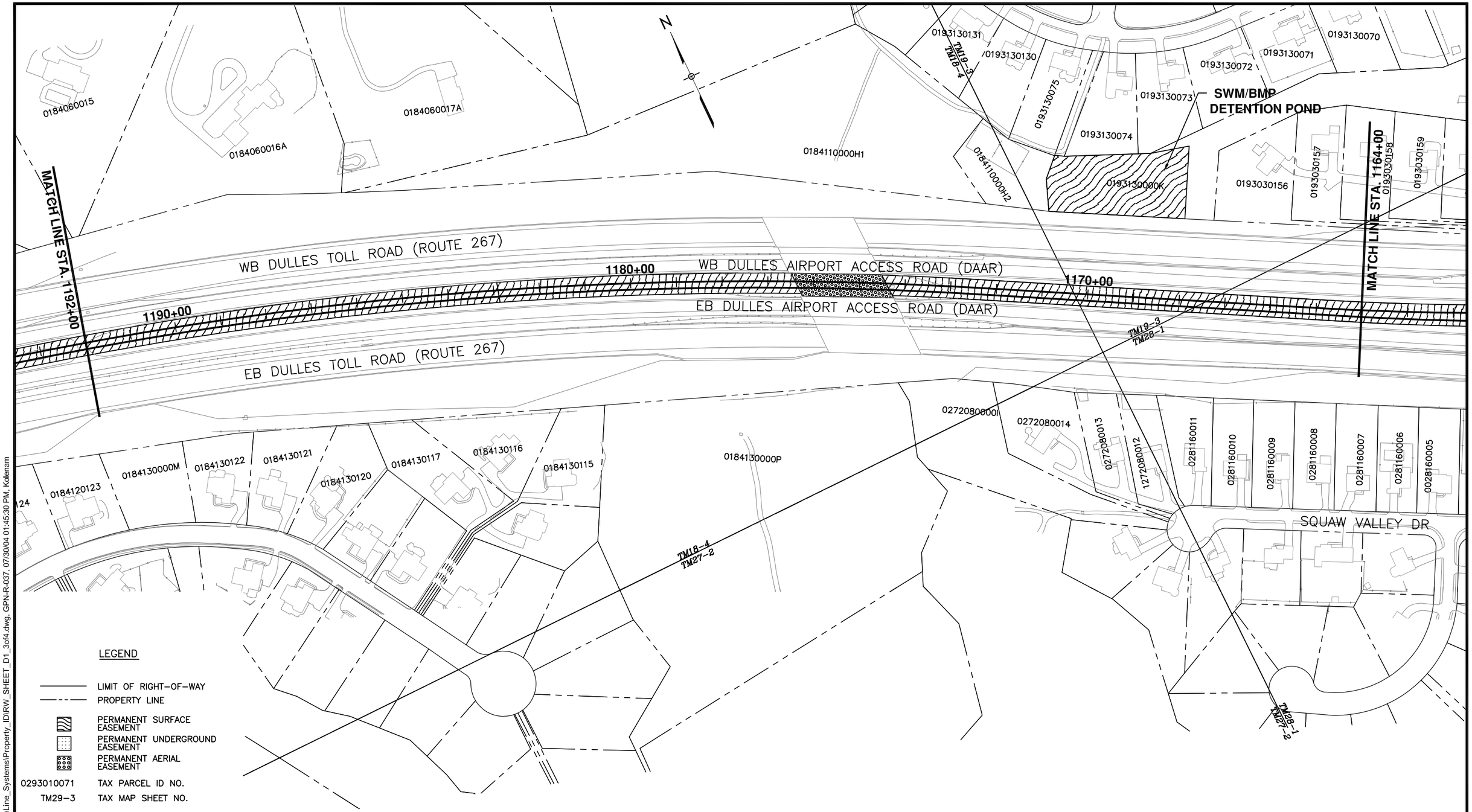
PROPERTY IDENTIFICATION PLAN
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1192+00 TO 1220+00

SCALE: 1"=100'

DRAWING NO.: GPN-R-036

036

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LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29-3 TAX MAP SHEET NO.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS	10-05-01 DATE	
DRAWN: D. MADSEN	10-09-01 DATE	
CHECKED: R. BERMUDEZ	9-23-03 DATE	
APPROVED: P. ELMAN	9-2003 DATE	

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

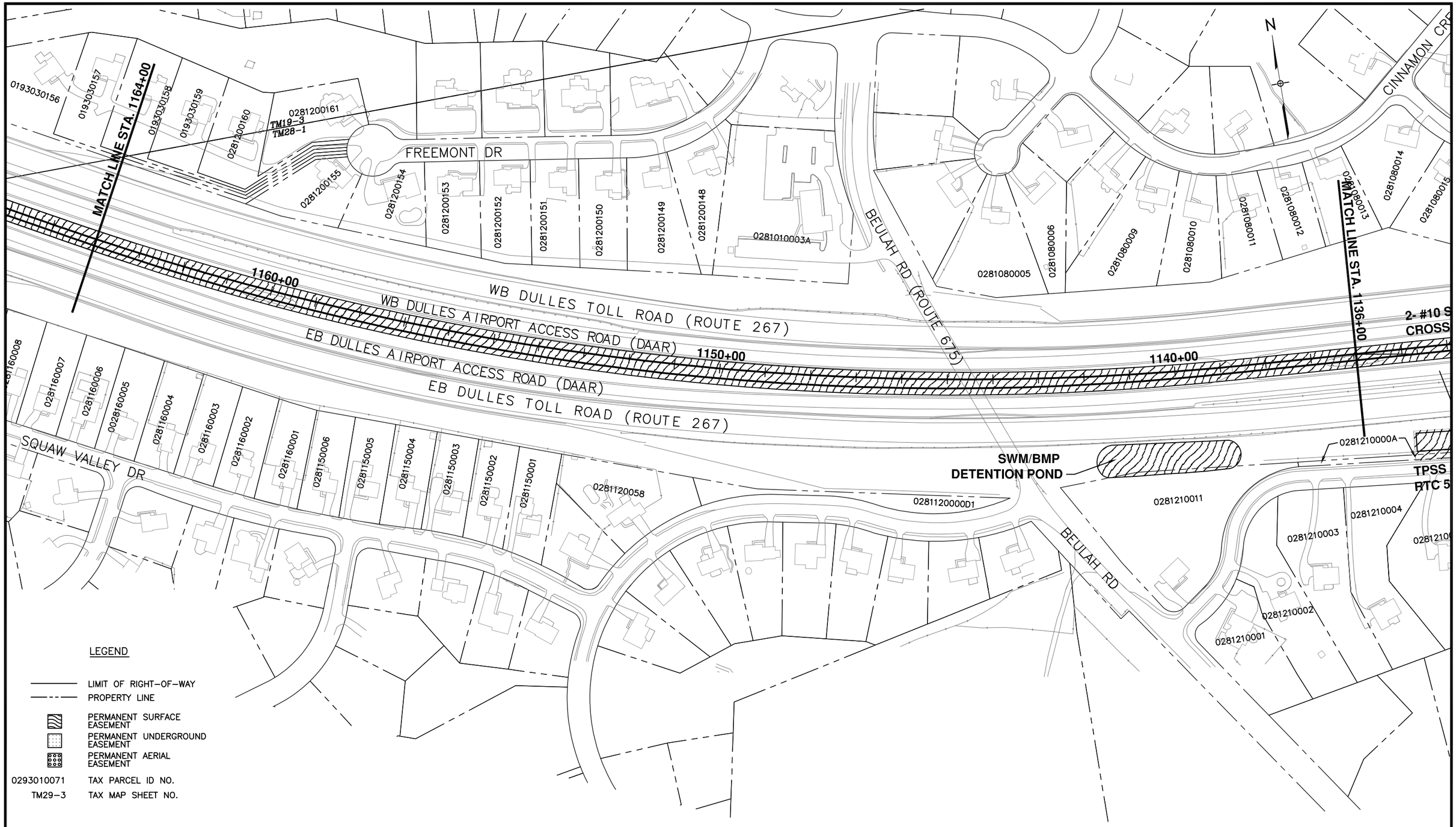
PROPERTY IDENTIFICATION PLAN
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1164+00 TO 1192+00

SCALE: 1"=100'

DRAWING NO.: GPN-R-037

037

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS 10-05-01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: D. MADSEN 10-09-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. BERMUDEZ 9-23-03 DATE		
APPROVED: P. ELMAN 01-2004 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

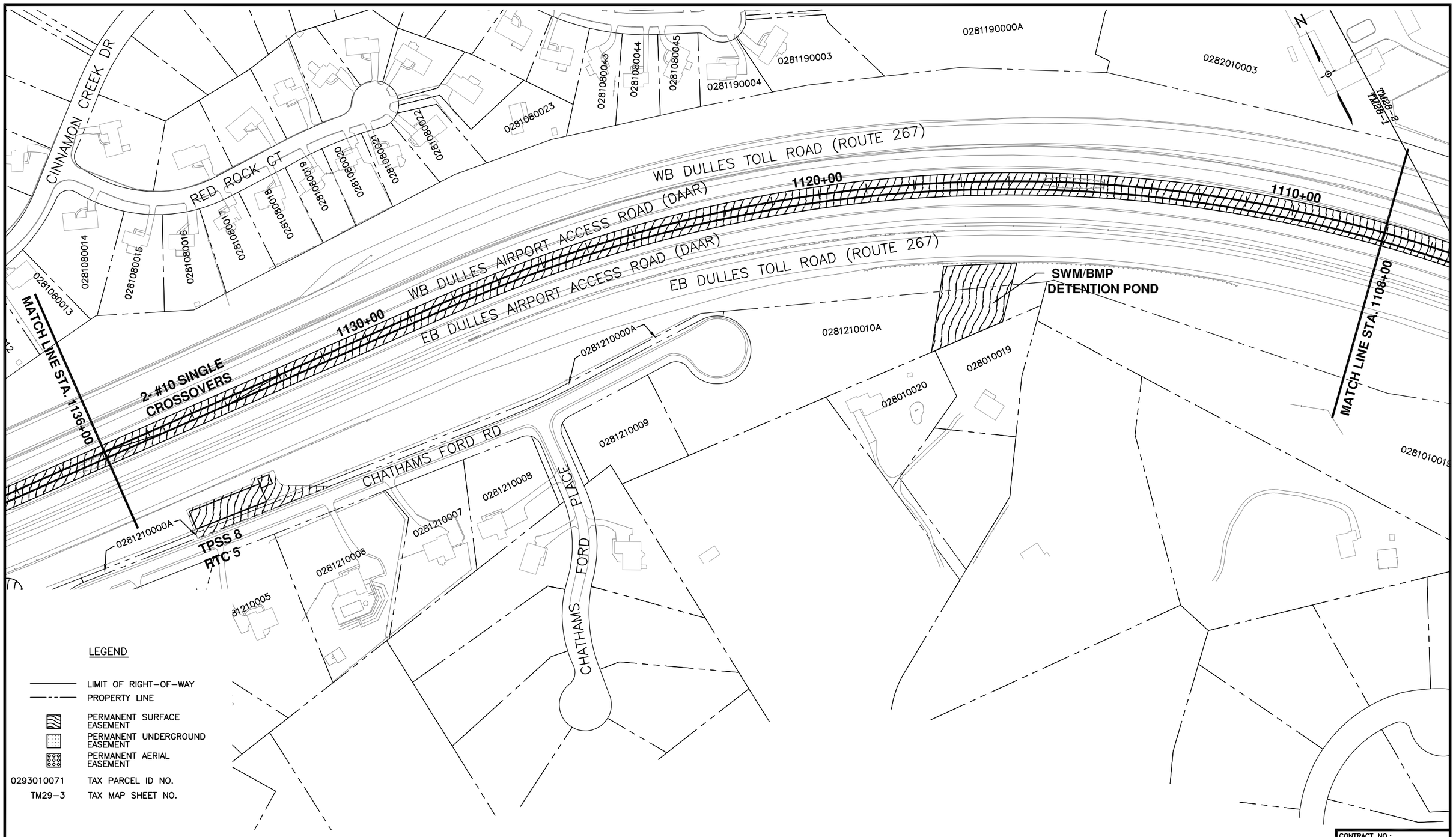
PROPERTY IDENTIFICATION PLAN
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1136+00 TO 1164+00

SCALE: 1"=100' 50 0 50 100

DRAWING NO.: GPN-R-039

038

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LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29-3 TAX MAP SHEET NO.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS	10-05-01	DATE
DRAWN: D. MADSEN	10-09-01	DATE
CHECKED: R. BERMUDEZ	9-23-03	DATE
APPROVED: P. ELMAN	01-2004	DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

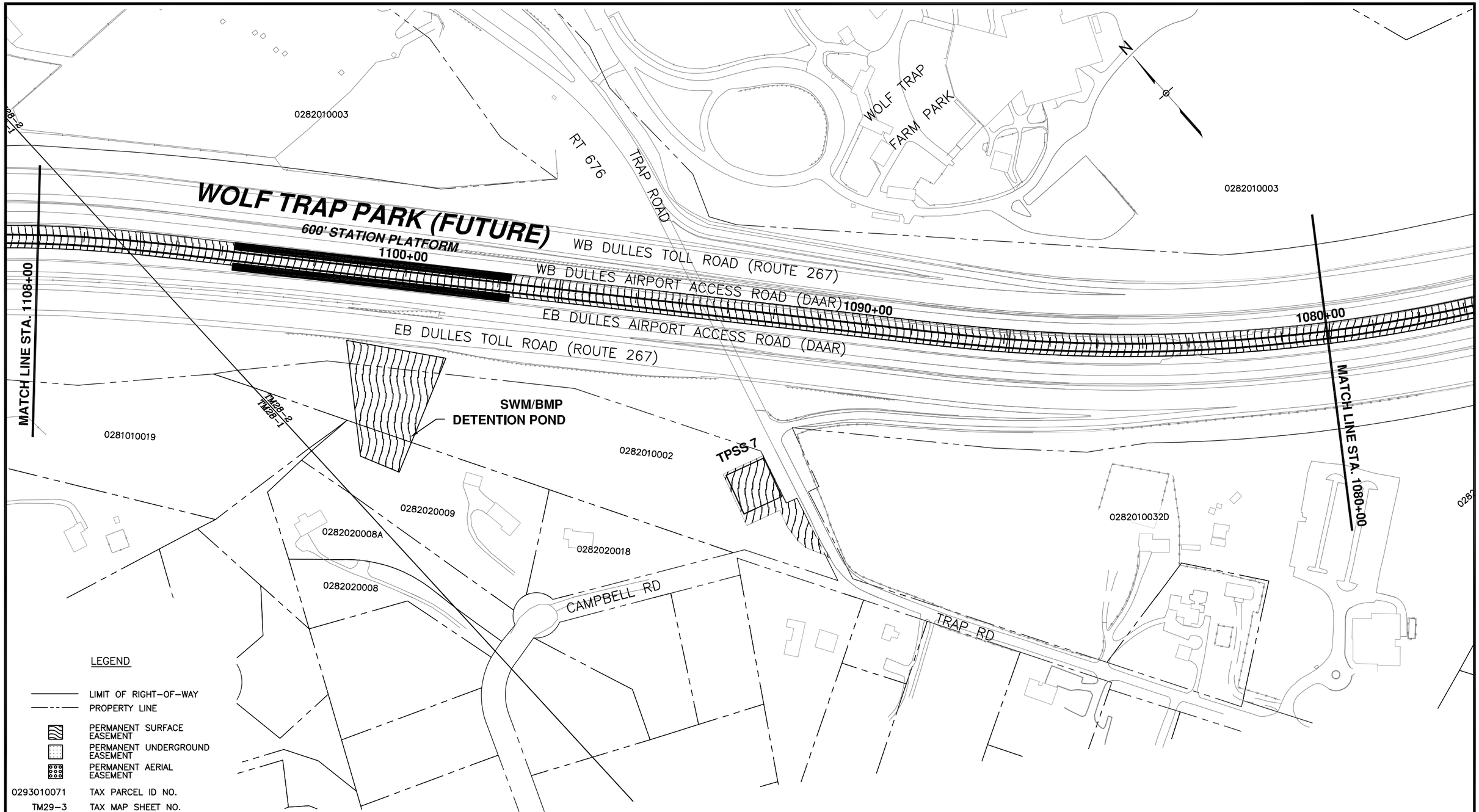
PROPERTY IDENTIFICATION PLAN
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1108+00 TO 1136+00

SCALE: 1"=100' (50 0 50 100)

DRAWING NO.: GPN-R-041

039

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS 10-05-01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: D. MADSEN 10-09-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. BERMUDEZ 9-23-03 DATE		
APPROVED: P. ELMAN 01-2004 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

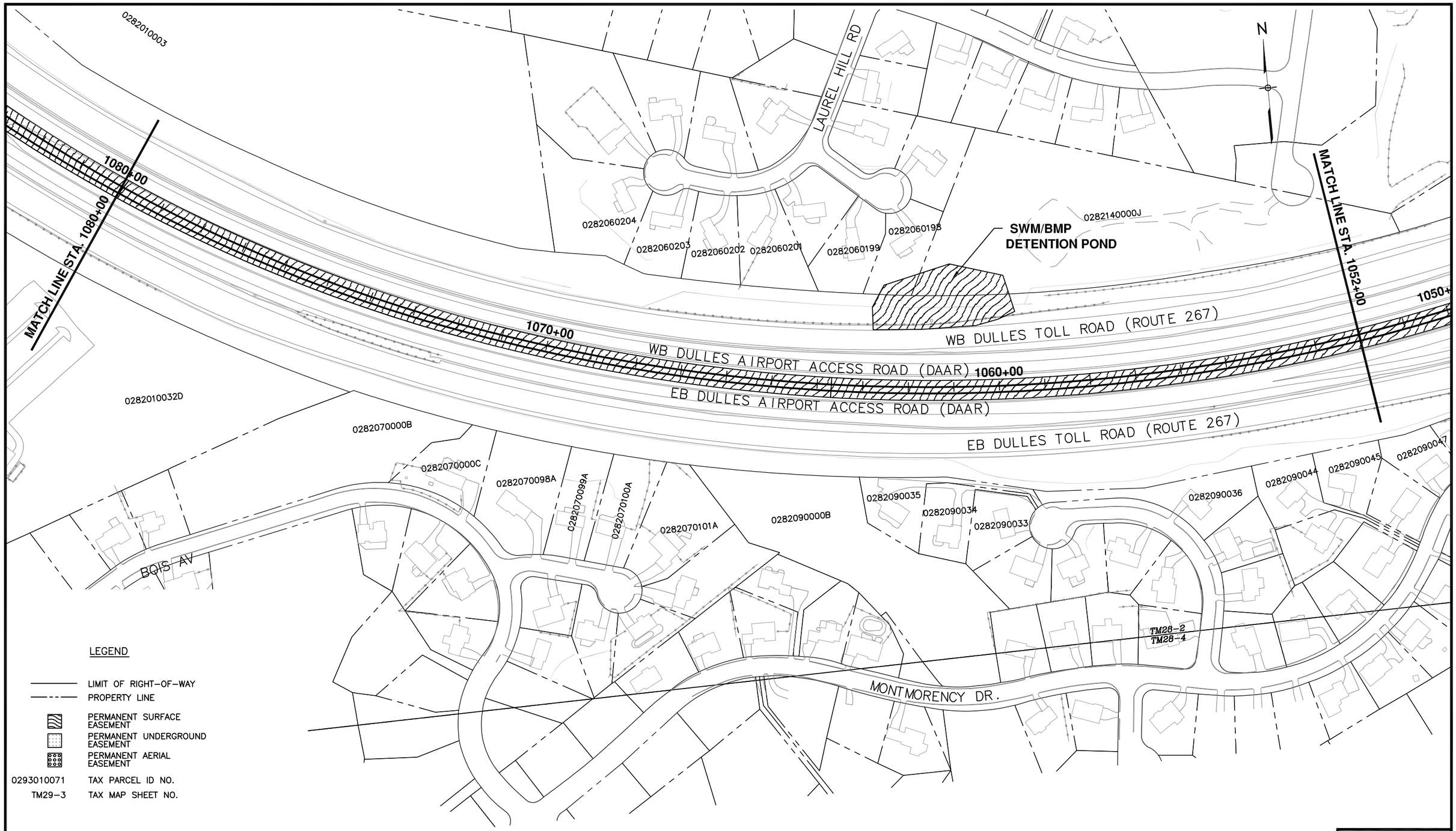
PROPERTY IDENTIFICATION PLAN
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT – WOLF TRAP STATION (TBD)
STATION 1080+00 TO 1108+00

SCALE: 1"=100' 50 0 50 100

DRAWING NO.: GPN-R-042

040

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LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT

0293010071 TAX PARCEL ID NO.

TM29-3 TAX MAP SHEET NO.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS	10-05-01 DATE	
DRAWN: D. MADSEN	10-09-01 DATE	
CHECKED: R. BERMUDEZ	9-23-03 DATE	
APPROVED: P. ELMAN	01-2004 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

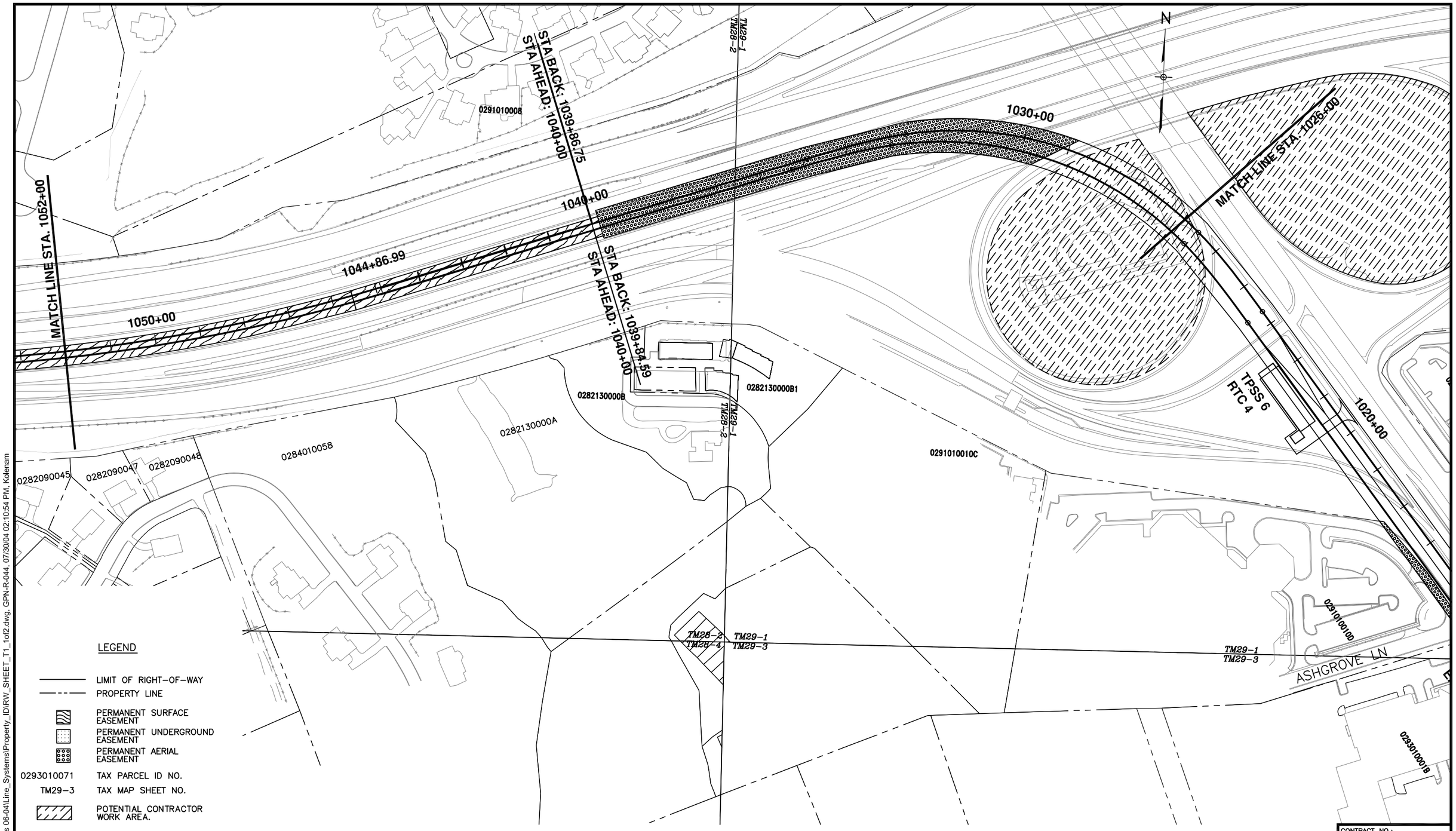
PROPERTY IDENTIFICATION PLAN
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1052+00 TO 1080+00

SCALE: 1"=100' 50 0 50 100

DRAWING NO.: GPN-R-043

041

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS	10-05-01 DATE	
DRAWN: D. MADSEN	10-09-01 DATE	
CHECKED: R. BERMUDEZ	9-23-03 DATE	
APPROVED: P. ELMAN	01-2004 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

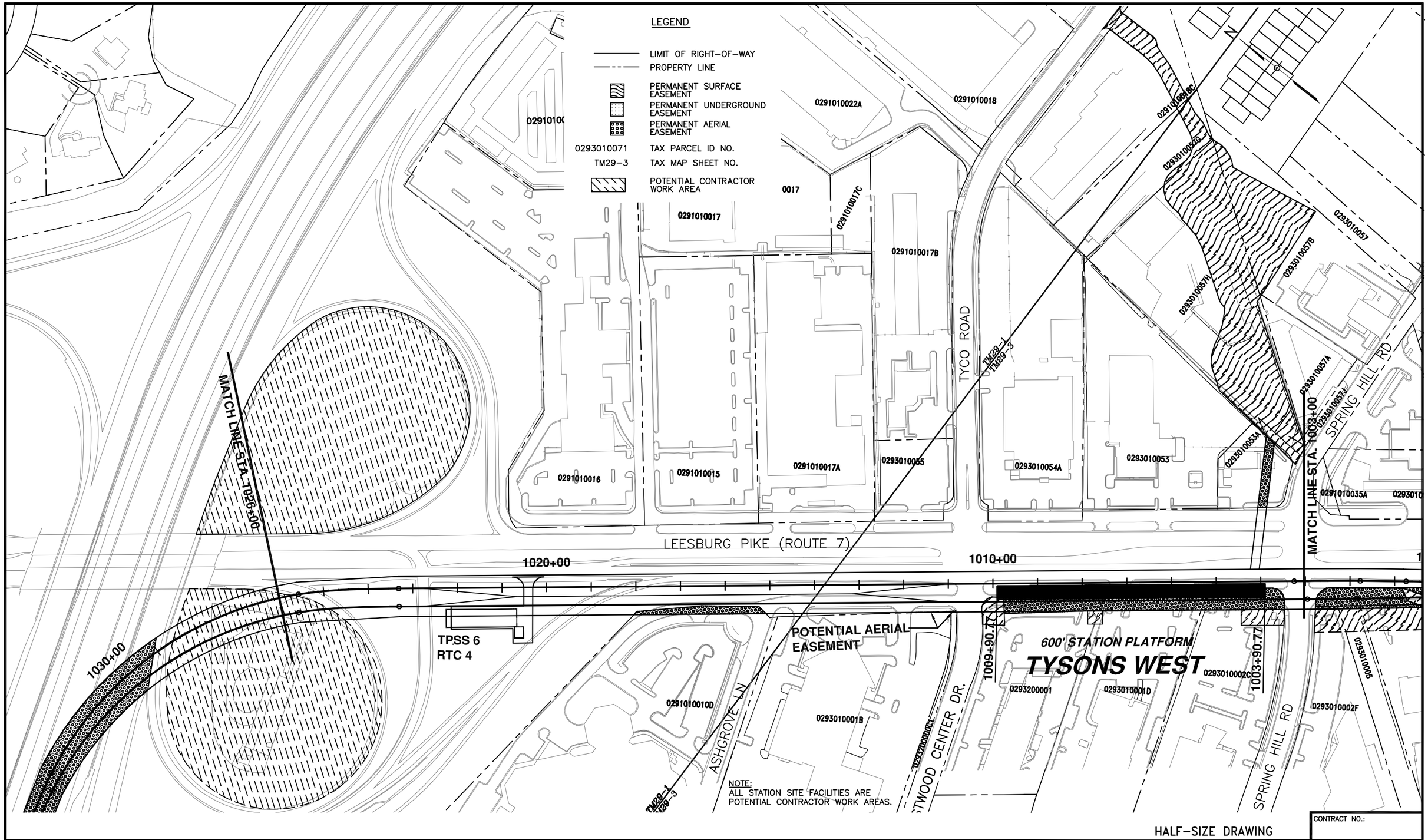
PROPERTY IDENTIFICATION PLAN
TYSONS CORNER
T6 ALIGNMENT
STATION 1026+00 TO 1052+00

SCALE: 1" = 100' 50 0 50 100

DRAWING NO.: GPN-R-044

042

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NOTE:
ALL STATION SITE FACILITIES ARE POTENTIAL CONTRACTOR WORK AREAS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS 10-05-01	REFERENCE DRAWINGS	REVISIONS
DRAWN: D. MADSEN 10-09-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. BERMUDEZ 9-23-03		
APPROVED: P. ELMAN 01-2004		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PROPERTY IDENTIFICATION PLAN
TYSONS CORNER
T6 ALIGNMENT – TYSONS WEST STATION
STATION 1003+00 TO 1026+00

SCALE: 1" = 100' (50 0 50 100)

DRAWING NO.: GPN-R-046

043

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LEGEND

LIMIT OF RIGHT-OF-WAY
PROPERTY LINE
PERMANENT SURFACE EASEMENT
PERMANENT UNDERGROUND EASEMENT
PERMANENT AERIAL EASEMENT
0293010071 TAX PARCEL ID NO.
TM29-3 TAX MAP SHEET NO.
POTENTIAL CONTRACTOR WORK AREA

SPRING HILL RD
GREENSBORO DRIVE
WESTPARK DRIVE
LEESBURG PIKE (ROUTE 7)
LEESBURG PIKE (RT. 7)
1000+00
990+00
980+00
PORTAL
MATCH LINE STA. 1003+00
1003+90.77
MATCH LINE STA. 978+00
976+43.87
600' STA
TYSONS
TPSS 5
RELOCATED SERVICE ROAD
PERMANENT UNDERGROUND EASEMENT

0293010057C
0293010057B
0293010057A
0293010057
0293010053A
0293010035A
0293010052
0293010050
0293010049
0293010048C
0293010047
0293010046A
0293010045B
0293010044
0293010066A1
0293010066A2
0293010066B
0293150007
0293150008
0293010002C
0293010002F
0293010005
0293010003B
0293010043B
0293010043A
0293010041A
0293010041B
0293010038
0293010036A
0293010036C

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS 10-01-01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: D. MADSEN 10-15-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. BERMUDEZ 9-24-03 DATE		
APPROVED: P. ELMAN 01-2004 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

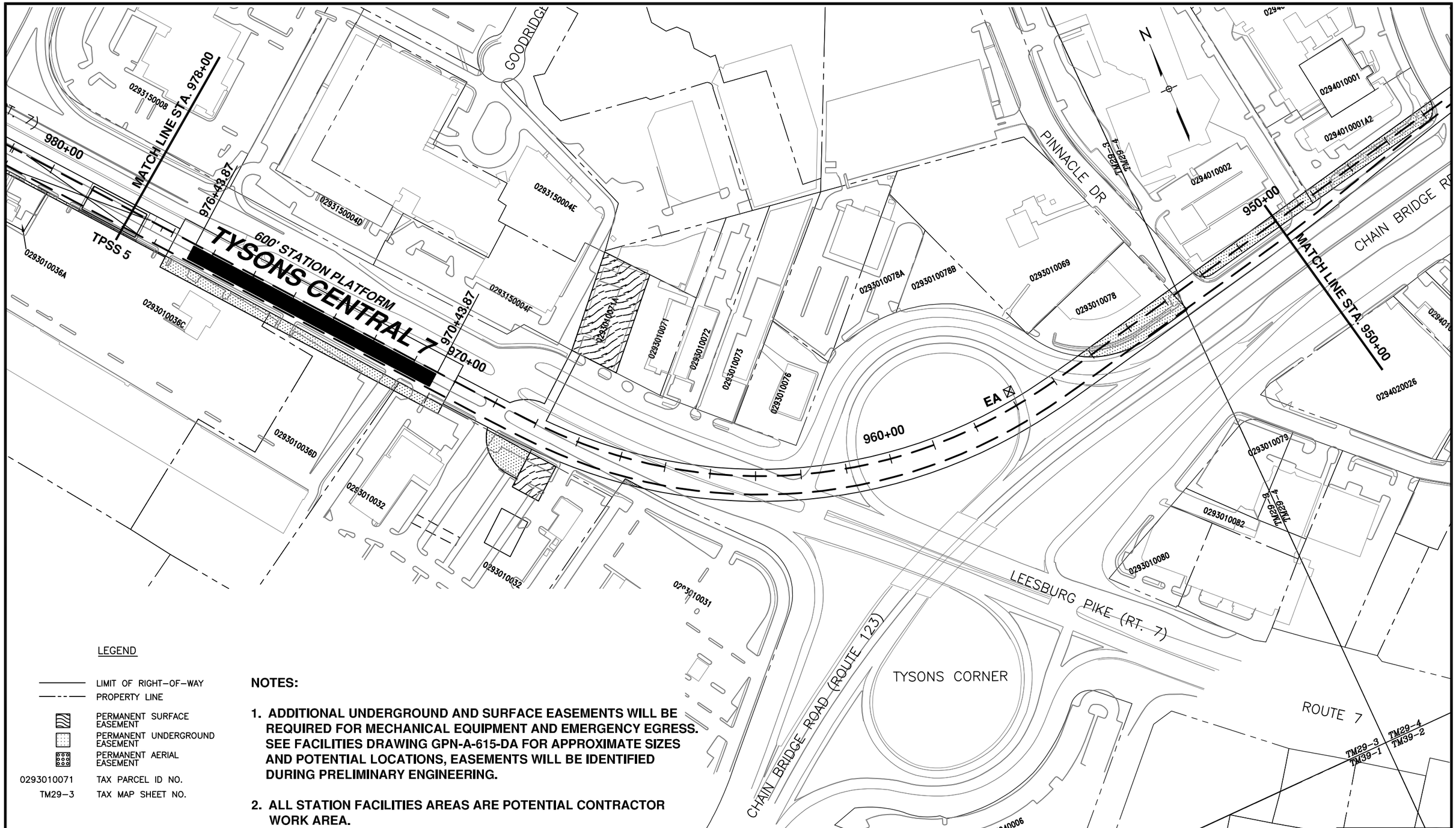
CAPITAL TRANSIT CONSULTANTS
SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PROPERTY IDENTIFICATION PLAN
TYSONS CORNER
T6 ALIGNMENT
STATION 978+00 TO 1003+00

SCALE: 1" = 100' 50 0 50 100
DRAWING NO.: GPN-R-103
044

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LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29-3 TAX MAP SHEET NO.

NOTES:

1. **ADDITIONAL UNDERGROUND AND SURFACE EASEMENTS WILL BE REQUIRED FOR MECHANICAL EQUIPMENT AND EMERGENCY EGRESS. SEE FACILITIES DRAWING GPN-A-615-DA FOR APPROXIMATE SIZES AND POTENTIAL LOCATIONS, EASEMENTS WILL BE IDENTIFIED DURING PRELIMINARY ENGINEERING.**

2. **ALL STATION FACILITIES AREAS ARE POTENTIAL CONTRACTOR WORK AREA.**

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS 10-01-01
DRAWN: D. MADSEN 10-15-01
CHECKED: R. BERMUDEZ 9-24-03
APPROVED: P. ELMAN 01-2004

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

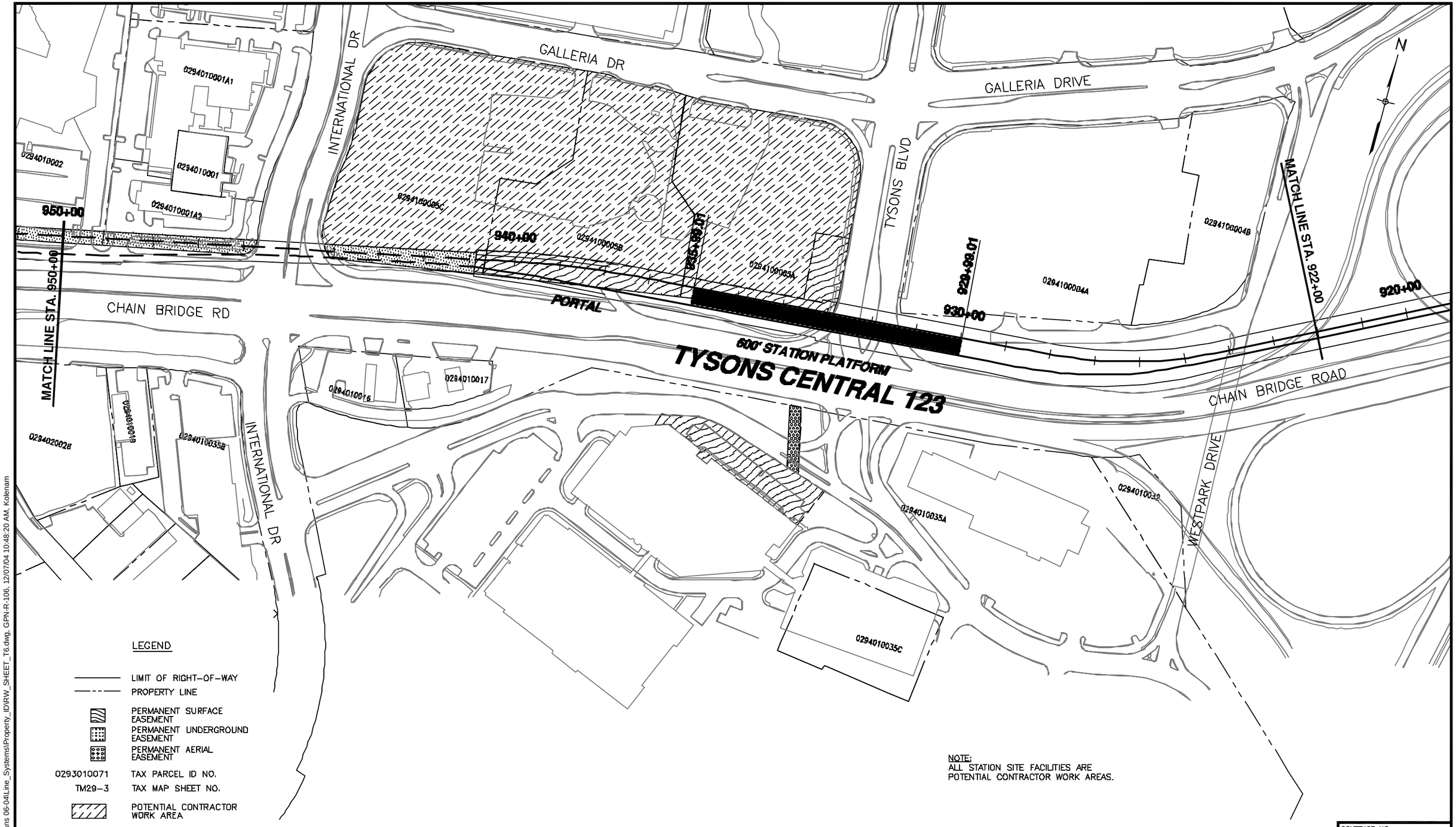
CAPITAL TRANSIT CONSULTANTS
SUBMITTED Diana C Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PROPERTY IDENTIFICATION PLAN
TYSONS CORNER
T6 ALIGNMENT
STATION 950+00 TO 978+00

SCALE: 1" = 100' 50 0 50 100
DRAWING NO.: GPN-R-104
045

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LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29-3 TAX MAP SHEET NO.
- POTENTIAL CONTRACTOR WORK AREA

NOTE:
ALL STATION SITE FACILITIES ARE POTENTIAL CONTRACTOR WORK AREAS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS	10-01-01 DATE		
DRAWN: D. NADSEN	10-15-01 DATE		
CHECKED: R. BERNUDEZ	9-24-03 DATE		
APPROVED: P. ELMAN	01-2004 DATE		

REFERENCE DRAWINGS		REVISIONS		
NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PROPERTY IDENTIFICATION PLAN
TYSONS CORNER
T6 ALIGNMENT – TYSONS CENTRAL 123 STATION
STATION 922+00 TO 950+00

SCALE: 1" = 100' (50 0 50 100)

DRAWING NO.: GPN-R-106

046

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WESTPARK DRIVE
CAPITAL BELTWAY (I-495)
OLD SPRINGHOUSE RD
N
897+98.59
900+00
910+00
920+00
MATCH LINE STA. 922+00
MATCH LINE STA. 904+00
DOLLY MADISON BLVD. (ROUTE 123)
CHAIN BRIDGE ROAD
RK DRIVE
OLD MEADOW ROAD
MEADOW ROAD
600' STATION PLATFORM
TYSONS EAS
0294050000A2
0294050000A1
0294050000D
0294050000C1
0294050000E
0294100004B
0294010034A
0294060101B
0294060101A
0294060102
0294010031
0294060100A
0294060099A
0294060097B

LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT

0293010071 TAX PARCEL ID NO.
TM29-3 TAX MAP SHEET NO.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS	10-01-01 DATE	
DRAWN: D. MADSEN	10-15-01 DATE	
CHECKED: R. BERMUDEZ	9-24-03 DATE	
APPROVED: P. ELMAN	01-2004 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS
SUBMITTED
Diana C Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

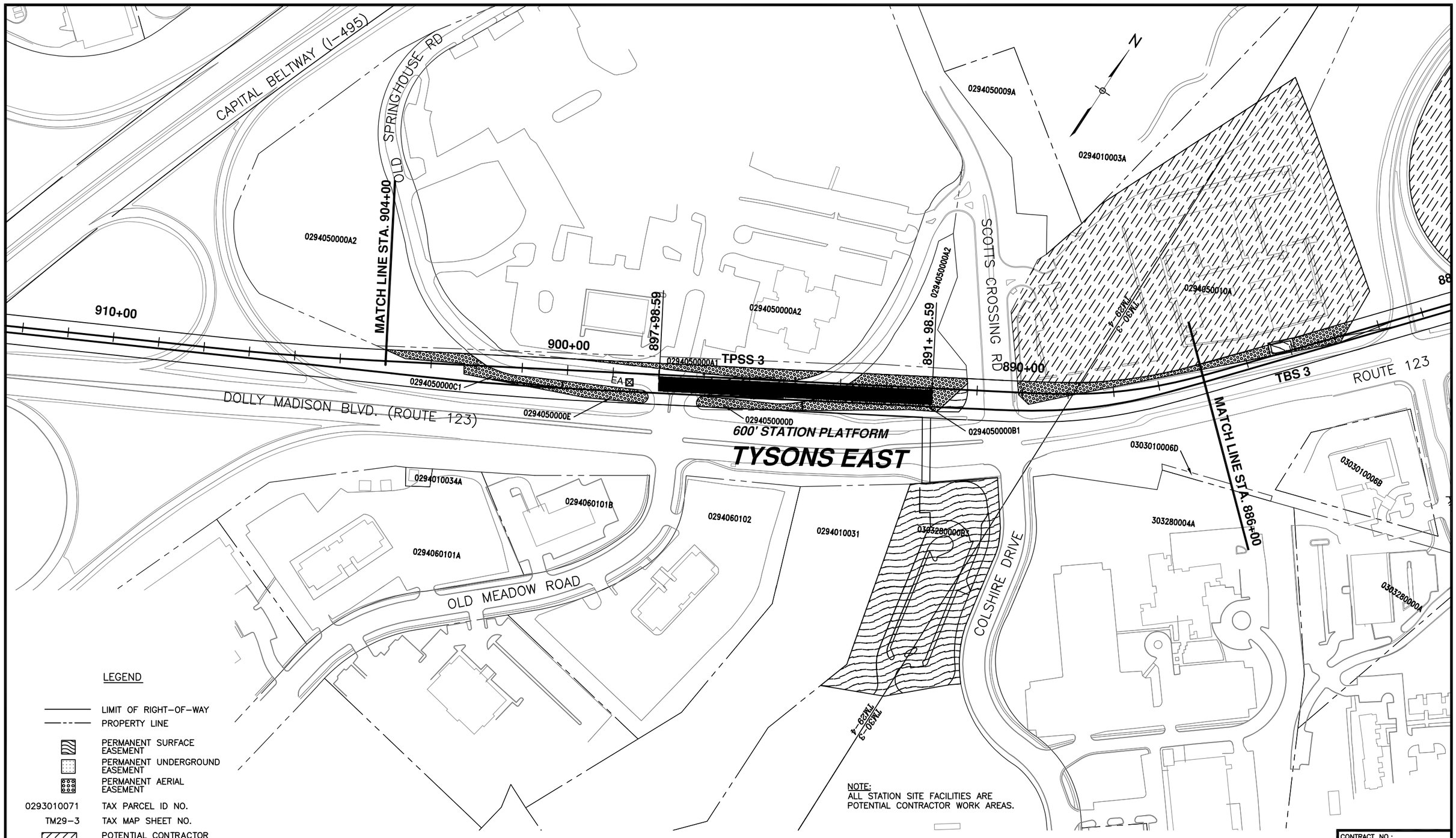
PROPERTY IDENTIFICATION PLAN
TYSONS CORNER
T6 ALIGNMENT
STATION 904+00 TO 922+00

SCALE: 1" = 100' 50 0 50 100

DRAWING NO.: GPN-R-108

047

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LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29-3 TAX MAP SHEET NO.
- POTENTIAL CONTRACTOR WORK AREA

NOTE:
ALL STATION SITE FACILITIES ARE POTENTIAL CONTRACTOR WORK AREAS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS 10-05-01	REFERENCE DRAWINGS	REVISIONS
DRAWN: D. MADSEN 10-8-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. BERMUDEZ 9-24-03		
APPROVED: P. ELMAN 01-2004		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PROPERTY IDENTIFICATION PLAN
TYSONS CORNER
T6 ALIGNMENT – TYSONS EAST STATION
STATION 886+00 TO 904+00

SCALE: 1"=100' 50 0 50 100

DRAWING NO.: GPN-R-054

048

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870+00

880+00

860+00

DULLES CONNECTOR ROAD (DCR)

CHAIN BRIDGE RD

ROUTE 123

TBS 3

ANDERSON RD

MATCHLINE STA. 886+00

MATCHLINE STA. 858+00

0303010005

0303010006A

0303010006B

0303010006D

0303280000A

0303280004A

0303280005

0303020060A

0303020090

0303020094

0303020230

0303020233

0303020234

0303020261

0303020263

0303020265

0303020272

0303020181

0303020182

0303020183

0303020184

0303020186

0303020189

0303020160

0303020161

0303020162

0303020163

0294010003A

0294050010A

03032400008

03032400009

03032400010

03032400011

03032400001

03032400002

03032400003

03032400004

03032400005

03032400006

03032400007

LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29-3 TAX MAP SHEET NO.
- POTENTIAL CONTRACTOR WORK AREA

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS	10-05-01 DATE	
DRAWN: D. MADSEN	10-8-01 DATE	
CHECKED: R. BERMUDEZ	9-24-03 DATE	
APPROVED: P. ELMAN	01-2004 DATE	

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PROPERTY IDENTIFICATION PLAN
TYSON CORNER
T6 ALIGNMENT
STATION 858+00 TO 886+00

SCALE: 1"=100' (50 0 50 100)

DRAWING NO.: GPN-R-056

049



LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT

0293010071 TAX PARCEL ID NO.

TM29-3 TAX MAP SHEET NO.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS	10-05-01	DATE
DRAWN: D. MADSEN	10-09-01	DATE
CHECKED: R. BERMUDEZ	9-24-03	DATE
APPROVED: P. ELMAN	01-2004	DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

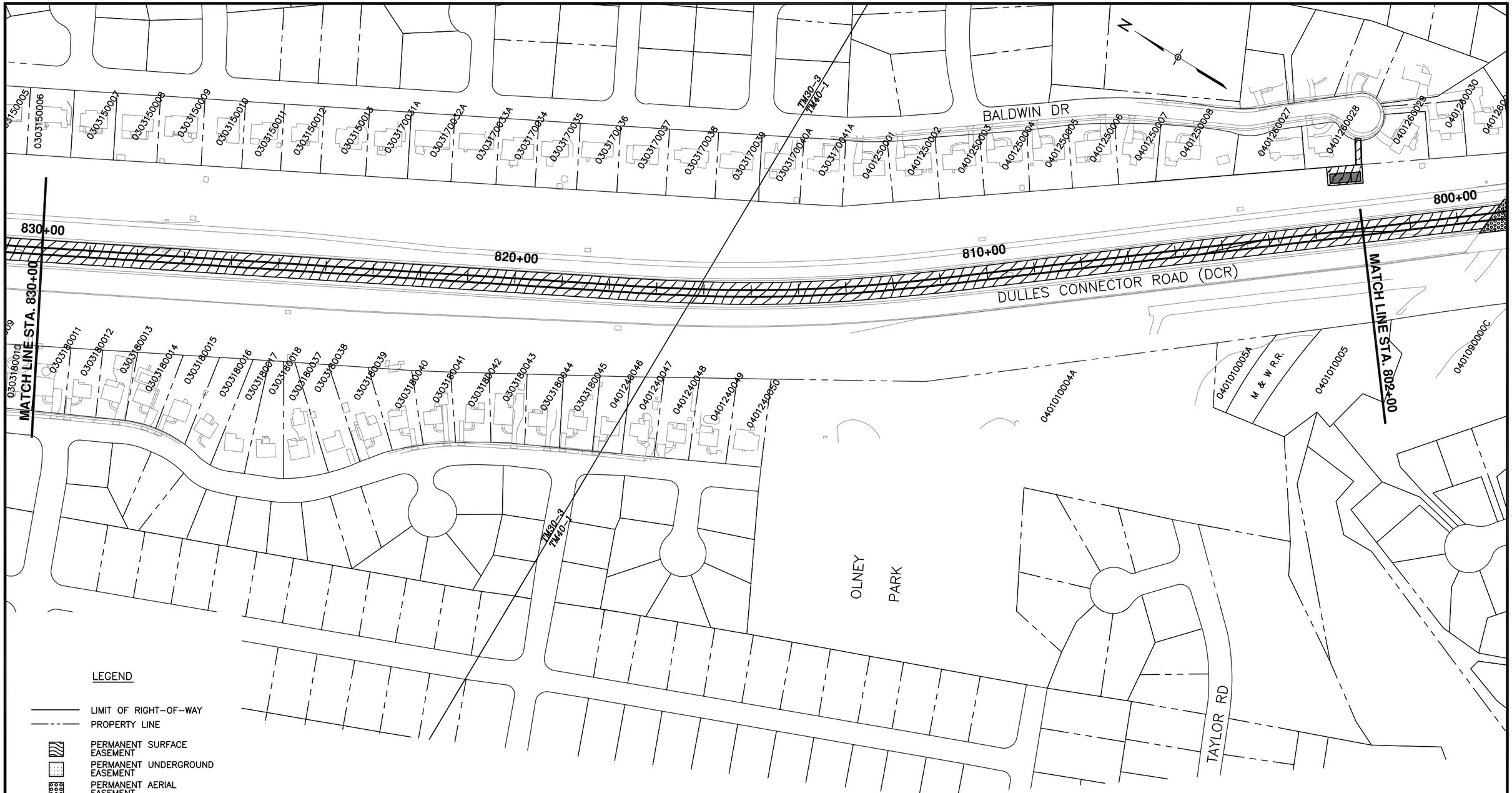
PROPERTY IDENTIFICATION PLAN
ORANGE LINE CONNECTION
01 ALIGNMENT
STATION 830+00 TO 858+00

SCALE: 1"=100' 50 0 50 100

DRAWING NO.: GPN-R-058

050

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LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29-3 TAX MAP SHEET NO.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS	10-05-01	DATE
DRAWN: D. MADSEN	10-09-01	DATE
CHECKED: R. BERMUDEZ	9-24-03	DATE
APPROVED: P. ELMAN	01-2004	DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PROPERTY IDENTIFICATION PLAN
ORANGE LINE CONNECTION
01 ALIGNMENT
STATION 802+00 TO 830+00

SCALE: 1"=100' (50 0 50 100)

DRAWING NO.: GPN-R-059

051

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LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29-3 TAX MAP SHEET NO.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS	10-05-01 DATE	
DRAWN: D. MADSEN	10-09-01 DATE	
CHECKED: R. BERMUDEZ	9-24-03 DATE	
APPROVED: P. ELMAN	01-2004 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

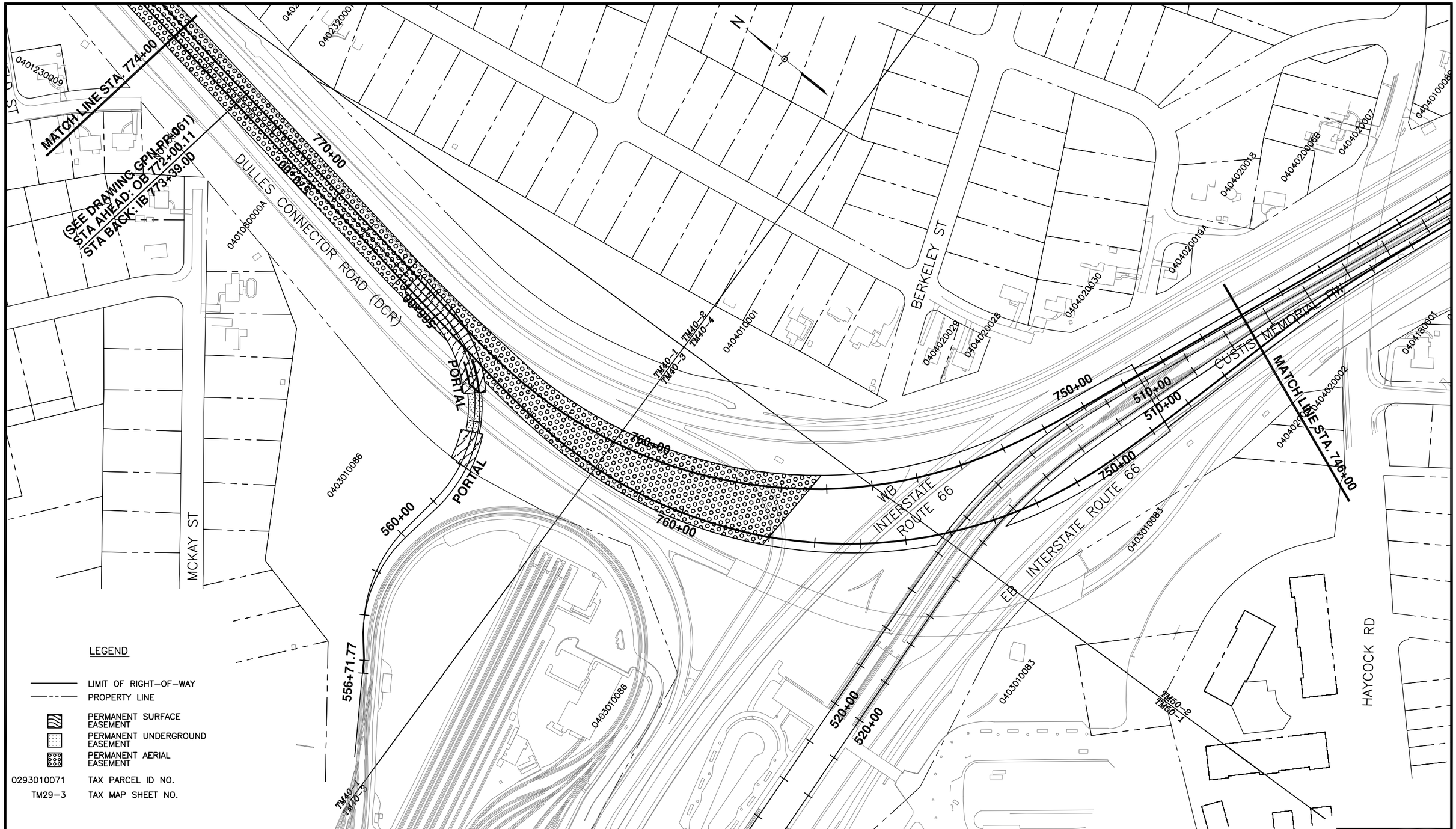
PROPERTY IDENTIFICATION PLAN
ORANGE LINE CONNECTION
01 ALIGNMENT
STATION 774+00 TO 802+00

SCALE: 1"=100' 50 0 50 100

DRAWING NO.: GPN-R-060

052

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LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT

0293010071 TAX PARCEL ID NO.

TM29-3 TAX MAP SHEET NO.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS	10-05-01 DATE	
DRAWN: D. MADSEN	10-09-01 DATE	
CHECKED: R. BERMUDEZ	9-24-03 DATE	
APPROVED: P. ELMAN	01-2004 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

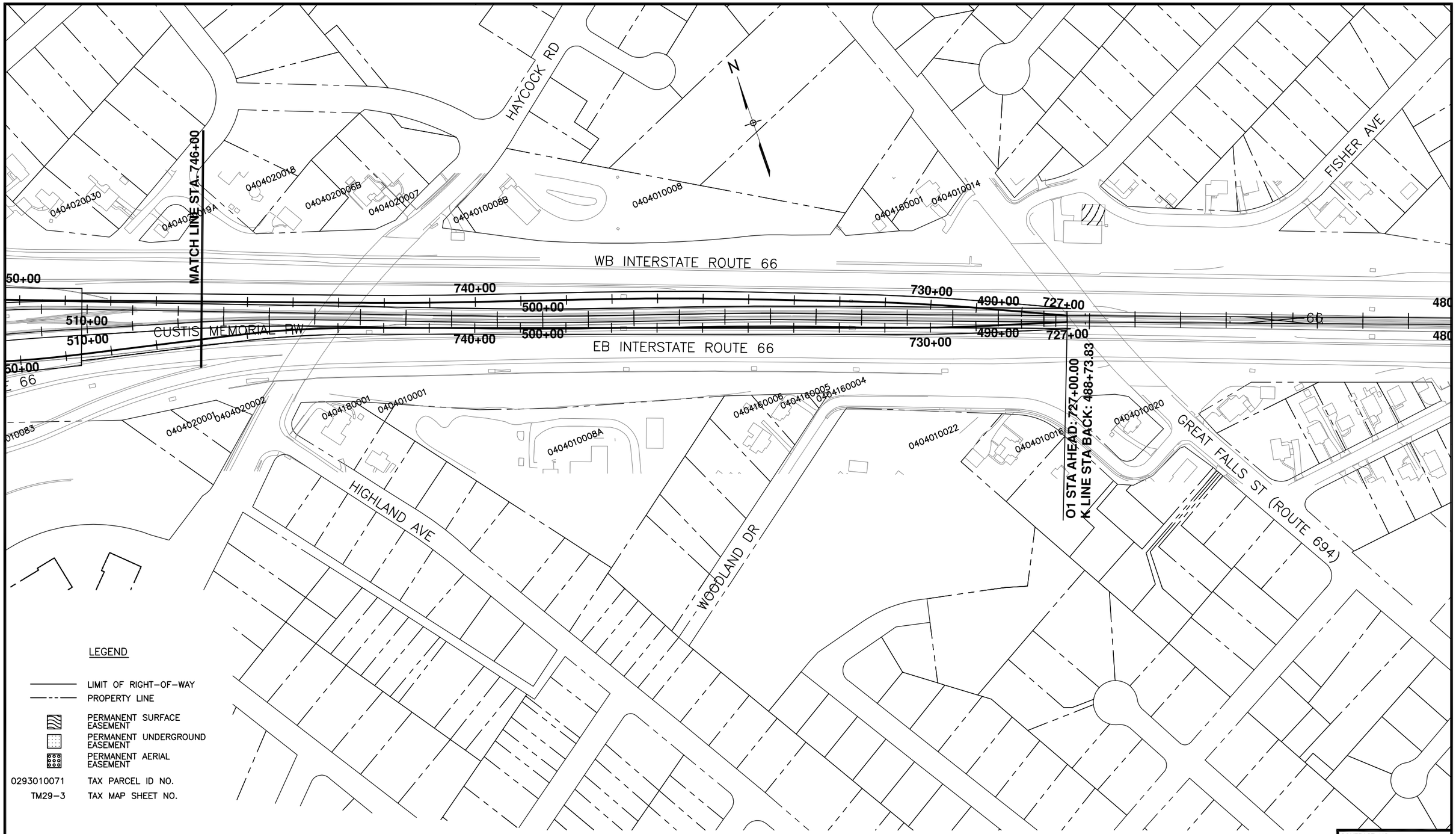
PROPERTY IDENTIFICATION PLAN
ORANGE LINE CONNECTION
01 ALIGNMENT
STATION 746+00 TO 774+00

SCALE: 1"=100' 50 0 50 100

DRAWING NO.: GPN-R-061

053

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LEGEND

- LIMIT OF RIGHT-OF-WAY
- PROPERTY LINE
- PERMANENT SURFACE EASEMENT
- PERMANENT UNDERGROUND EASEMENT
- PERMANENT AERIAL EASEMENT
- 0293010071 TAX PARCEL ID NO.
- TM29-3 TAX MAP SHEET NO.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. SANTOS	10-05-01 DATE	
DRAWN: D. MADSEN	10-09-01 DATE	
CHECKED: R. BERMUDEZ	9-24-03 DATE	
APPROVED: P. ELMAN	01-2004 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

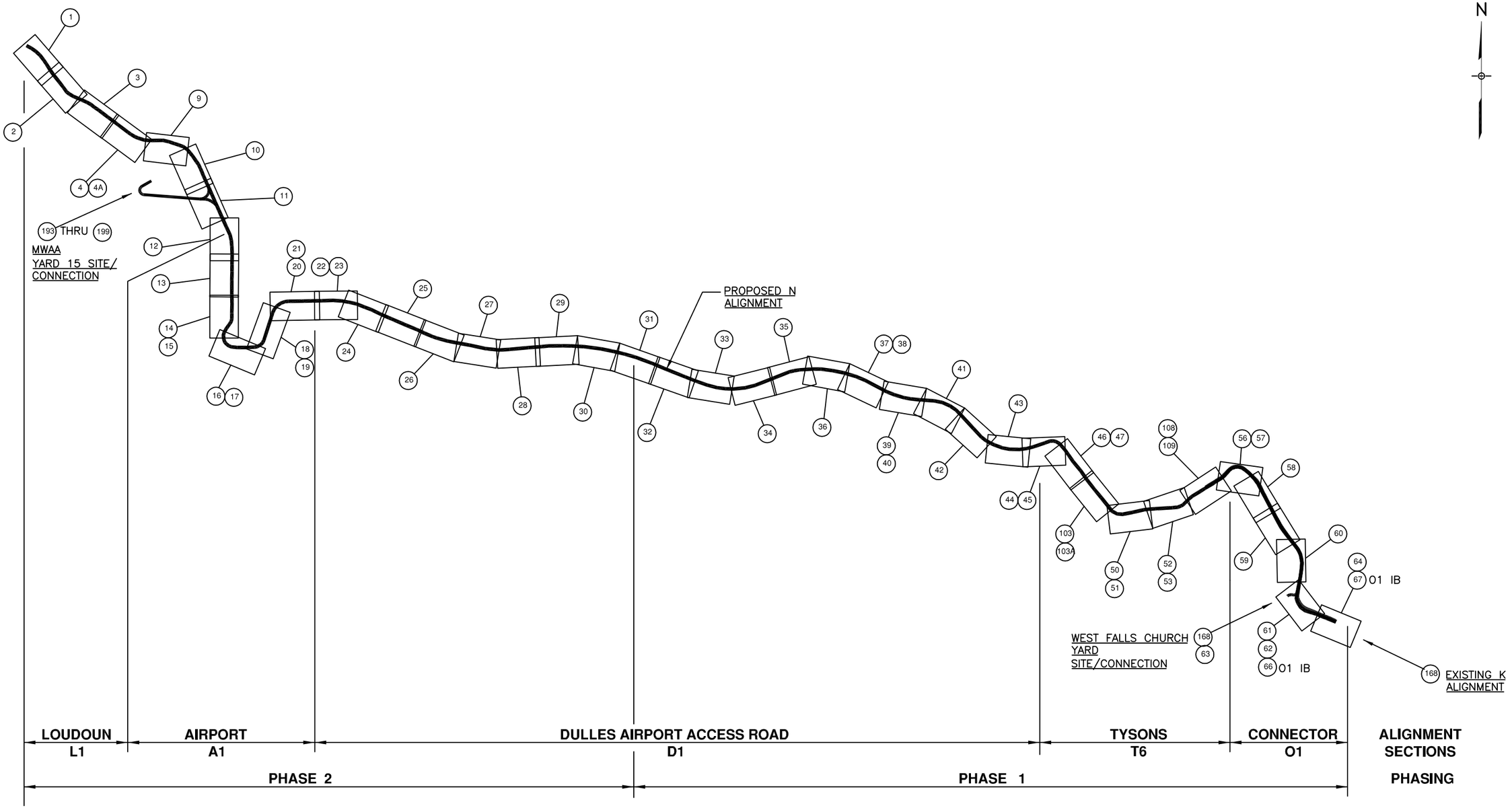
PROPERTY IDENTIFICATION PLAN
ORANGE LINE CONNECTION
01 ALIGNMENT
STATION 727+00 TO 746+00

SCALE: 1"=100' 50 0 50 100

DRAWING NO.: GPN-R-064

054

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NOTE:

REFERENCE NUMBERS INDICATE THE LAST DIGITS OF THE DRAWING NUMBER, PREFIXED WITH "GPN–PP–???"

FOR EXAMPLE: REFERENCE NO. (27) INDICATES DRAWING NO. "GPN–PP–027".

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. KASHIF	10–10–01	DATE
DRAWN: K. WINGFIELD	10–10–01	DATE
CHECKED: P. ELMAN	9–29–03	DATE
APPROVED: P. ELMAN	01–2004	DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

KEY PLAN
ALIGNMENT SECTIONS
METRORAIL CONSTRUCTION PHASING

SCALE: NOT TO SCALE

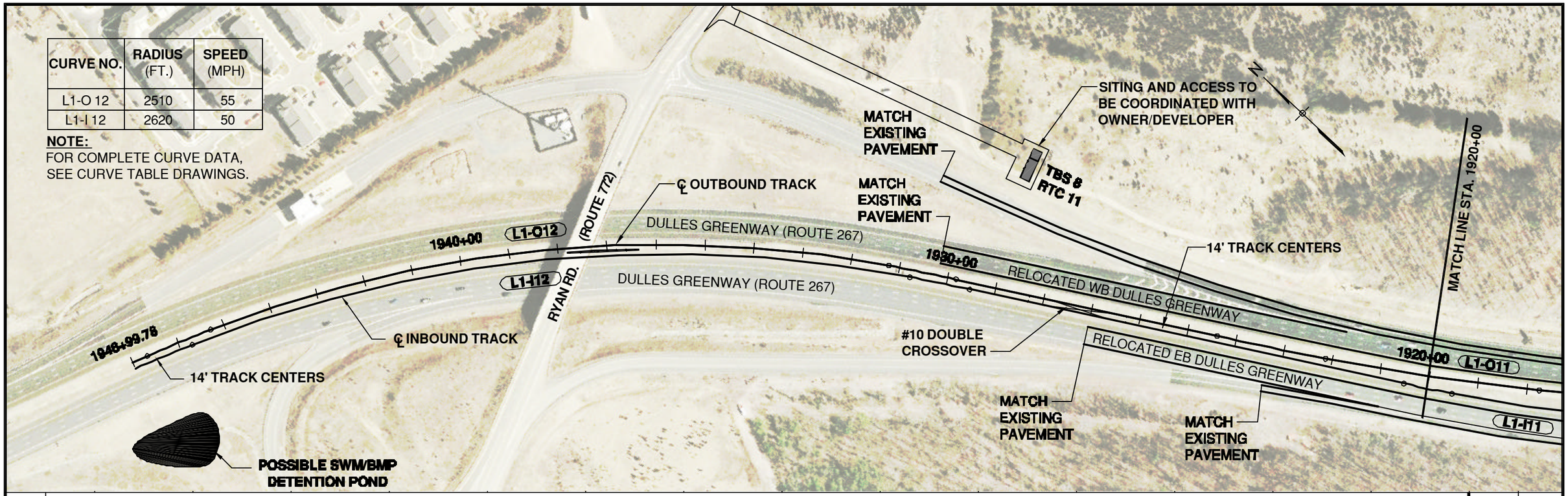
DRAWING NO.: GPN–PP–120

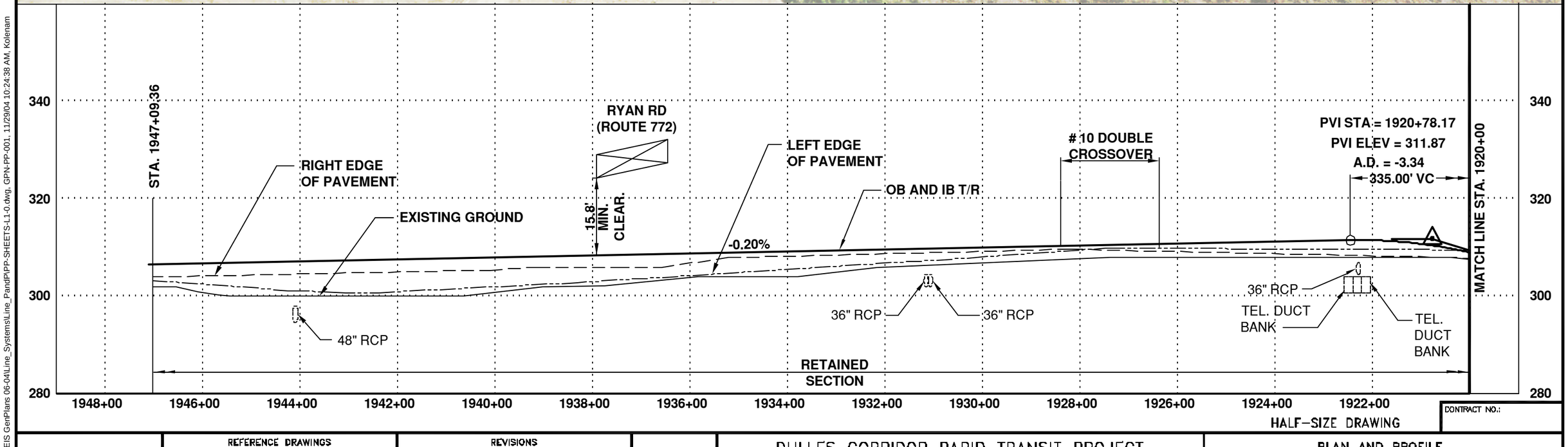
055

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CURVE NO.	RADIUS (FT.)	SPEED (MPH)
L1-O 12	2510	55
L1-I 12	2620	50

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.





HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. KASHIF	10-20-01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: R. KASHIF	10-20-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: P. ELMAN	9-24-03 DATE		
APPROVED: P. ELMAN	9-2003 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

SUBMITTED — CAPITAL TRANSIT CONSULTANTS
Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

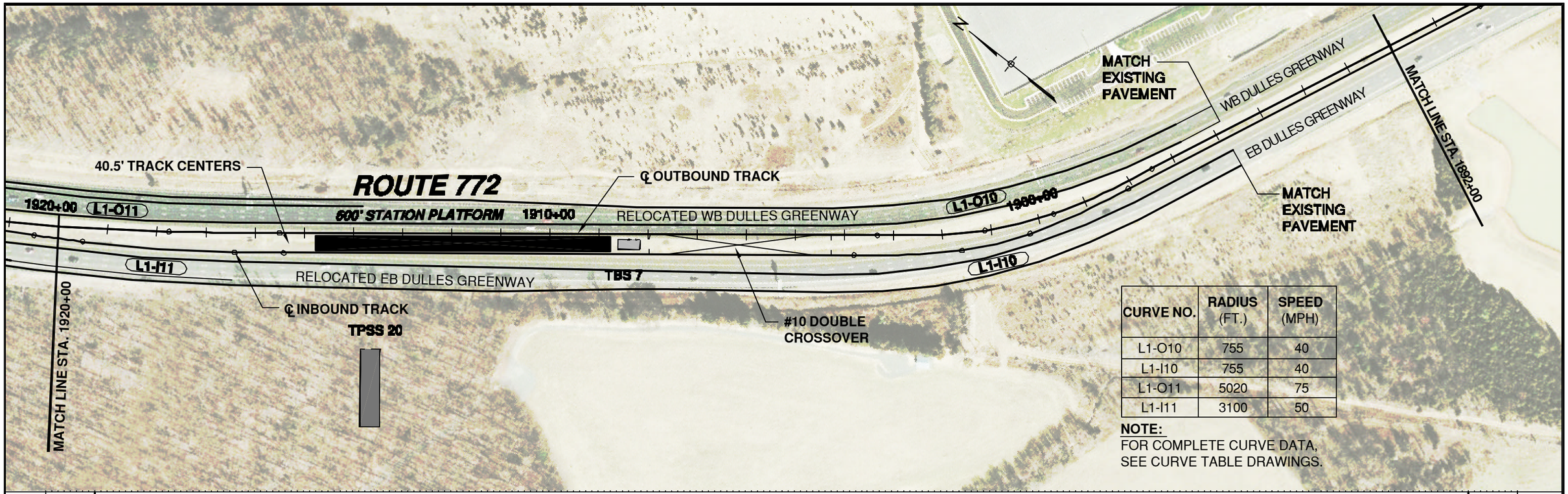
PLAN AND PROFILE
DULLES GREENWAY
L1 ALIGNMENT
STATION 1920+00 TO 1947+09.36

SCALE: H: 1"=100' 50 0 100
V: 1"=10' 5 0 10

DRAWING NO.: GPN-PP-001

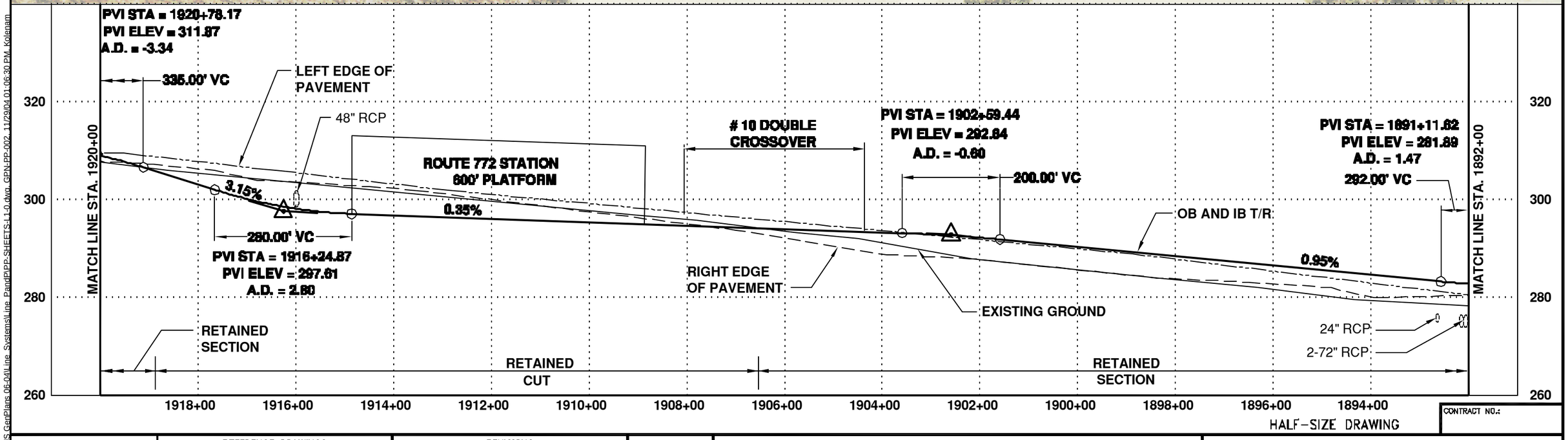
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CURVE NO.	RADIUS (FT.)	SPEED (MPH)
L1-O10	755	40
L1-I10	755	40
L1-O11	5020	75
L1-I11	3100	50

NOTE:
FOR COMPLETE CURVE DATA, SEE CURVE TABLE DRAWINGS.



HALF-SIZE DRAWING

CONTRACT NO.:

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Line_PandP\PP-SHEETS-L1-0.dwg, GPN-PP-002, 11/29/04 01:06:30 PM, Kolenam

DESIGNED: R. KASHIF	10-20-01 DATE	
DRAWN: R. KASHIF	10-20-01 DATE	
CHECKED: P. ELMAN	9-24-03 DATE	
APPROVED: P. ELMAN	9-2003 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

SUBMITTED

CAPITAL TRANSIT CONSULTANTS

PROJECT MANAGER

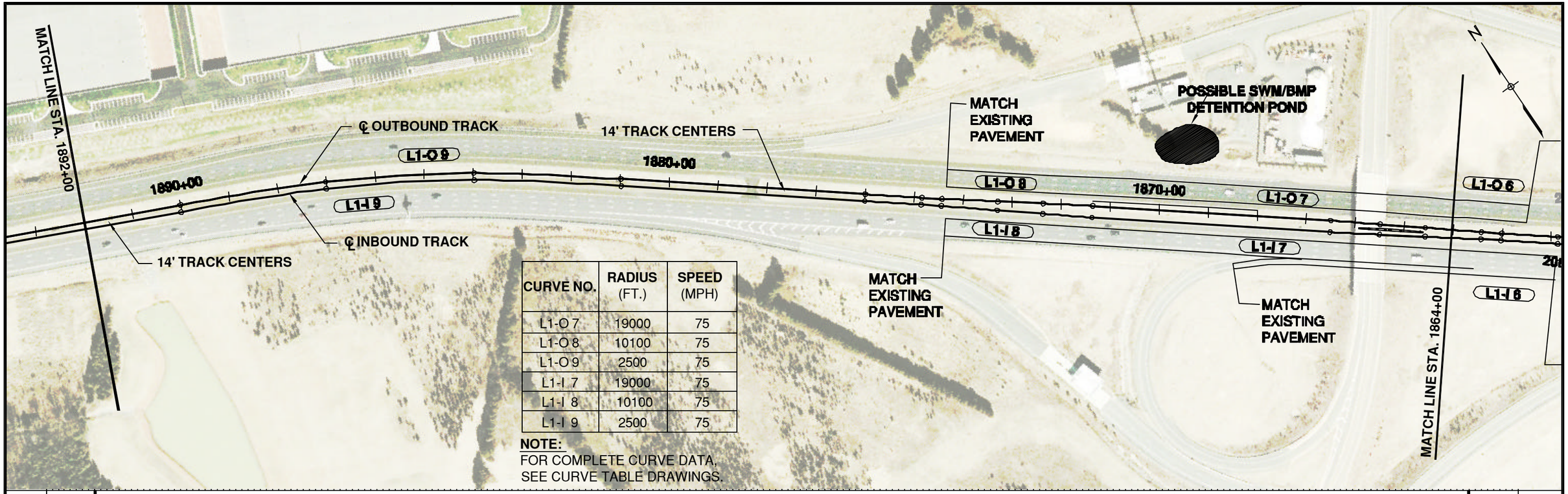
FINAL GENERAL PLANS
JULY 2004

PLAN AND PROFILE
DULLES GREENWAY
L1 ALIGNMENT – ROUTE 772 STATION
STATION 1892+00 TO 1920+00

SCALE: H: 1"=100' V: 1"=10' (50 0 100; 5 0 10)

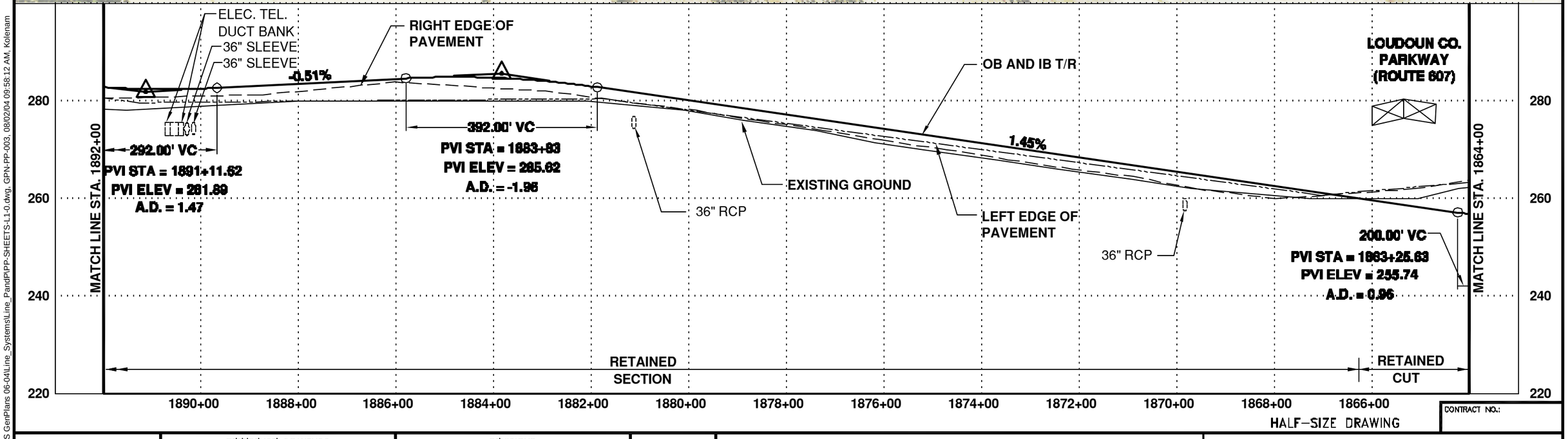
DRAWING NO.: GPN-PP-002

057



CURVE NO.	RADIUS (FT.)	SPEED (MPH)
L1-O 7	19000	75
L1-O 8	10100	75
L1-O 9	2500	75
L1-I 7	19000	75
L1-I 8	10100	75
L1-I 9	2500	75

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.



HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. KASHIF	10–20–01 DATE	
DRAWN: R. KASHIF	10–20–01 DATE	
CHECKED: T. TWYMAN	3–11–02 DATE	
APPROVED: P. ELMAN	01–2004 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

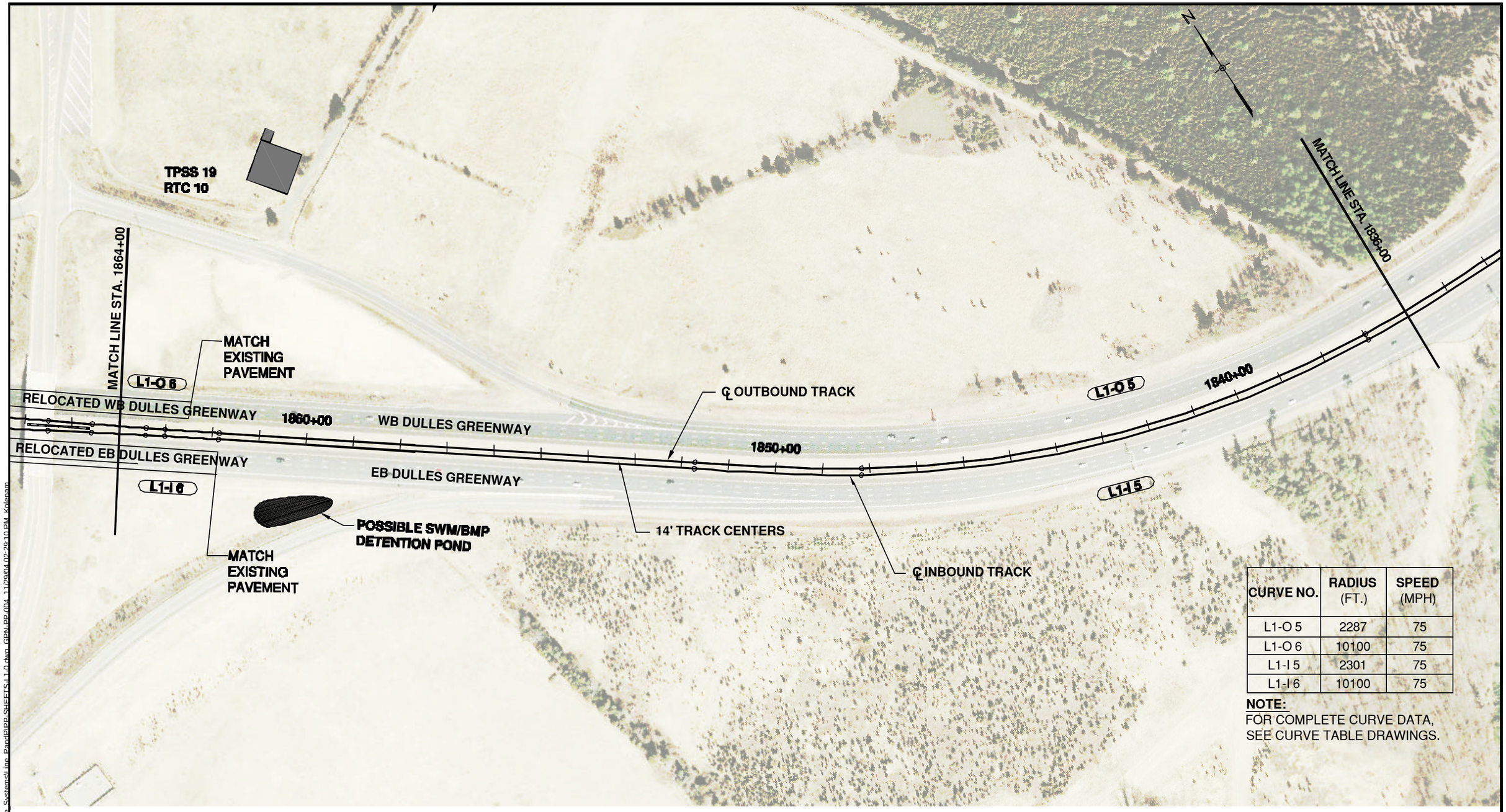
PLAN AND PROFILE
DULLES GREENWAY
L1 ALIGNMENT
STATION 1864+00 TO 1892+00

SCALE: H: 1"=100' V: 1"=10' 50 0 100 5 0 10

DRAWING NO.: GPN–PP–003

058

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CURVE NO.	RADIUS (FT.)	SPEED (MPH)
L1-O 5	2287	75
L1-O 6	10100	75
L1-I 5	2301	75
L1-I 6	10100	75

NOTE:
FOR COMPLETE CURVE DATA, SEE CURVE TABLE DRAWINGS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. KASHF 10-20-01
DRAWN: R. KASHF 10-20-01
CHECKED: P. ELMAN 8-24-03
APPROVED: P. ELMAN 01-2004

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

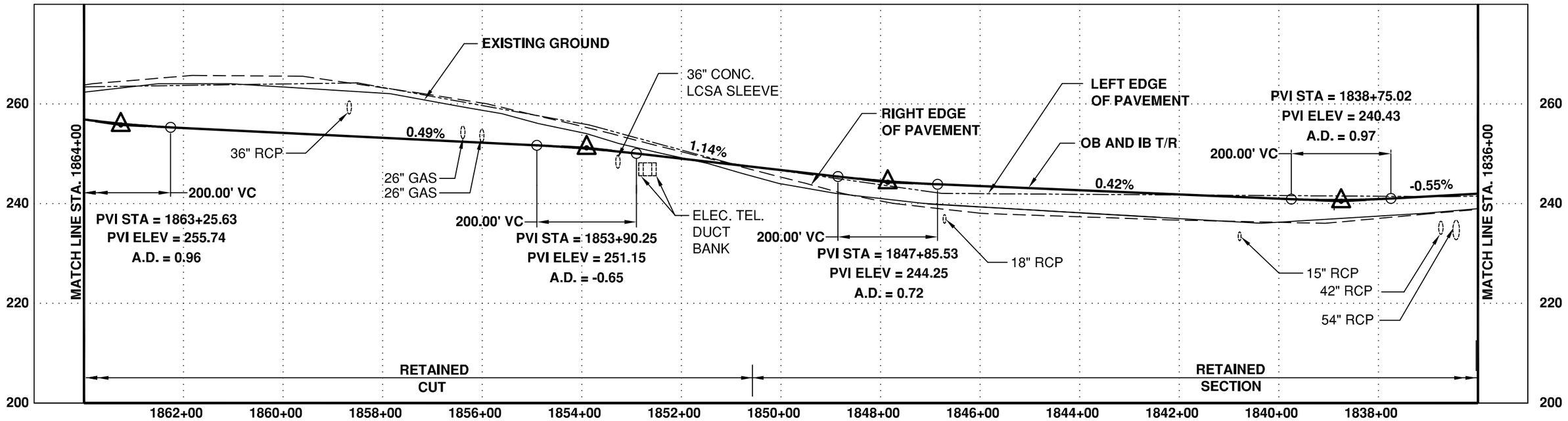
CAPITAL TRANSIT CONSULTANTS
SUBMITTED
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PLAN
DULLES GREENWAY
L1 ALIGNMENT
STATION 1836+00 TO 1864+00

SCALE: H: 1"=100' V: 1"=10"
DRAWING NO.: CPN-PP-004
059

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HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. KASHIF 10–20–01	REFERENCE DRAWINGS	REVISIONS
DRAWN: R. KASHIF 10–20–01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: P. ELMAN 9–24–03		
APPROVED: P. ELMAN 01–2004		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

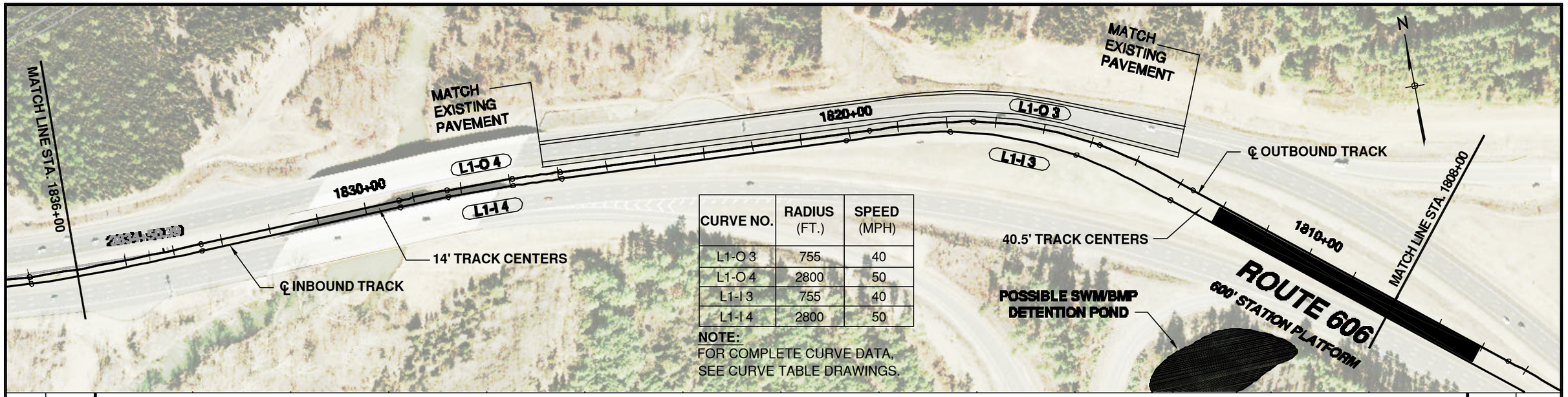
PROFILE
DULLES GREENWAY
L1 ALIGNMENT
STATION 1836+00 TO 1864+00

SCALE: H: 1"=100' V: 1"=10'

DRAWING NO.: GPN–PP–004A

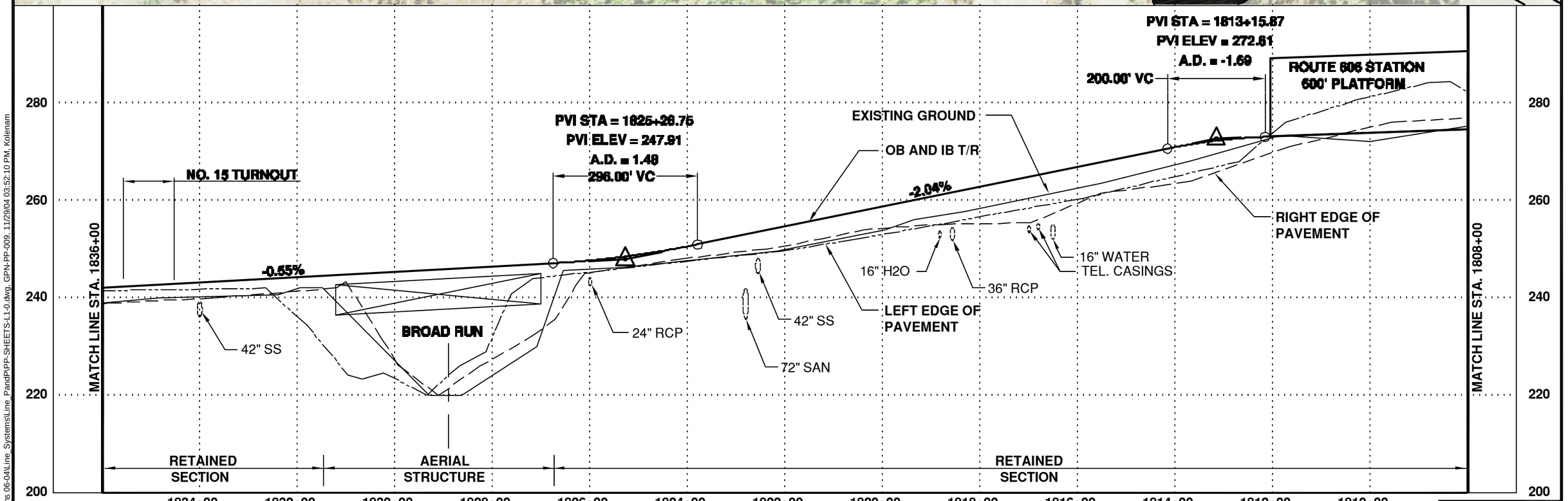
060

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Line_PandP\PP-SHEETS-L1-0.dwg, GPN-PP-004A, 08/02/04 10:11:00 AM, Kolenam



CURVE NO.	RADIUS (FT.)	SPEED (MPH)
L1-O 3	755	40
L1-O 4	2800	50
L1-I 3	755	40
L1-I 4	2800	50

NOTE:
FOR COMPLETE CURVE DATA, SEE CURVE TABLE DRAWINGS.



HALF-SIZE DRAWING

CONTRACT NO.:

O:\002_dulles\FEIS GenPlans 06-04\Line_SystemsLine_PandPPP-SHEETS-L1-0.dwg, GPN-PP-009, 11/29/04 03:52:10 PM, Kolenam

DESIGNED:	R. KASHIF	10-20-01 DATE
DRAWN:	R. KASHIF	10-20-01 DATE
CHECKED:	T. TWYMAN	3-11-02 DATE
APPROVED:	P. ELMAN	01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

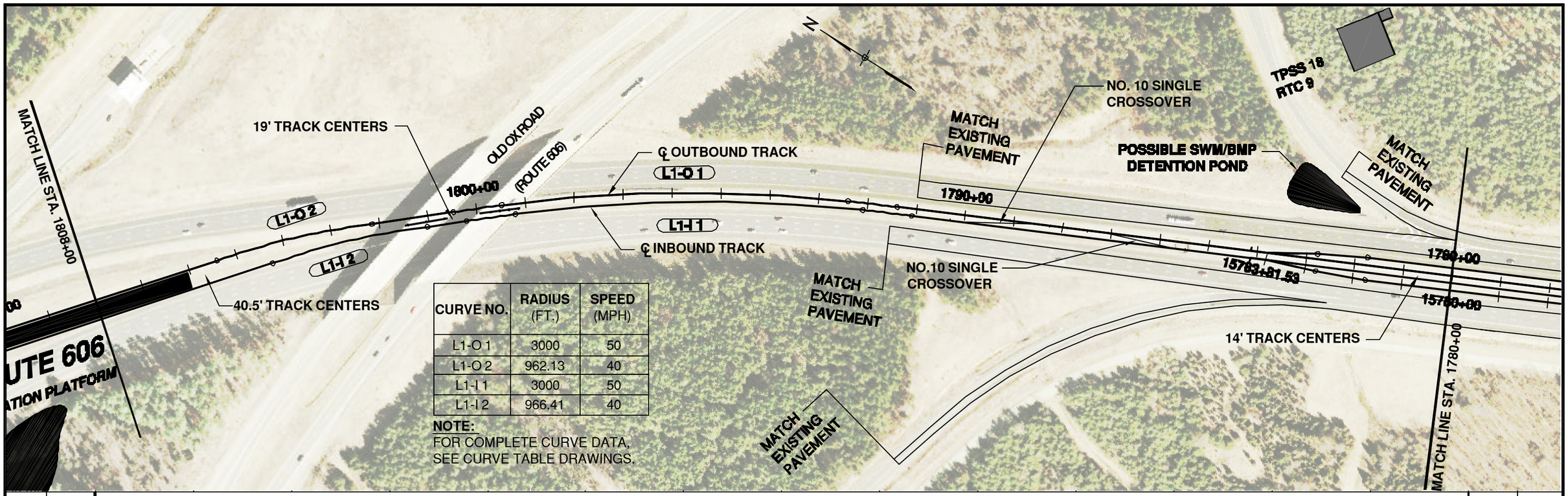
FINAL GENERAL PLANS
JULY 2004

PLAN AND PROFILE
DULLES GREENWAY
L1 ALIGNMENT – ROUTE 606 STATION
STATION 1808+00 TO 1836+00

SCALE: H: 1"=100' V: 1"=10'

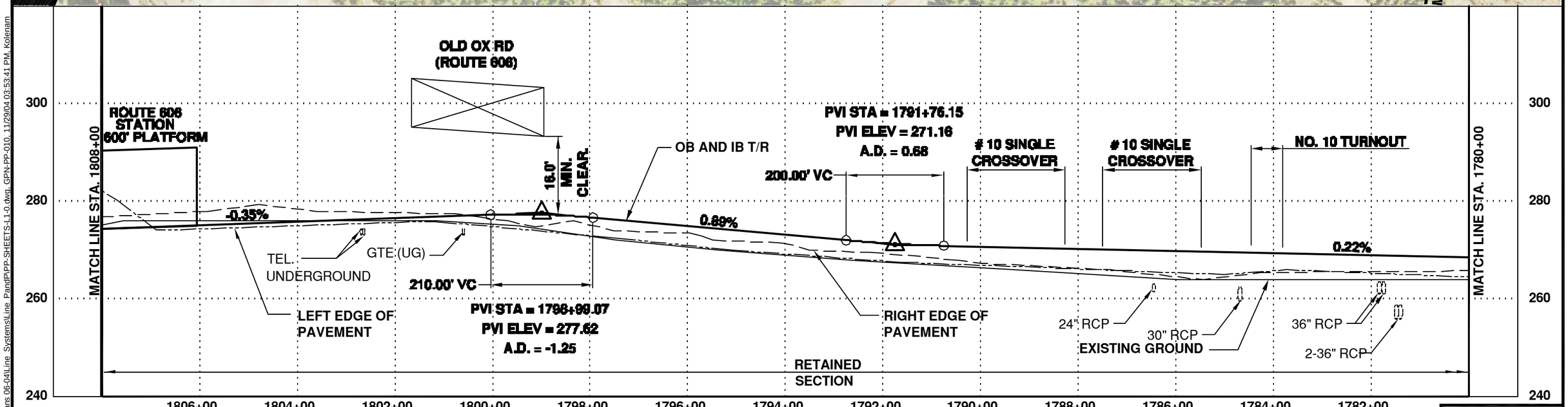
DRAWING NO.: GPN-PP-009

061



CURVE NO.	RADIUS (FT.)	SPEED (MPH)
L1-O 1	3000	50
L1-O 2	962.13	40
L1-I 1	3000	50
L1-I 2	966.41	40

NOTE:
FOR COMPLETE CURVE DATA, SEE CURVE TABLE DRAWINGS.



HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. KASHIF	10-20-01 DATE		
DRAWN: R. KASHIF	10-20-01 DATE		
CHECKED: P. ELMAN	9-24-03 DATE		
APPROVED: P. ELMAN	01-2004 DATE		

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Manos
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

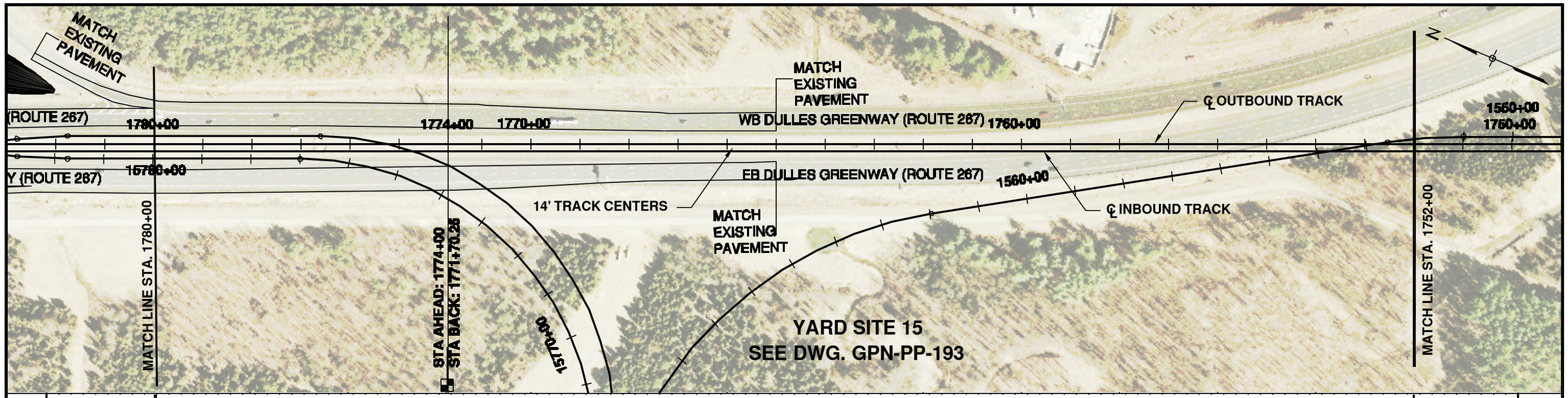
PLAN AND PROFILE
DULLES GREENWAY
L1 ALIGNMENT
STATION 1780+00 TO 1808+00

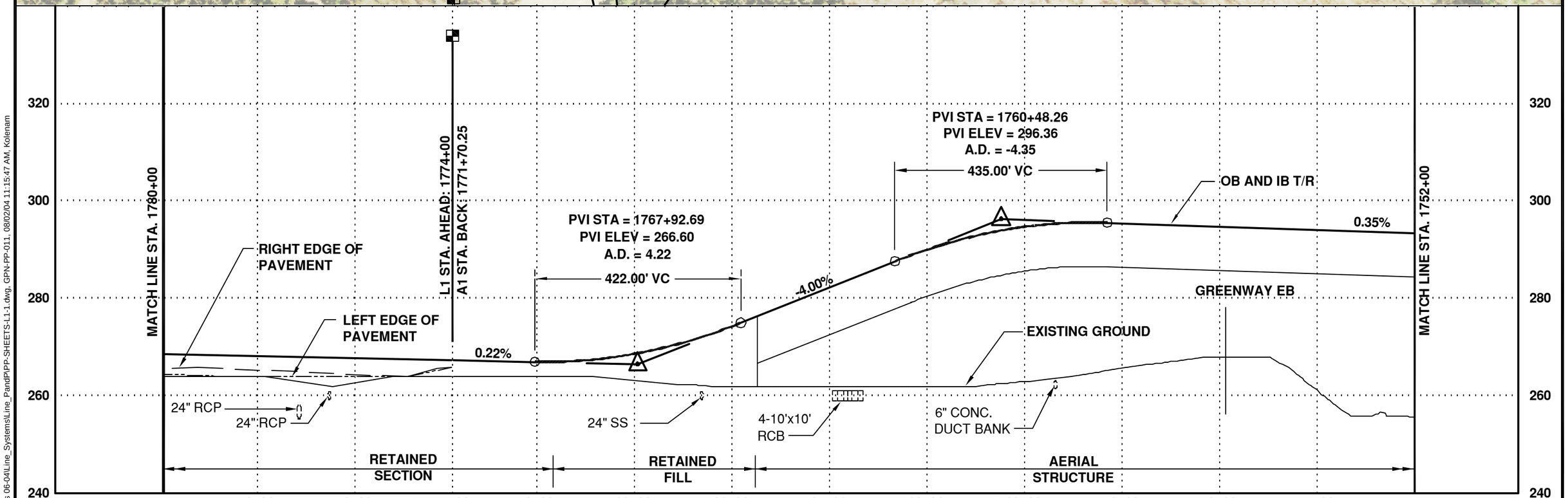
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DRAWING NO.: GPN-PP-010

062

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADLANSACAY 07-01-01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: R. KASHIF 07-06-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: T. TWYMAN 3-11-02 DATE		
APPROVED: P. ELMAN 01-2004 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

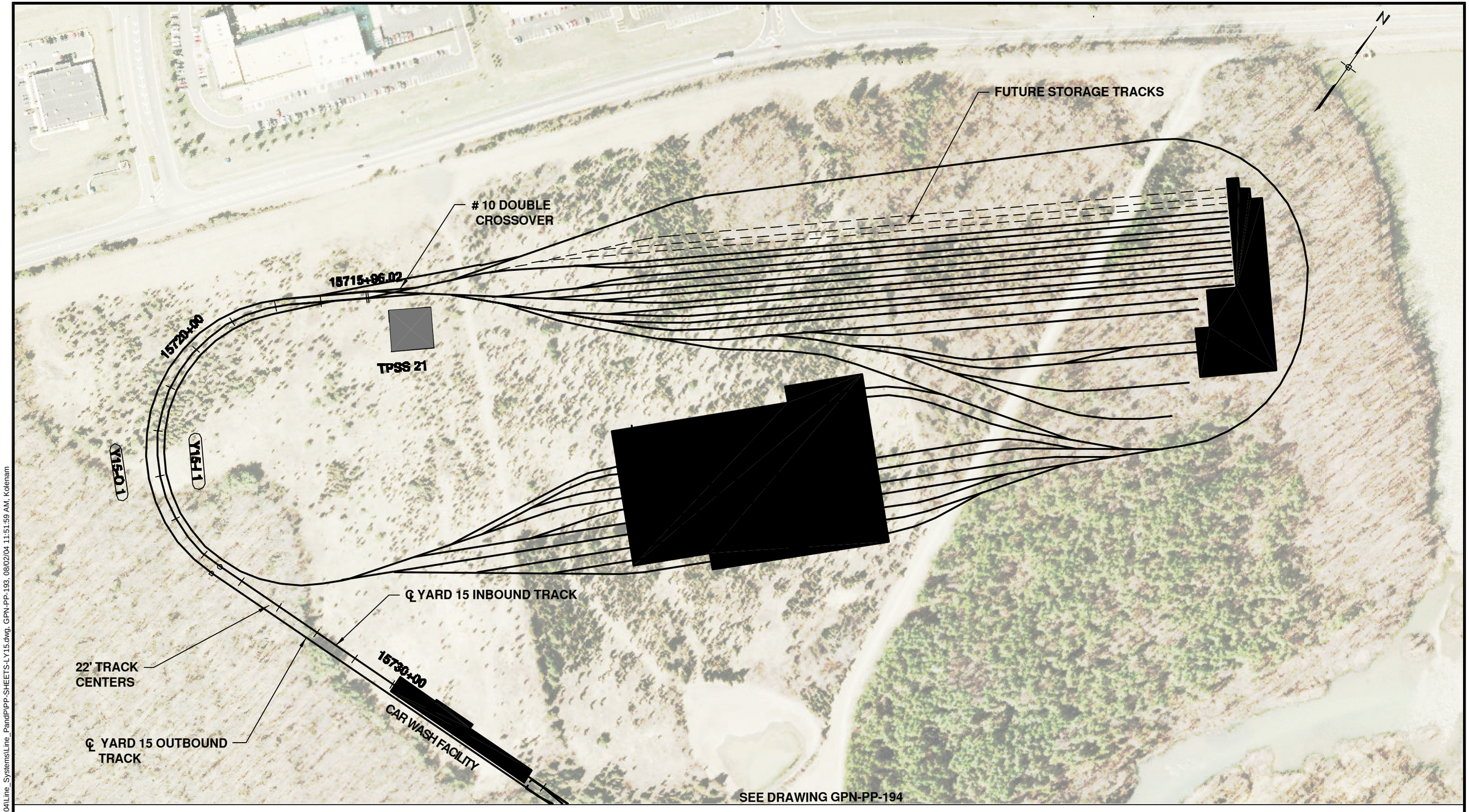
PLAN AND PROFILE
DULLES GREENWAY
L1 ALIGNMENT
STATION 1752+00 TO 1780+00

SCALE: H: 1"=100' V: 1"=10'

DRAWING NO.: GPN-PP-011

063

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: P. KASHF — 02-10-02 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: D. NADSEN — 02-20-02 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: T. TWYMAN — 03-11-02 DATE		
APPROVED: P. ELMAN — 01-2004 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED — PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PLAN
DULLES GREENWAY
YARD SITE 15

SCALE: 1"=100' (50 0 50 100)

DRAWING NO.: GPN-PP-193

064

CURVE NO.	RADIUS (FT.)	SPEED (MPH)
Y15-O 1	330	N/A
Y15-O 2	7000	N/A
Y15-O 3	7000	N/A
Y15-I 1	315	N/A

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.

15715+96.02
TPSS 21
15720+00
Y15-I 1
Y15-O 1
22' TRACK CENTERS
15730+00
CAR WASH
℄ YARD 15 OUTBOUND TRACK
℄ YARD 15 INBOUND TRACK
#10 DOUBLE CROSSOVER
15740+00
Y15-O 2
Y15-O 3
15750+00
MATCH LINE STA. 15744+00
N

PVI STA = 15721+05.58
PVI ELEV = 280.12
A.D. = -1.51
302.00' VC
OB AND IB T/R
PVI STA = 15728+83.63
PVI ELEV = 269.92
A.D. = 1.11
222.00' VC
CAR WASH
10 DOUBLE CROSSOVER
PVI STA = 15737+77.64
PVI ELEV = 268.13
A.D. = 0.55
200.00' VC
PVI STA = 15747+07.55
PVI ELEV = 271.39
A.D. = 3.65
730.00' VC
Y15 YARD TRACKS
0.20%
-1.31%
-0.20%
0.35%
EXISTING GROUND
MATCH LINE STA. 15744+00
AT GRADE
FILL
AT GRADE
RETAINED FILL
AERIAL STRUCTURE
300
280
260
240
15718+00
15720+00
15722+00
15724+00
15726+00
15728+00
15730+00
15732+00
15734+00
15736+00
15738+00
15740+00
15742+00

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. KASHIF	02-10-02	DATE
DRAWN: D. MADSEN	02-20-02	DATE
CHECKED: T. TWYMAN	03-11-02	DATE
APPROVED: P. ELMAN	01-2004	DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS
SUBMITTED
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

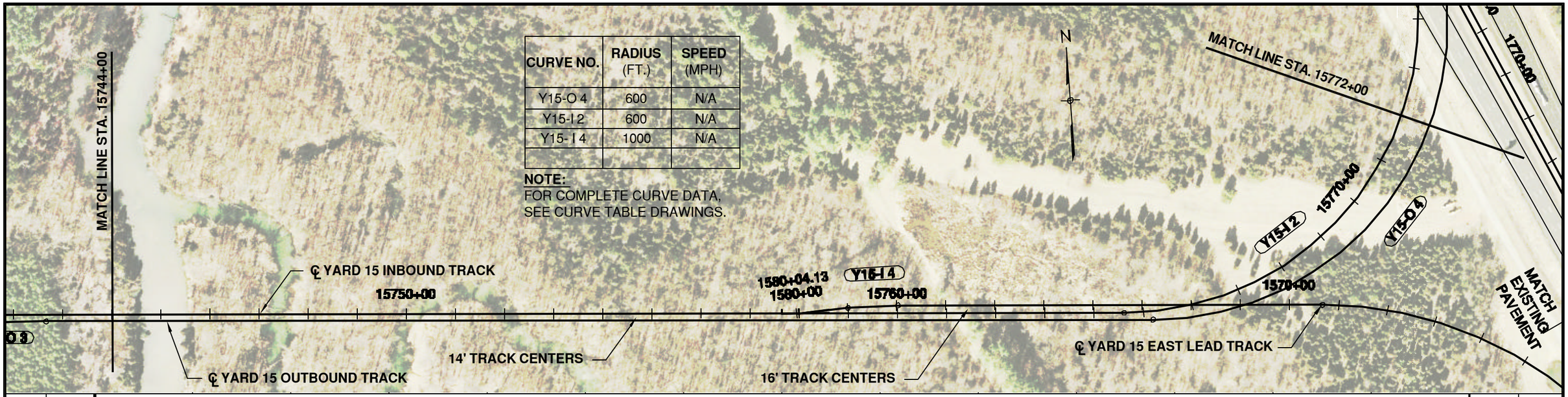
PLAN AND PROFILE
DULLES GREENWAY
L1 ALIGNMENT – YARD 15 CONNECTION
STATION 15716+00 TO 15744+00

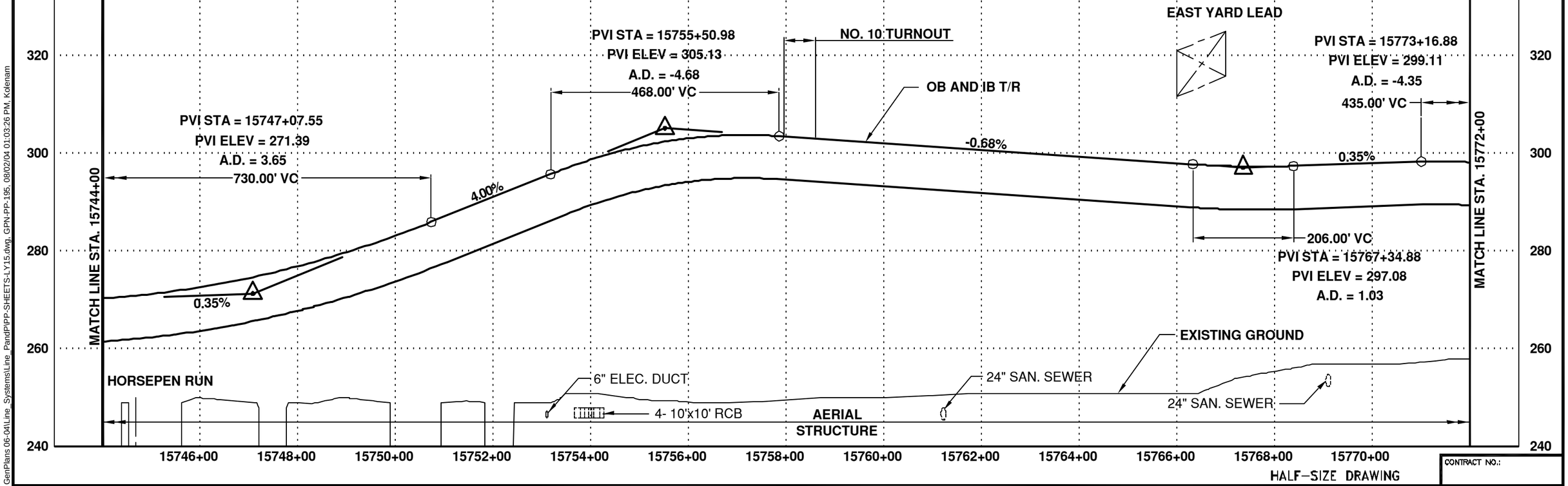
SCALE: H: 1"=100' V: 1"=10'
DRAWING NO.: GPN-PP-194
065

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CURVE NO.	RADIUS (FT.)	SPEED (MPH)
Y15-O 4	600	N/A
Y15-I 2	600	N/A
Y15-I 4	1000	N/A

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.





HALF–SIZE DRAWING

CONTRACT NO.:

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Line_PandP\PP-SHEETS-LY15.dwg, GPN-PP-195, 08/02/04 01:03:26 PM, Kolenam

DESIGNED:	P. KASHIF	02–10–02 DATE
DRAWN:	D. NADSEN	02–20–02 DATE
CHECKED:	T. TWYMAN	03–11–02 DATE
APPROVED:	P. ELMAN	01–2004 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Morales
PROJECT MANAGER

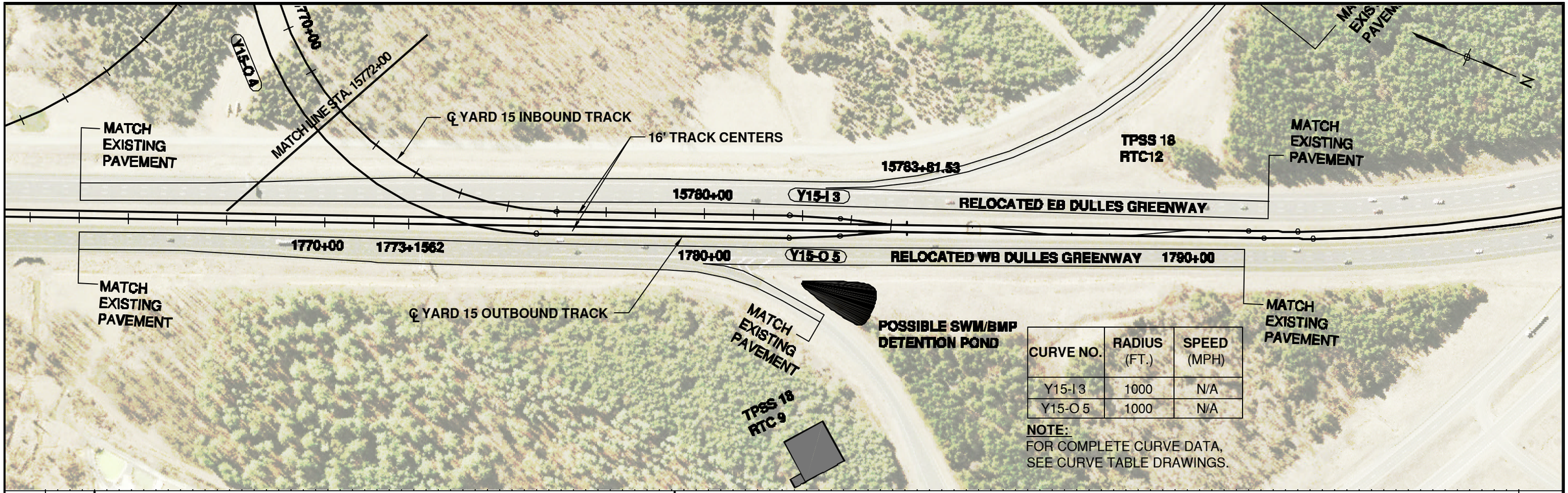
FINAL GENERAL PLANS
JULY 2004

PLAN AND PROFILE
DULLES GREENWAY
L1 ALIGNMENT – YARD 15 CONNECTION
STATION 15744+00 TO 15772+00

SCALE: H: 1"=100' 50 0 100
V: 1"=10' 5 0 10

DRAWING NO.: GPN–PP–195

066



CURVE NO.	RADIUS (FT.)	SPEED (MPH)
Y15-I 3	1000	N/A
Y15-O 5	1000	N/A

NOTE:
FOR COMPLETE CURVE DATA, SEE CURVE TABLE DRAWINGS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. KASHIF	02-10-04 DATE	
DRAWN: D. MADSEN	02-20-04 DATE	
CHECKED: T. TWYMAN	03-11-2004 DATE	
APPROVED: P. ELMAN	01-2004 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

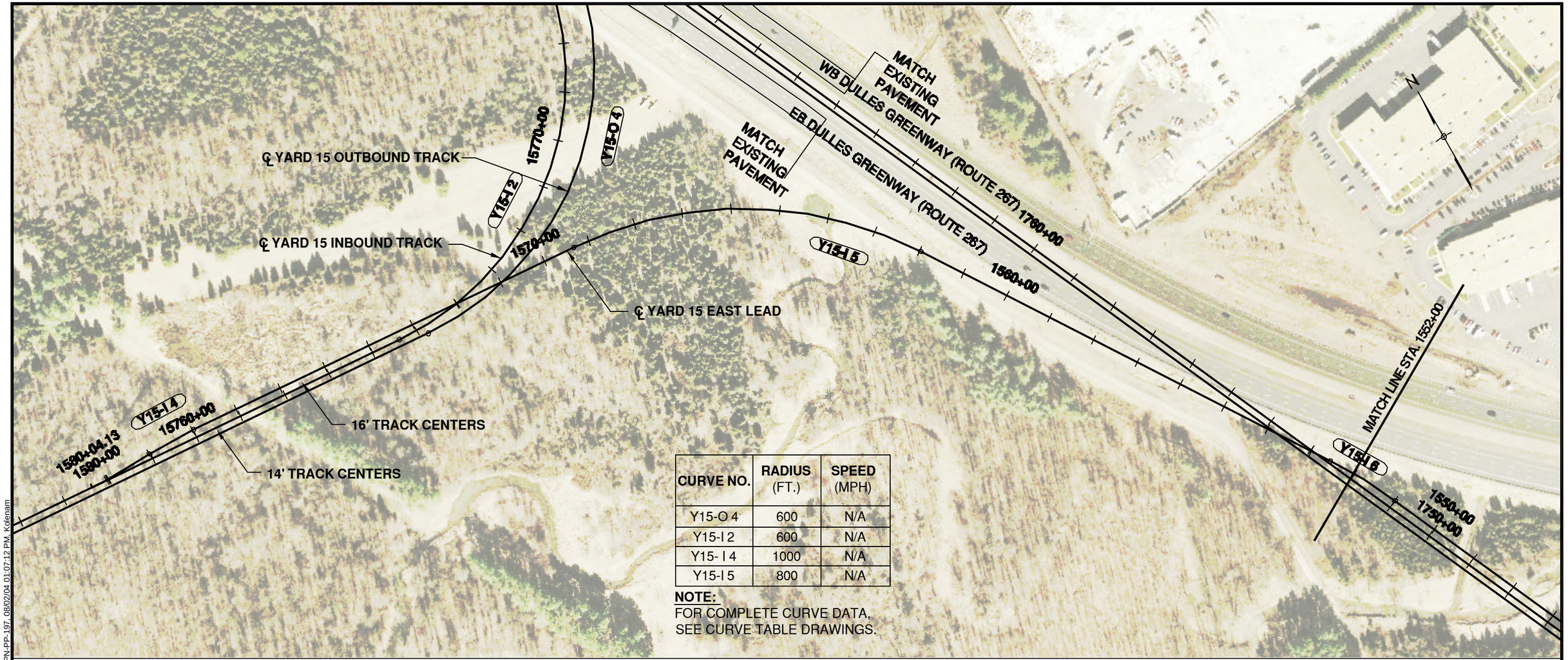
PLAN AND PROFILE
DULLES GREENWAY
L1 ALIGNMENT – YARD 15 CONNECTION
STATION 15772+00 TO 15783+81.53

SCALE: H: 1"=100' 50 0 100
V: 1"=10' 5 0 10

DRAWING NO.: GPN-PP-196

067

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CURVE NO.	RADIUS (FT.)	SPEED (MPH)
Y15-O 4	600	N/A
Y15-I 2	600	N/A
Y15- I 4	1000	N/A
Y15-I 5	800	N/A

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. KASHIF 02-10-02
DRAWN: D. MADSEN 02-20-02
CHECKED: T. TWYMAN 03-11-02
APPROVED: P. ELNAN 01-2004
DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

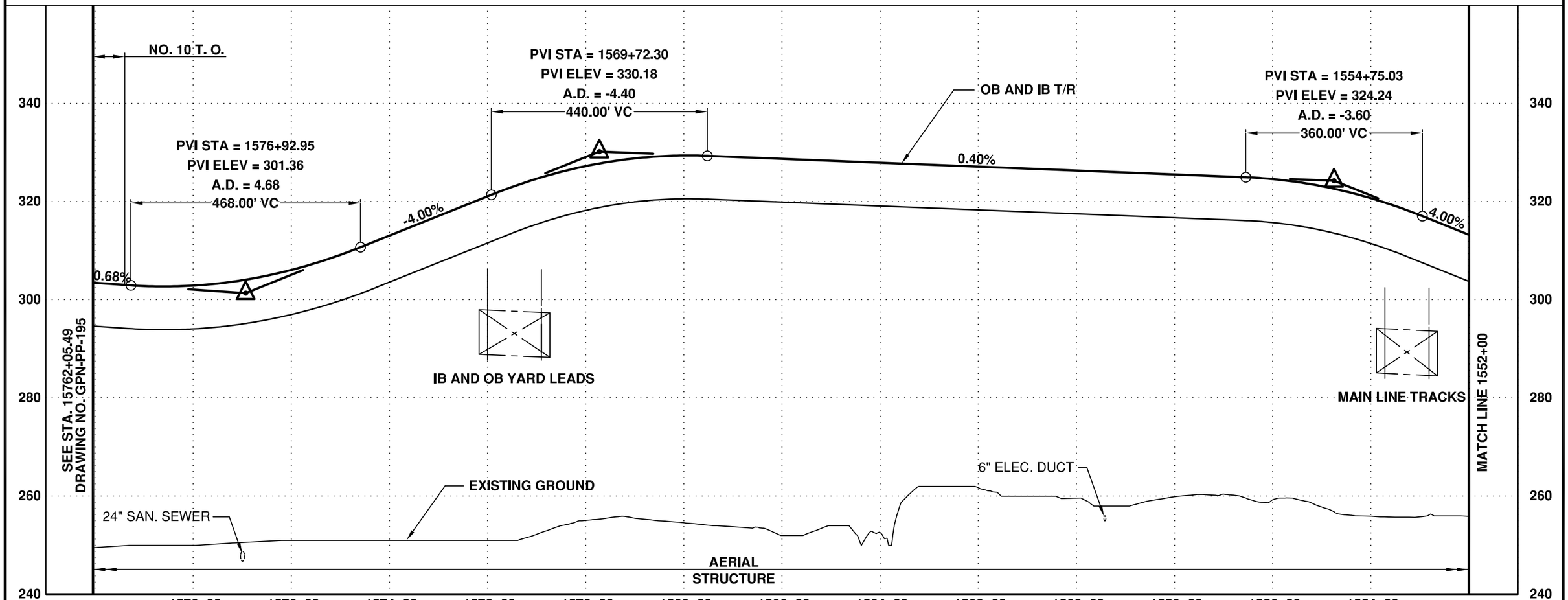
SUBMITTED: CAPITAL TRANSIT CONSULTANTS
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PLAN
DULLES GREENWAY
L1 ALIGNMENT – YARD 15 EAST CONNECTION
STATION 1552+00 TO 1580+04.13

SCALE: 1" = 100' (50 0 50 100)
DRAWING NO.: GPN-PP-197
068

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CONTRACT NO.:

DESIGNED: R. KASHIF 02-10-02 DATE	REFERENCE DRAWINGS: NUMBER / DESCRIPTION	REVISIONS: DATE / BY / DESCRIPTION
DRAWN: D. MADSEN 02-20-02 DATE		
CHECKED: T. TWYMAN 03-11-02 DATE		
APPROVED: P. ELMAN 01-2004 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

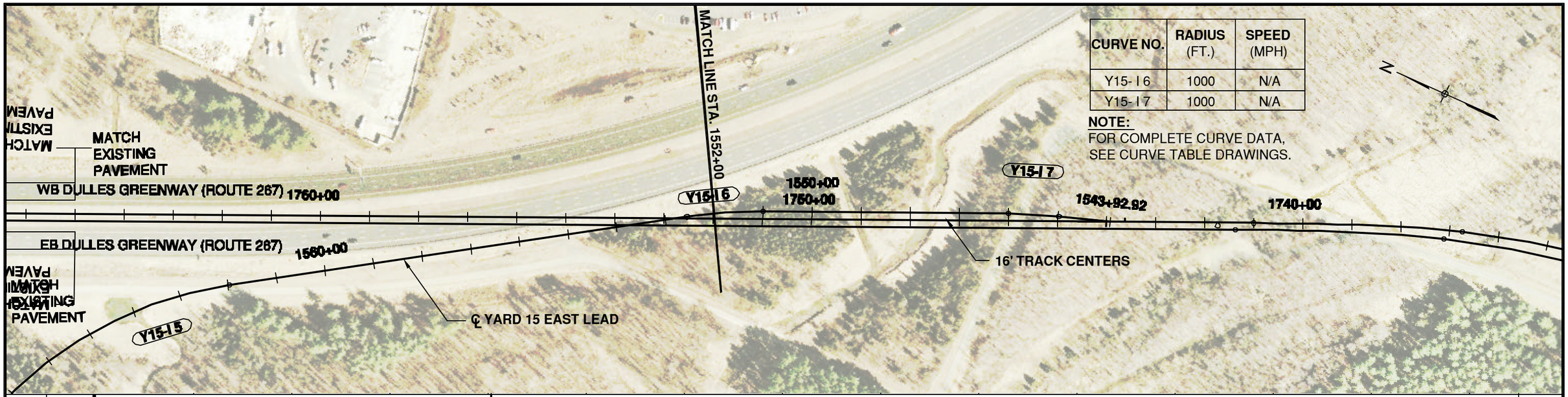
PROFILE
DULLES GREENWAY
L1 ALIGNMENT – YARD 15 EAST CONNECTION
STATION 1552+00 TO 1580+04.13

SCALE: H: 1"=100' 50 0 100; V: 1"=10' 5 0 10

DRAWING NO.: GPN-PP-198

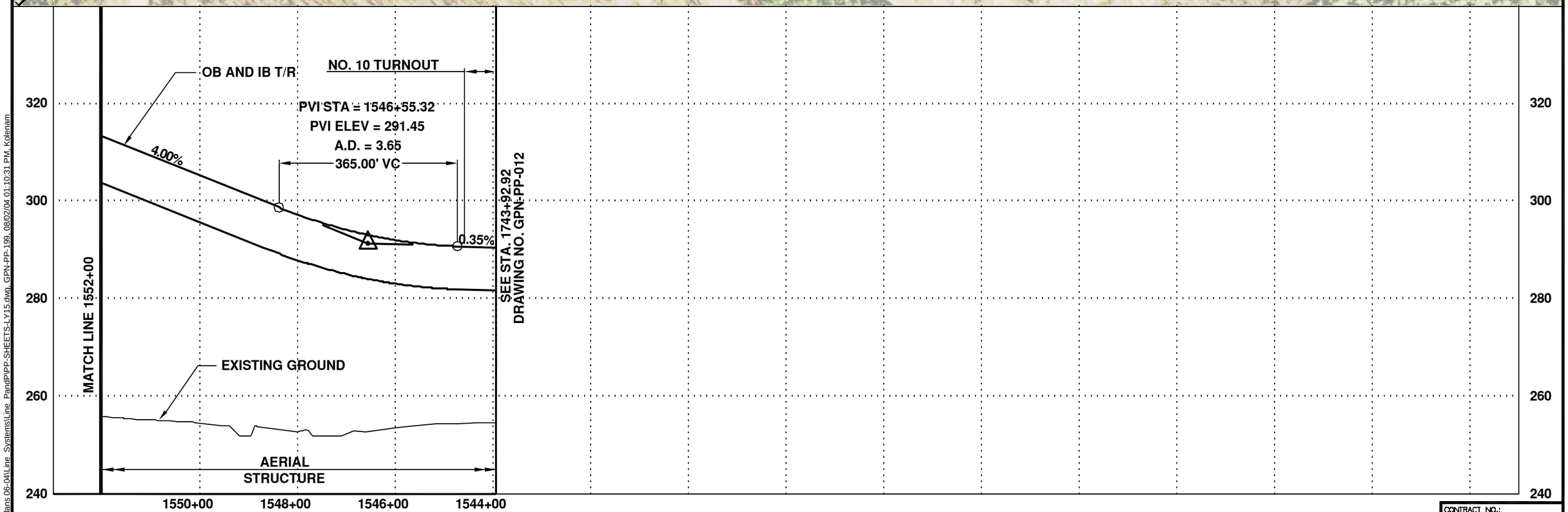
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CURVE NO.	RADIUS (FT.)	SPEED (MPH)
Y15-I 6	1000	N/A
Y15-I 7	1000	N/A

NOTE:
FOR COMPLETE CURVE DATA, SEE CURVE TABLE DRAWINGS.



HALF-SIZE DRAWING

CONTRACT NO.:

REFERENCE DRAWINGS		REVISIONS		
NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION

DESIGNED: R. KASHIF 02-10-02
DRAWN: D. MADSEN 02-20-02
CHECKED: T. TWYMAN 03-11-02
APPROVED: P. ELMAN 01-2004
DATE

DULLES CORRIDOR RAPID TRANSIT PROJECT

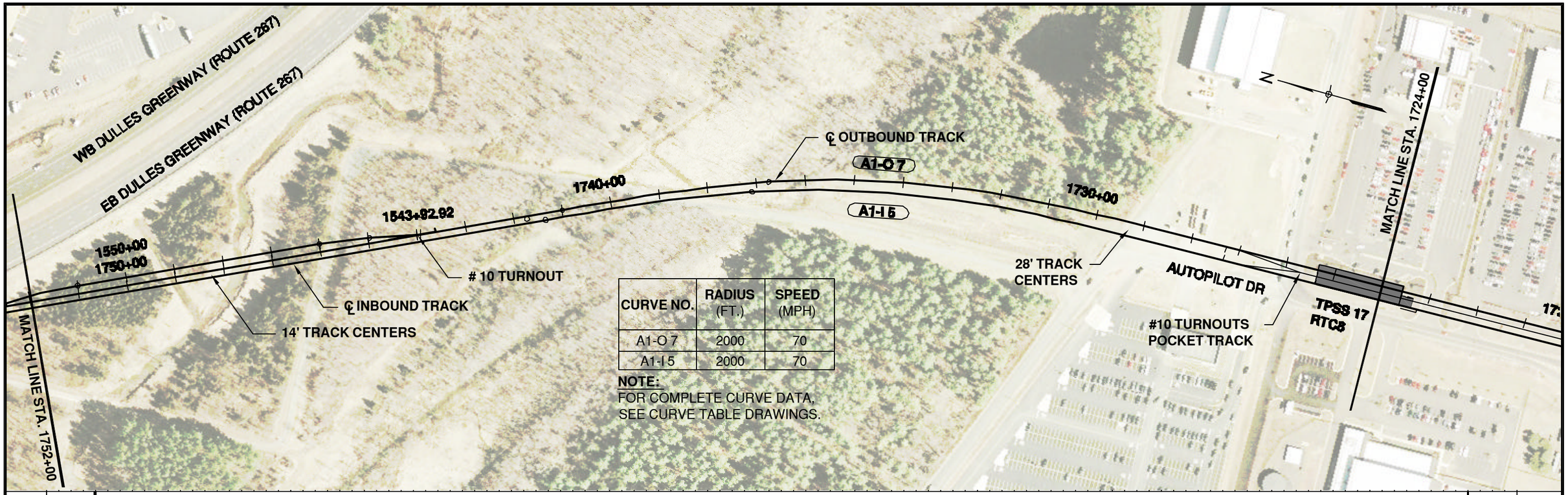
CAPITAL TRANSIT CONSULTANTS
SUBMITTED
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PLAN AND PROFILE
DULLES GREENWAY
L1 ALIGNMENT - YARD 15 EAST CONNECTION
STATION 1543+92.92 TO 1552+00

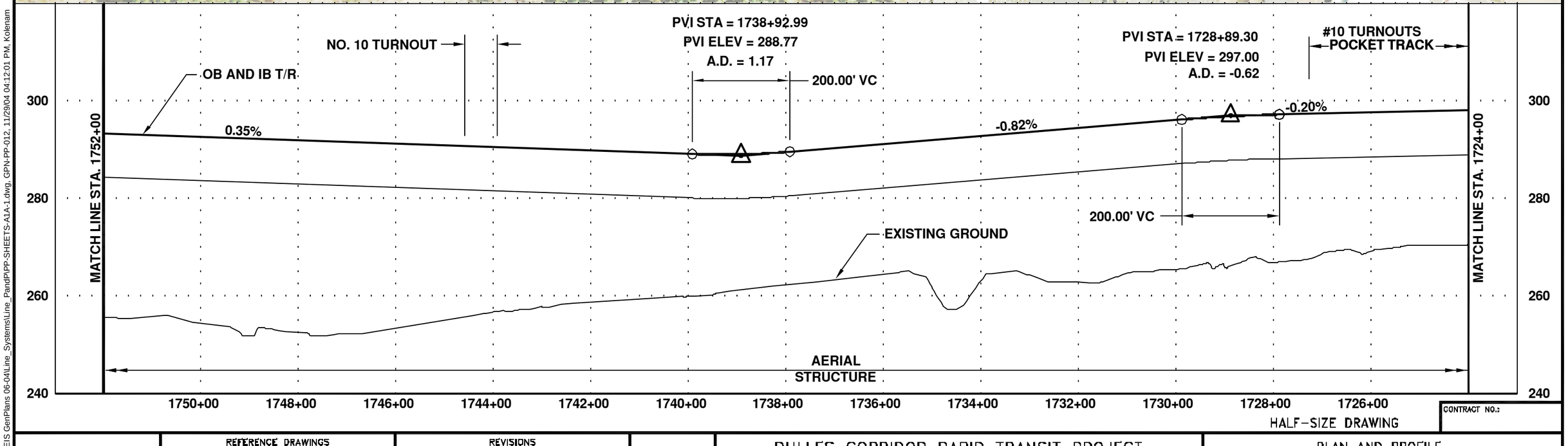
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070

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CURVE NO.	RADIUS (FT.)	SPEED (MPH)
A1-O 7	2000	70
A1-I 5	2000	70

NOTE:
FOR COMPLETE CURVE DATA, SEE CURVE TABLE DRAWINGS.



HALF-SIZE DRAWING

CONTRACT NO.:

REFERENCE DRAWINGS		REVISIONS		
NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION

DESIGNED: D. MADLANSACAY 10-20-01 DATE
DRAWN: R. KASHIF 10-20-01 DATE
CHECKED: T. TWYMAN 3-11-02 DATE
APPROVED: P. ELMAN 01-2004 DATE

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS
SUBMITTED
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

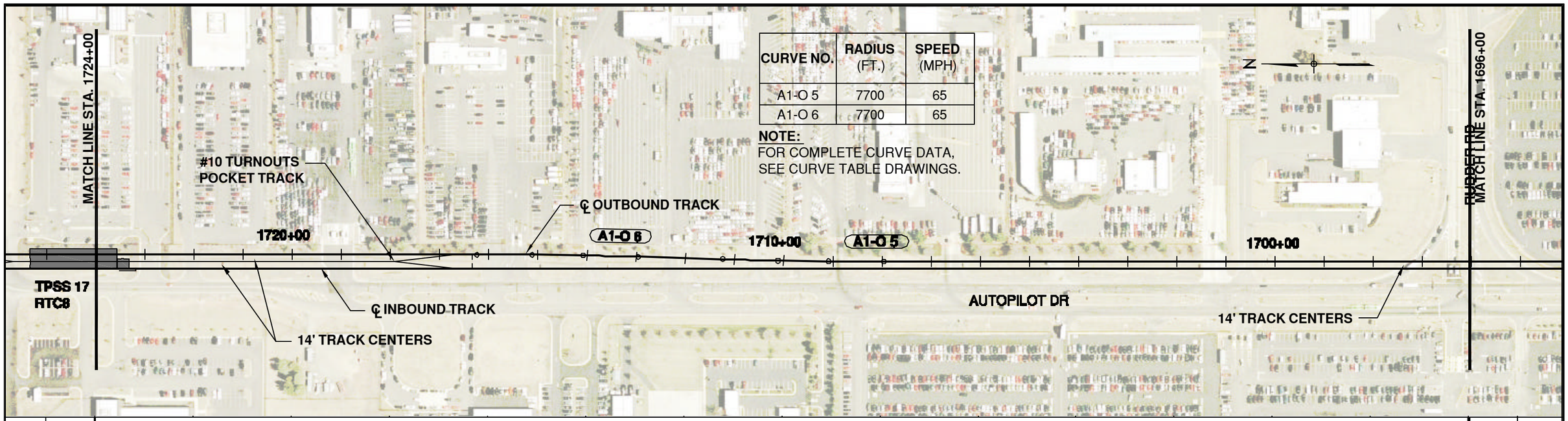
PLAN AND PROFILE
DULLES AIRPORT
A1 ALIGNMENT
STATION 1724+00 TO 1752+00

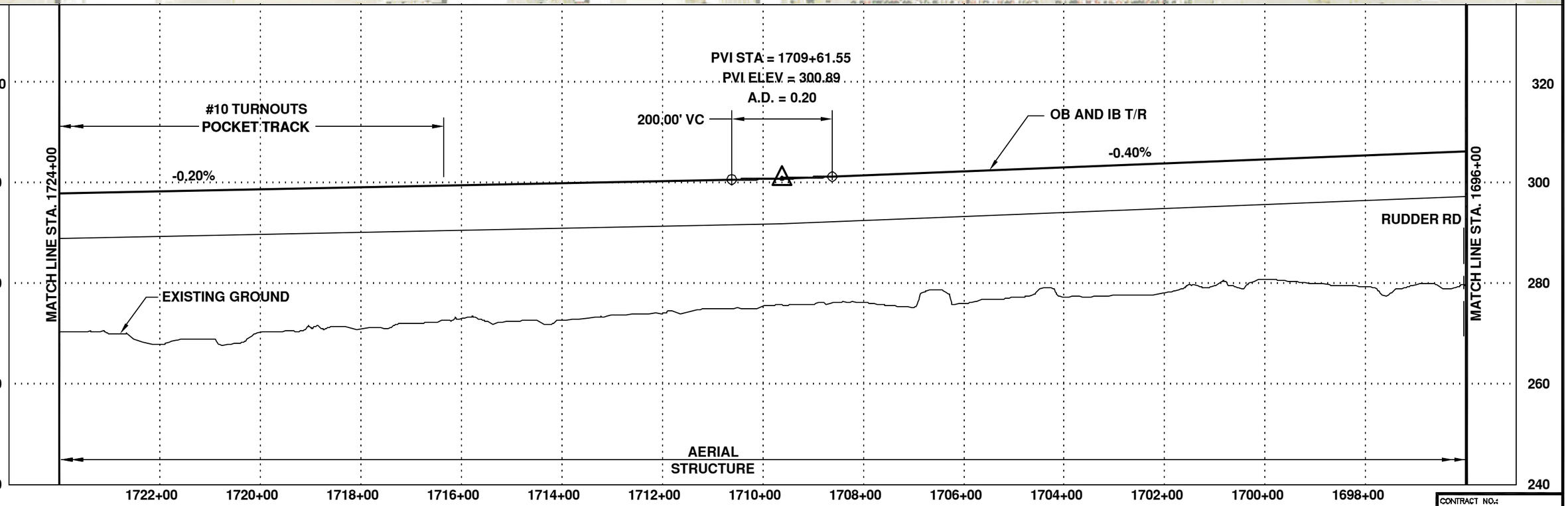
SCALE: H: 1"=100' V: 1"=10' 50 0 100 5 0 10
DRAWING NO.: GPN-PP-012
071

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CURVE NO.	RADIUS (FT.)	SPEED (MPH)
A1-O 5	7700	65
A1-O 6	7700	65

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.





HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADLANSACAY 10-20-01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: R. KASHIF 10-20-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: P. ELMAN 9-29-03 DATE		
APPROVED: P. ELMAN 01-2004 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED — PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PLAN AND PROFILE
DULLES AIRPORT
A1 ALIGNMENT
STATION 1696+00 TO 1724+00

SCALE: H: 1"=100' 50 0 100; V: 1"=10' 5 0 10

DRAWING NO.: GPN-PP-013

072

O:\002 dulles\FEIS GenPlans 06-04\Line Systems\Line PandP\PP-SHEETS-A1A-1.dwg, GPN-PP-013, 11/29/04 05:07:56 PM, Kolenam

CURVE NO.	RADIUS (FT.)	SPEED (MPH)
A1-O 4	770	40
A1-I 4	755	40

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.

N

RUDDER RD

MATCH LINE STA. 1696+00

℄ OUTBOUND TRACK

1690+00

14' TRACK CENTERS

℄ INBOUND TRACK

PORTAL

1680+00
AUTOPILOT DR

A1-O 4

A1-I 4

14' TRACK CENTERS

MATCH LINE STA. 1668+00

PACKAGE CT

AVIATION DR

1670+00

EA

COPILOT WAY

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADLANSACAY 10-20-01
DRAWN: R. KASHIF 10-20-01
CHECKED: P. ELMAN 9-29-03
APPROVED: P. ELMAN 01-2004

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

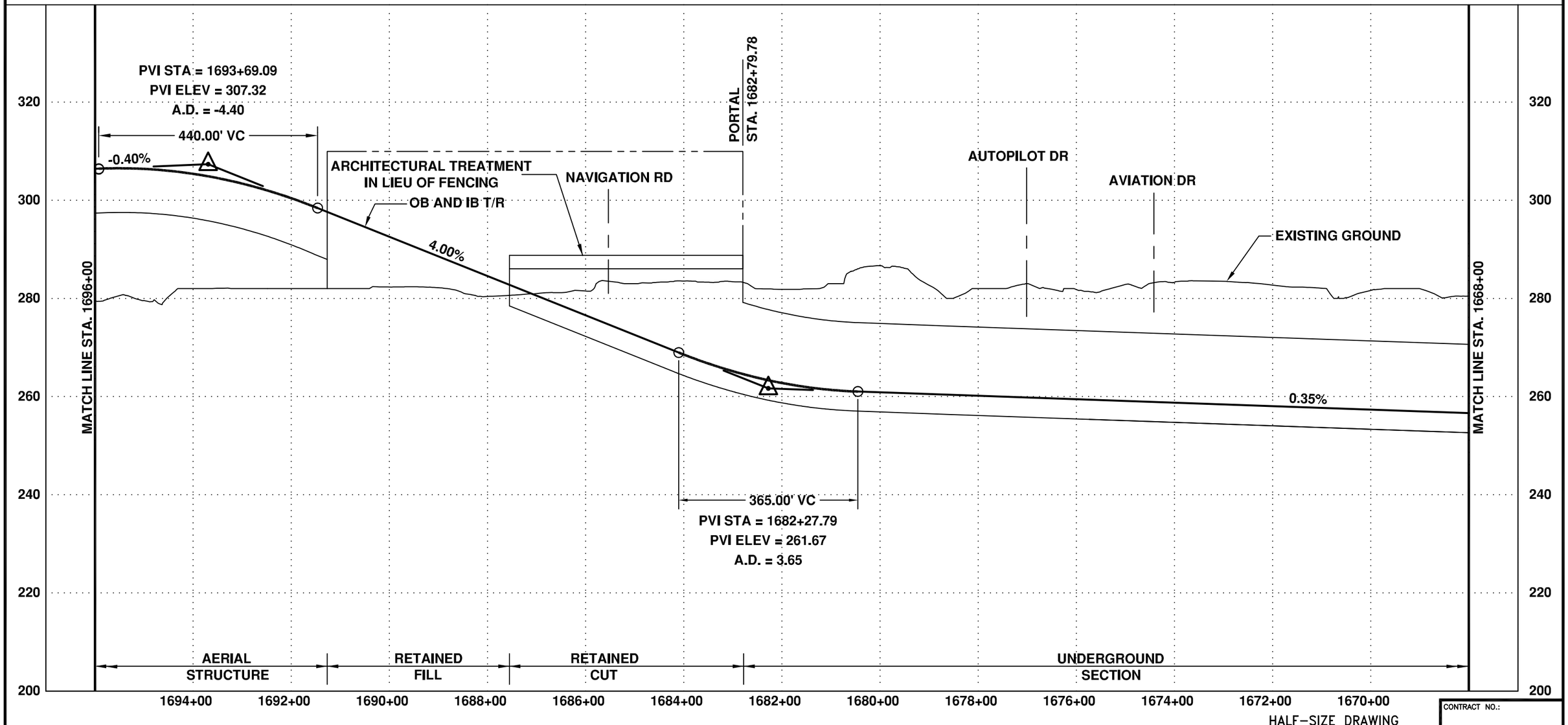
PLAN
DULLES AIRPORT
A1 ALIGNMENT
STATION 1668+00 TO 1696+00

SCALE: 1"=100' 50 0 50 100

DRAWING NO.: GPN-PP-014

073

O:\002_dulles\FEIS GenPlans 06-04\Line_SystemsLine_PandP\PPP-SHEETS-A1A-1.dwg, GPN-PP-014, 08/02/04 01:17:50 PM, Kolenam



HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADLANSACAY 10-20-01 DATE	REFERENCE DRAWINGS	REVISIONS	DULLES CORRIDOR RAPID TRANSIT PROJECT
DRAWN: R. KASHIF 10-20-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION	CAPITAL TRANSIT CONSULTANTS
CHECKED: P. ELMAN 9-29-03 DATE			SUBMITTED Diana C Mendes PROJECT MANAGER
APPROVED: P. ELMAN 01-2004 DATE			FINAL GENERAL PLANS JULY 2004

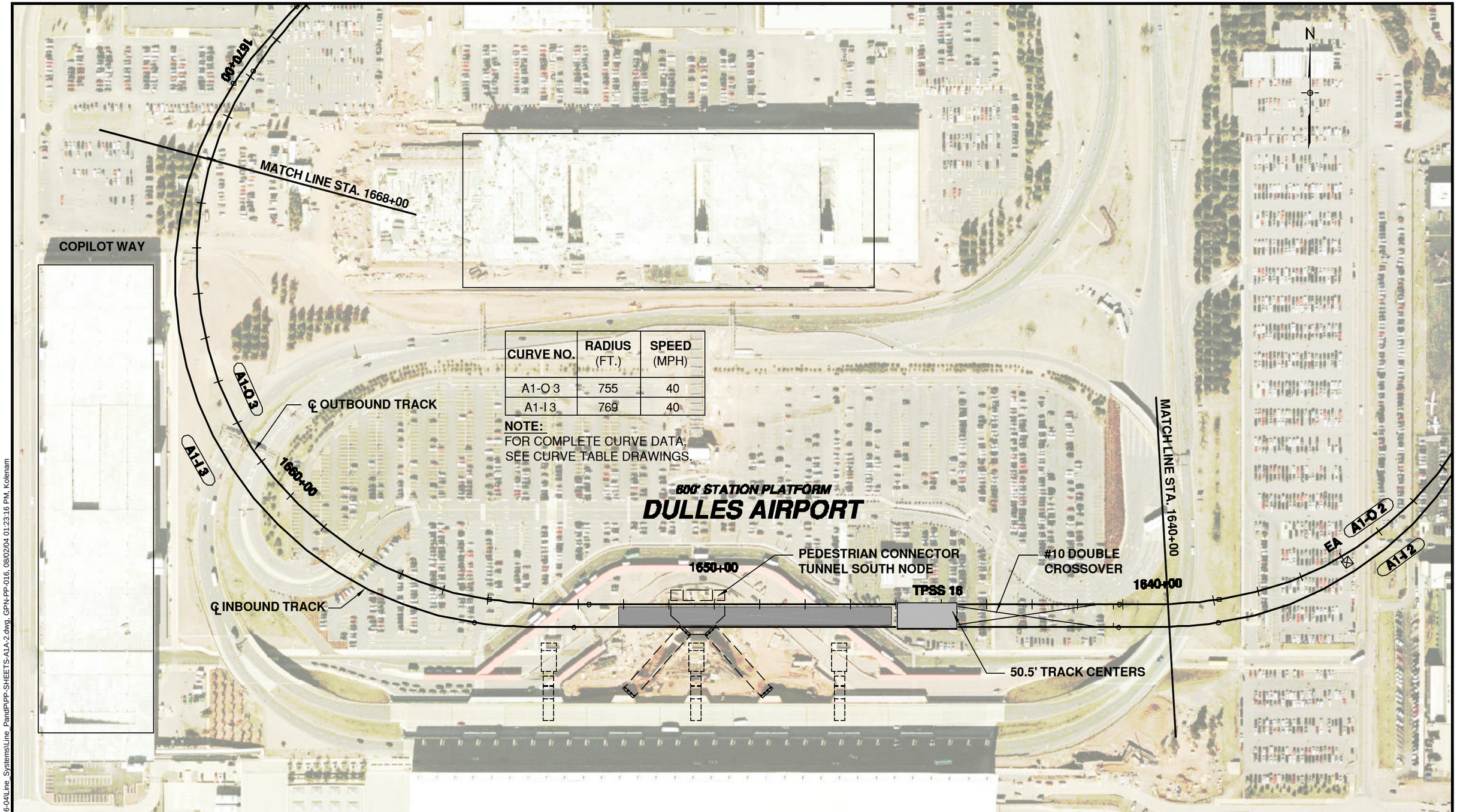
PROFILE
DULLES AIRPORT
A1 ALIGNMENT
STATION 1668+00 TO 1696+00

SCALE: H: 1"=100' V: 1"=10' (50 0 100 / 5 0 10)

DRAWING NO.: GPN-PP-015

074

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Line_Pand\PP-SHEETS-A1A-1.dwg, GPN-PP-015, 08/02/04 01:19:40 PM, Kolenam



CURVE NO.	RADIUS (FT.)	SPEED (MPH)
A1-O 3	755	40
A1-I 3	769	40

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. NADLANSACAY 07-01-01 DATE
DRAWN: R. KASHIF 07-02-01 DATE
CHECKED: T. TWYMAN 3-11-02 DATE
APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

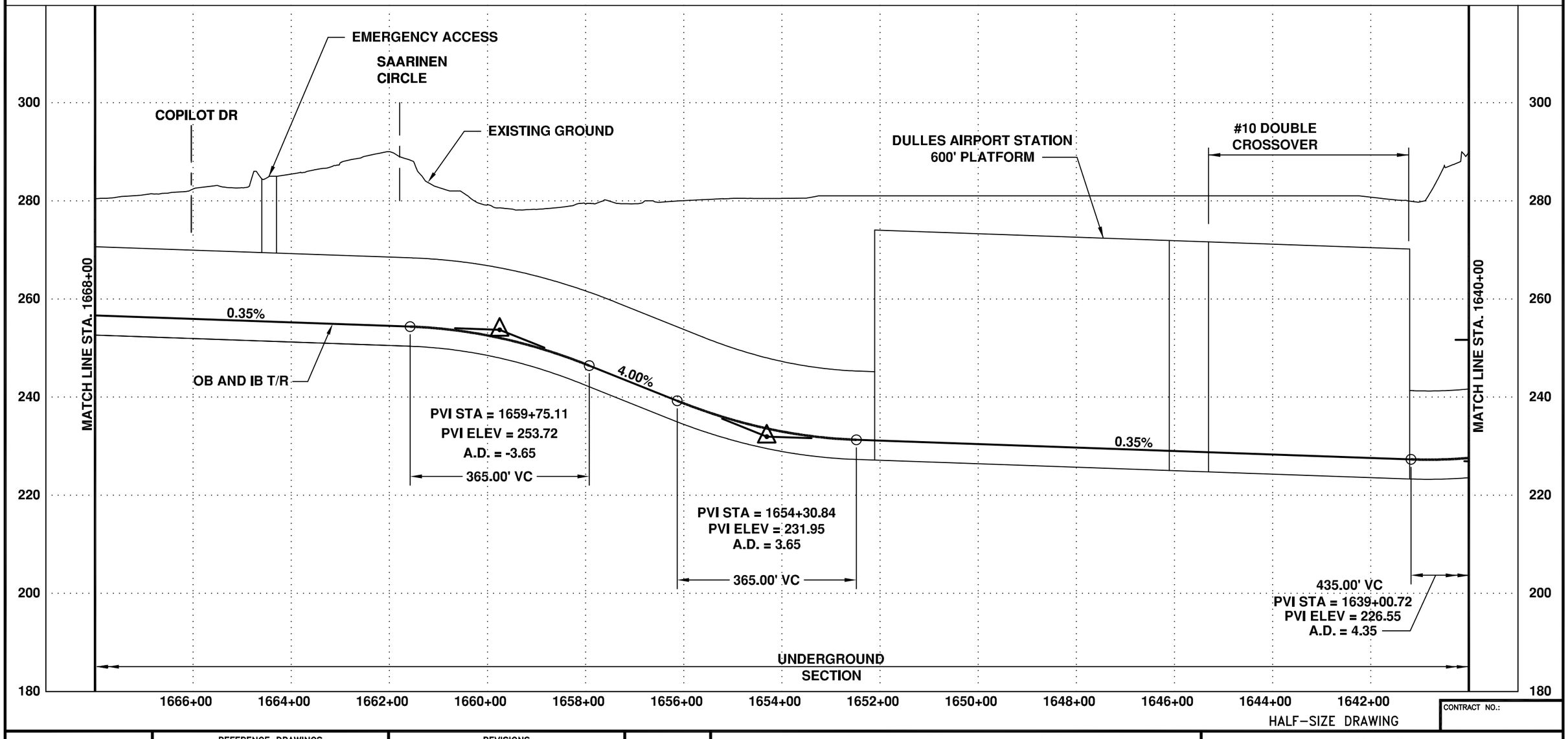
CAPITAL TRANSIT CONSULTANTS
SUBMITTED
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PLAN
DULLES AIRPORT
A1 ALIGNMENT-DULLES AIRPORT STATION
STATION 1640+00 TO 1668+00

SCALE: 1"=100' 50 0 50 100
DRAWING NO.: GPN-PP-016
075

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADLANSACAY	07-01-01 DATE
DRAWN: R. KASHIF	07-02-01 DATE
CHECKED: T. TWYMAN	3-11-02 DATE
APPROVED: P. ELMAN	01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

Dana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

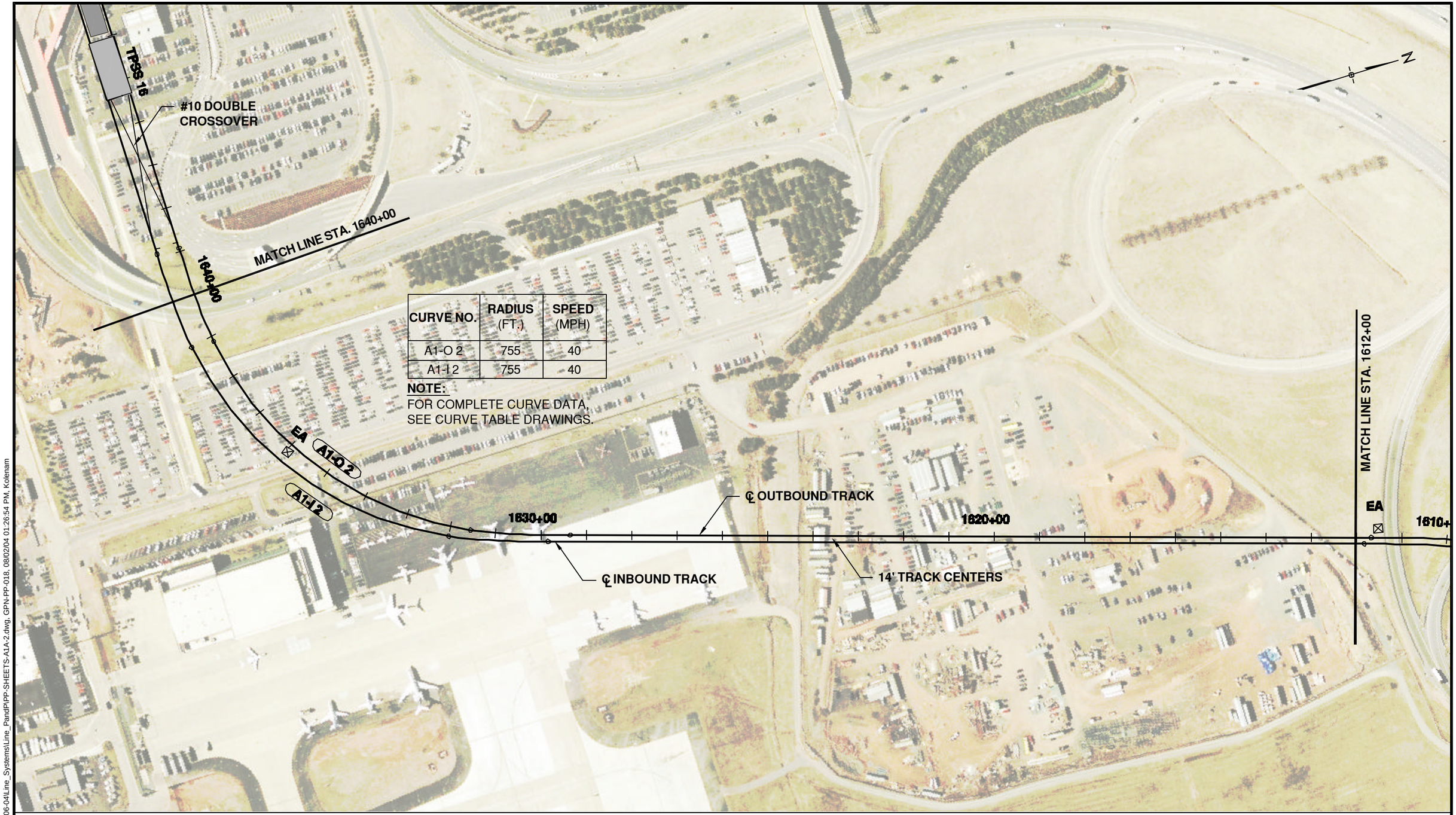
PROFILE
DULLES AIRPORT
A1 ALIGNMENT–DULLES AIRPORT STATION
STATION 1640+00 TO 1668+00

SCALE: H: 1"=100' V: 1"=10'

DRAWING NO.: GPN-PP-017

076

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CURVE NO.	RADIUS (FT.)	SPEED (MPH)
A1-O 2	755	40
A1-I 2	755	40

NOTE:
FOR COMPLETE CURVE DATA, SEE CURVE TABLE DRAWINGS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADLANSACAY 07-01-01 DATE
DRAWN: R. KASHIF 07-02-01 DATE
CHECKED: P. ELMAN 9-29-03 DATE
APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

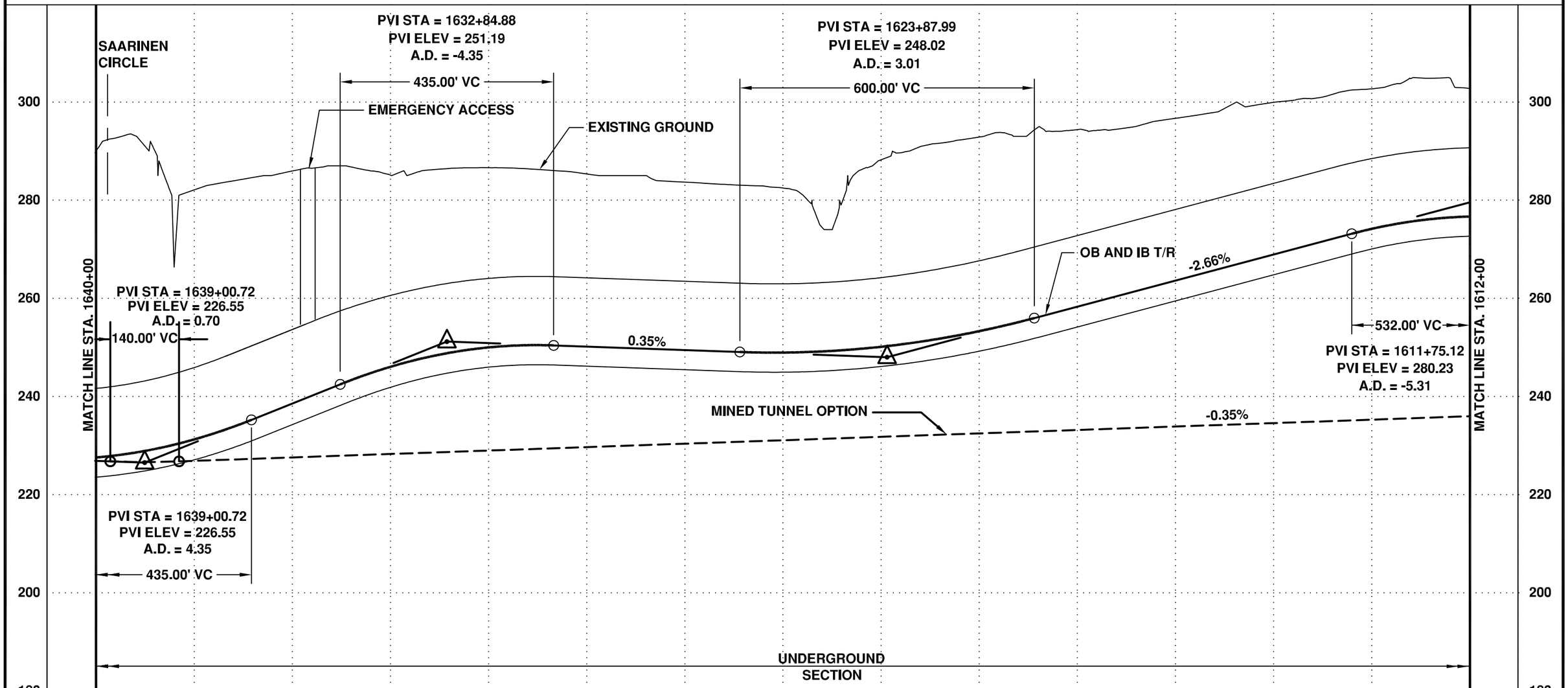
PLAN
DULLES AIRPORT
A1 ALIGNMENT
STATION 1612+00 TO 1640+00

SCALE: 1"=100' 50 0 50 100

DRAWING NO.: GPN-PP-018

077

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADLANSACAY 07-01-01	REFERENCE DRAWINGS	REVISIONS
DRAWN: R. KASHIF 07-02-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: T. TWYMAN 3-11-02		
APPROVED: P. ELMAN 01-2004		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PROFILE
DULLES AIRPORT
A1 ALIGNMENT
STATION 1612+00 TO 1640+00

SCALE: H: 1"=100' V: 1"=10' (50 0 100 / 5 0 10)

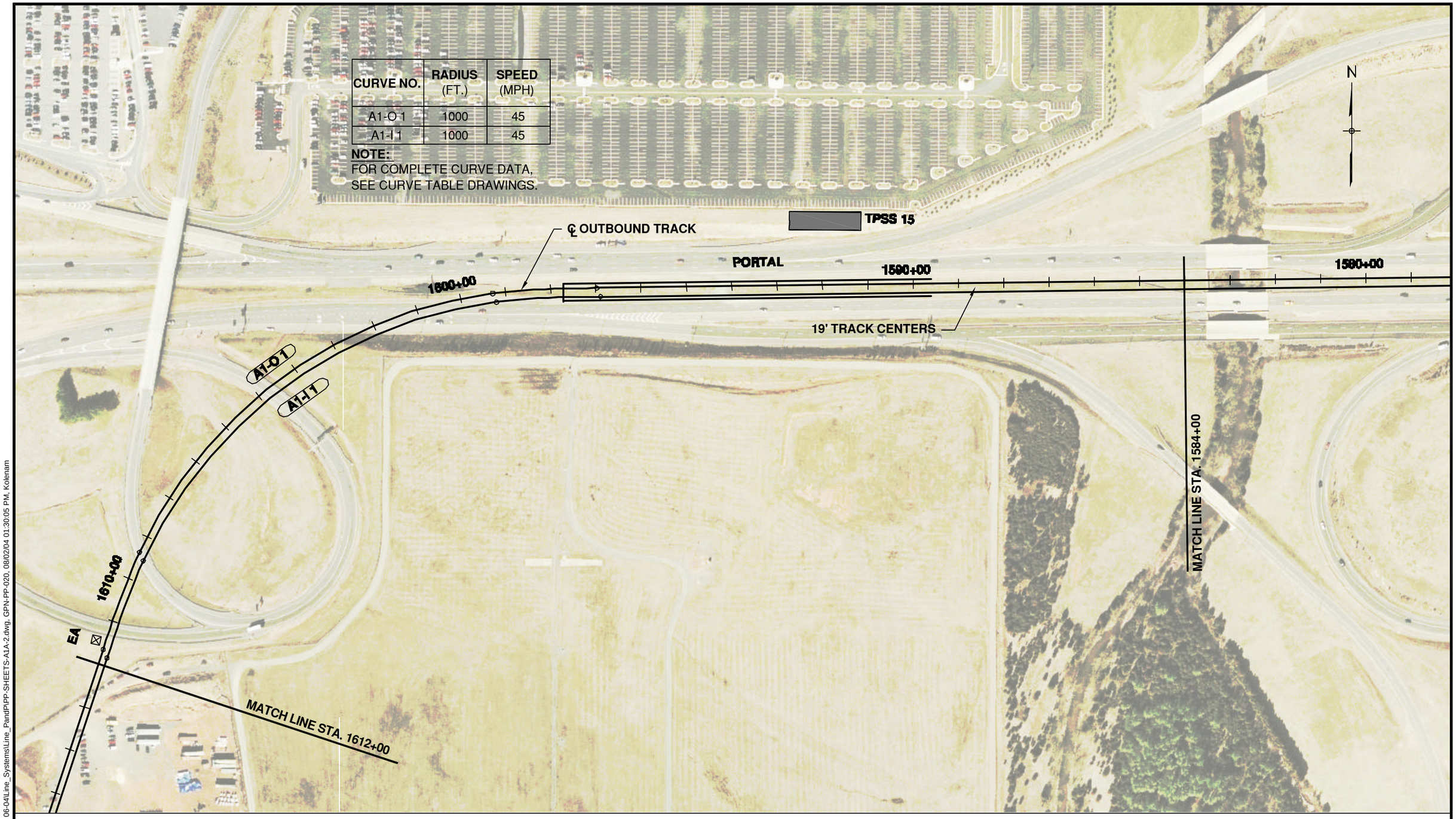
DRAWING NO.: GPN-PP-019

078

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CURVE NO.	RADIUS (FT.)	SPEED (MPH)
A1-O 1	1000	45
A1-I 1	1000	45

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.



HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADLANSACAY	07-01-01 DATE		
DRAWN: R. KASHIF	07-02-01 DATE		
CHECKED: P. ELNAN	9-20-03 DATE		
APPROVED: P. ELNAN	01-2004 DATE		

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

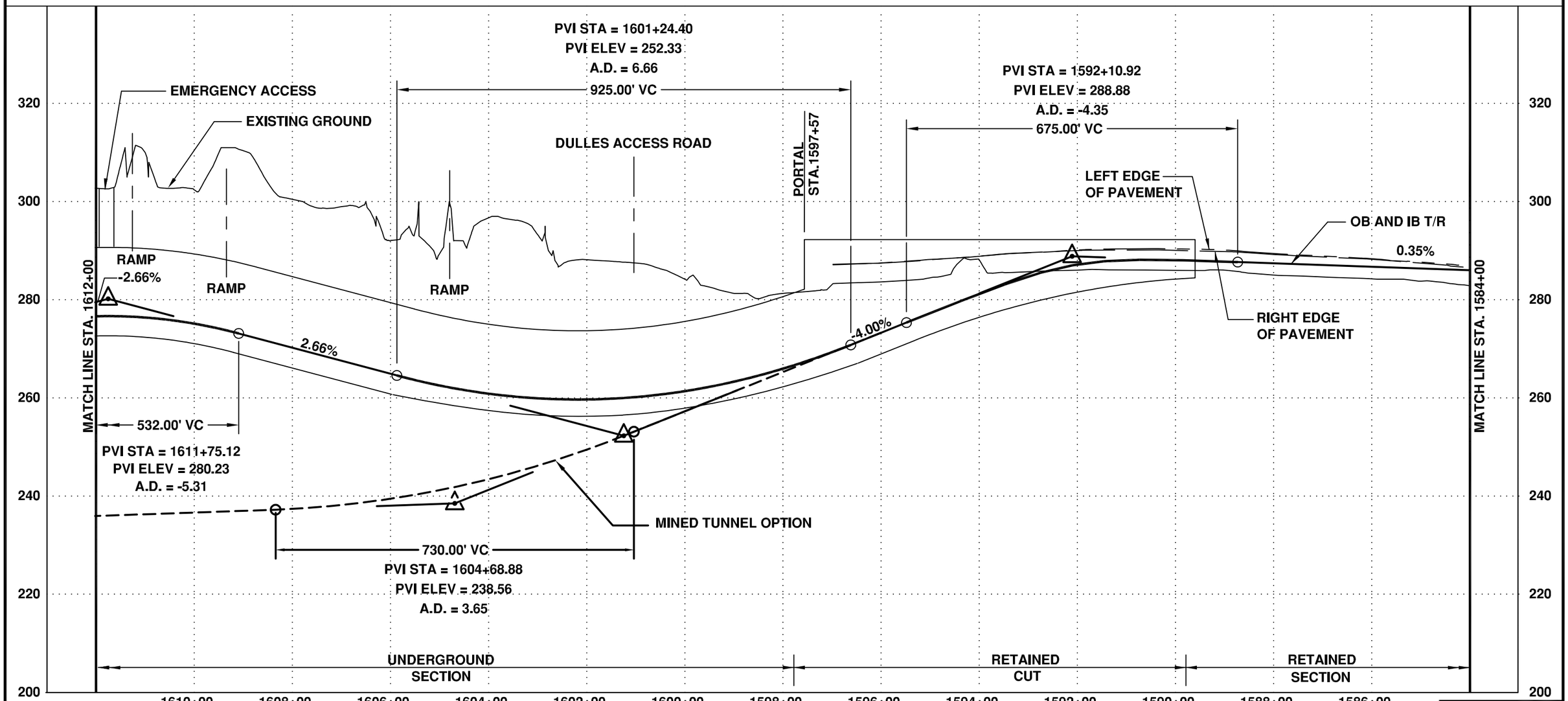
PLAN
DULLES AIRPORT
A1 ALIGNMENT
STATION 1584+00 TO 1612+00

SCALE: 1"=100' (0 50 100)

DRAWING NO.: GPN-PP-020

079

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADLANSACAY 07-01-01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: R. KASHIF 07-02-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: P. ELMAN 9-29-03 DATE		
APPROVED: P. ELMAN 01-2004 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

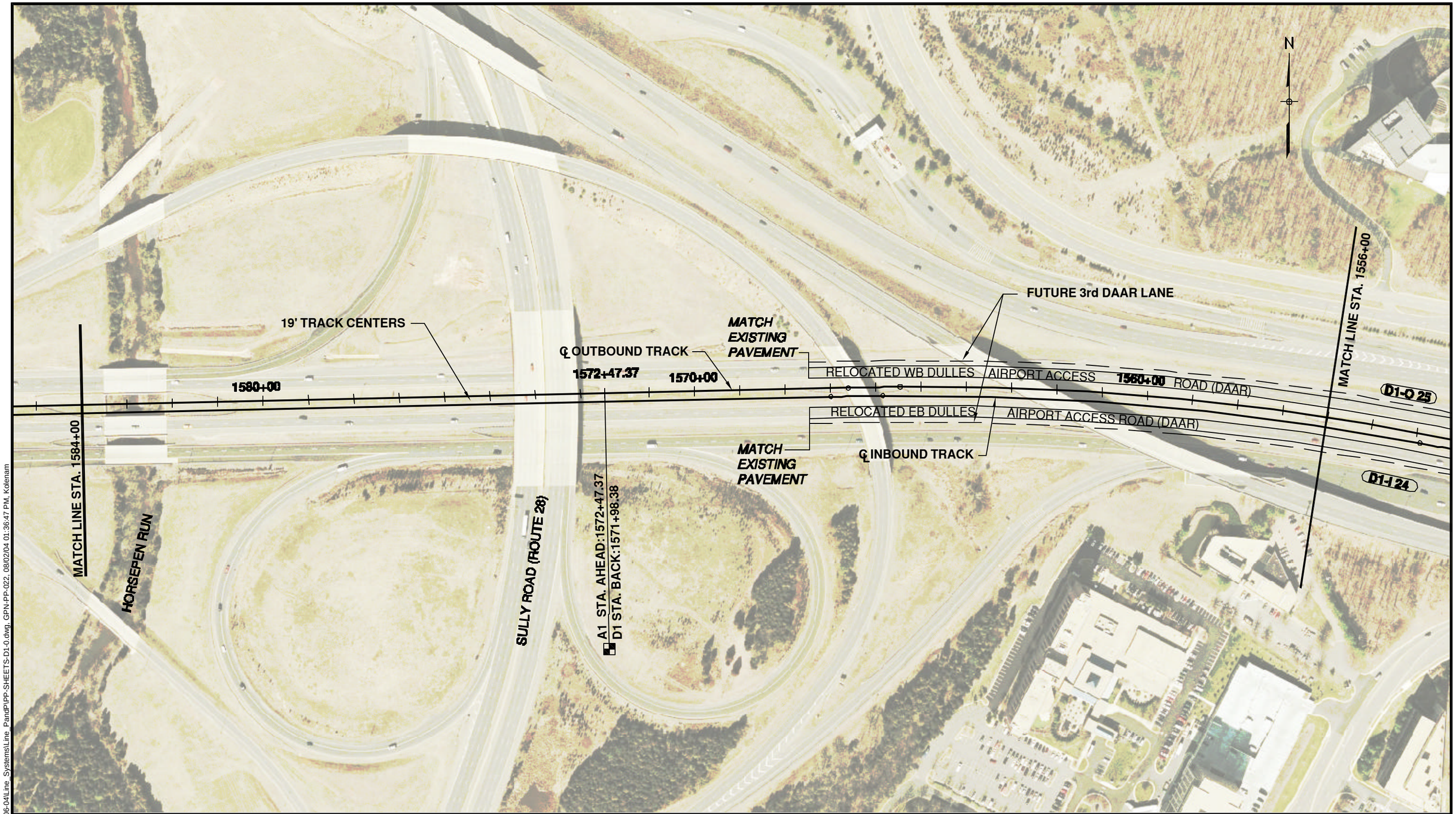
PROFILE
DULLES AIRPORT
A1 ALIGNMENT
STATION 1584+00 TO 1612+00

SCALE: H: 1"=100' V: 1"=10' (50 0 100 / 5 0 10)

DRAWING NO.: GPN-PP-021

080

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH	10-02-01 DATE		
DRAWN: R. KASHIF	10-08-01 DATE		
CHECKED: P. ELMAN	9-29-03 DATE		
APPROVED: P. ELMAN	01-2004 DATE		

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

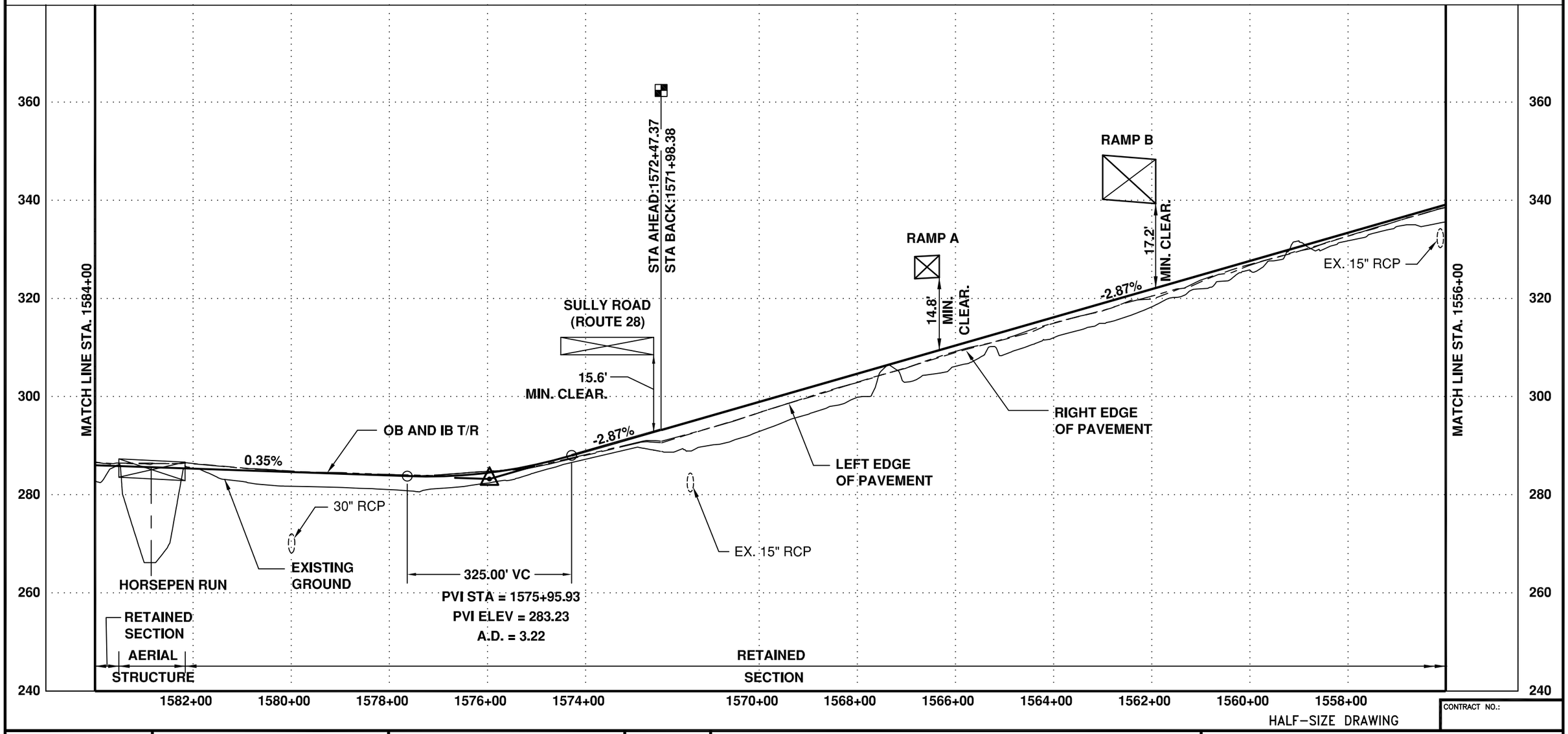
PLAN
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1556+00 TO 1584+00

SCALE: 1"=100' (50 0 50 100)

DRAWING NO.: GPN-PP-022

081

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH 10-02-01	REFERENCE DRAWINGS	REVISIONS
DRAWN: R. KASHIF 10-11-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: P. ELMAN 9-29-03		
APPROVED: P. ELMAN 01-2004		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED — PROJECT MANAGER: Diana C. Mendes

FINAL GENERAL PLANS
JULY 2004

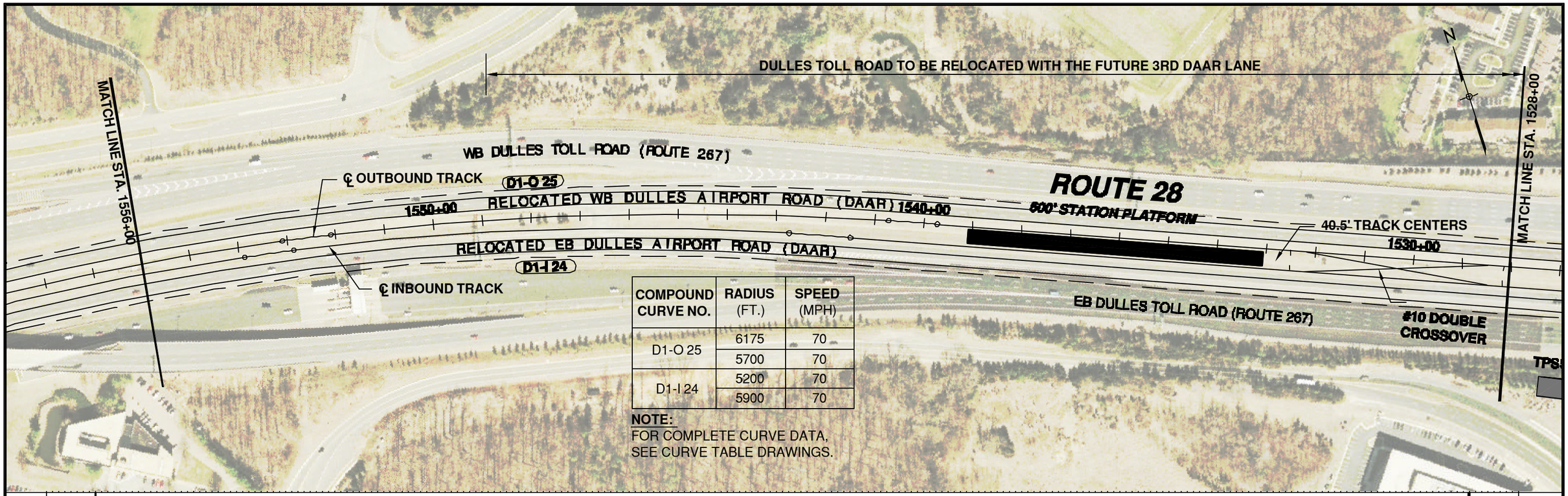
PROFILE
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1556+00 TO 1584+00

SCALE: H: 1"=100' V: 1"=10' (50 0 100 / 5 0 10)

DRAWING NO.: GPN-PP-023

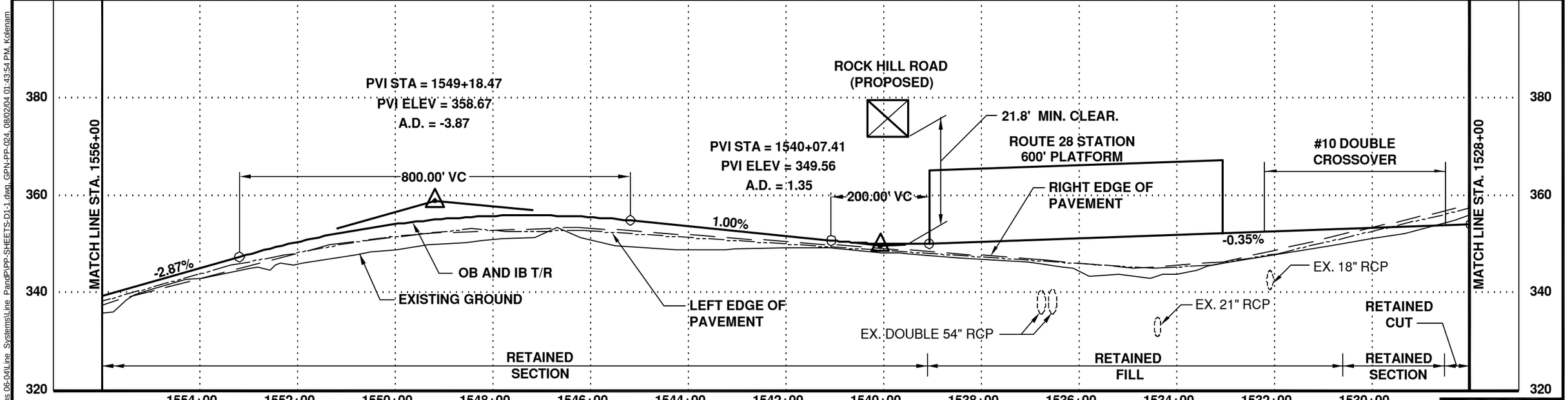
082

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COMPOUND CURVE NO.	RADIUS (FT.)	SPEED (MPH)
D1-O 25	6175	70
	5700	70
D1-I 24	5200	70
	5900	70

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.



HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH	10-02-01 DATE	
DRAWN: K. WINGFIELD	10-08-01 DATE	
CHECKED: D. NADLANSACAY	3-11-02 DATE	
APPROVED: P. ELMAN	01-2004 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

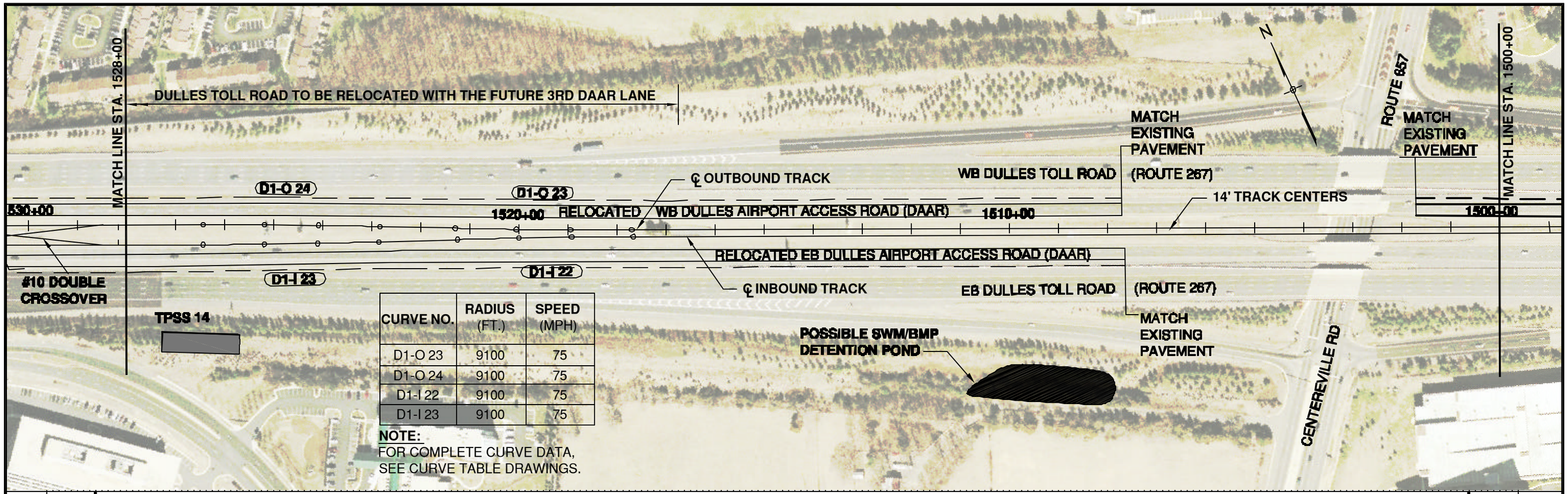
PLAN AND PROFILE
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT-ROUTE 28 STATION
STATION 1528+00 TO 1556+00

SCALE: H: 1"=100' 50 0 100
V: 1"=10' 5 0 10

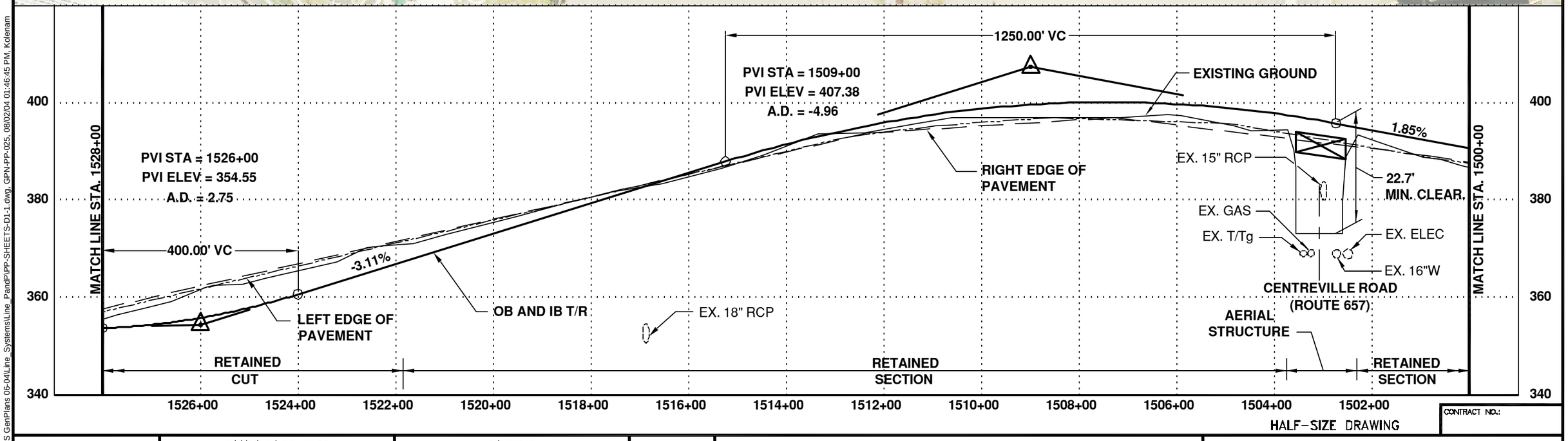
DRAWING NO.: GPN-PP-024

083

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CURVE NO.	RADIUS (FT.)	SPEED (MPH)
D1-O 23	9100	75
D1-O 24	9100	75
D1-I 22	9100	75
D1-I 23	9100	75



HALF-SIZE DRAWING

CONTRACT NO.:

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Line_Pand P\PP-SHEETS-D1-1.dwg, GPN-PP-025, 08/02/04 01:46:45 PM, Kolenam

DESIGNED: D. SMITH 10-02-01 DATE
DRAWN: K. WINGFIELD 10-08-01 DATE
CHECKED: D. NADIANSACAY 3-11-02 DATE
APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS
SUBMITTED
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PLAN AND PROFILE
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1500+00 TO 1528+00

SCALE: H: 1"=100' 50 0 100
V: 1"=10' 5 0 10

DRAWING NO.: GPN-PP-025

084

ROUTE 657

MATCH EXISTING PAVEMENT

MATCH LINE STA. 1500+00

14' TRACK CENTERS

1500+00

℄ OUTBOUND TRACK

1490+00

RELOCATED WB DULLES AIRPORT ACCESS ROAD (DAAR) 1490+00

D1-O 22

EXISTING SWM/BMP
(FOR POSSIBLE USE BY DCRTP)

WORLDGATE DR

WB DULLES TOLL ROAD (ROUTE 267)

N

MATCH LINE STA. 1472+00

EB DULLES AIRPORT ACCESS ROAD (DAAR)

D1-I 21

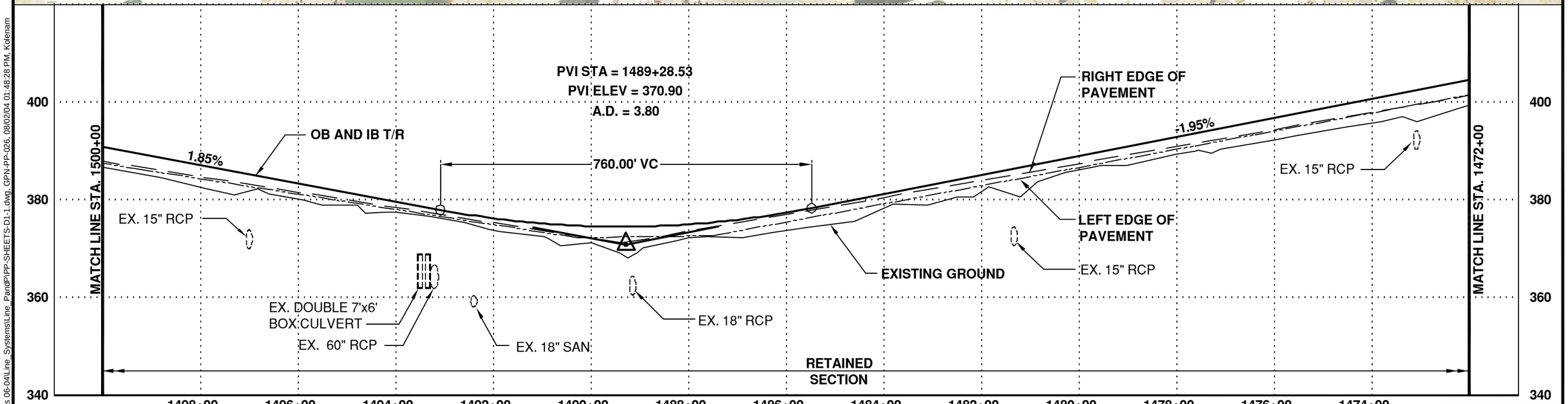
℄ INBOUND TRACK

EB DULLES TOLL ROAD (ROUTE 267)

MATCH EXISTING PAVEMENT

CURVE NO.	RADIUS (FT.)	SPEED (MPH)
D1-O 22	7500	75
D1-I 21	7500	75

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.



HALF-SIZE DRAWING

CONTRACT NO.:

O:\002_dulles\FEIS GenPlans 06-04\Line_SystemsLine_PandP\PP-SHEETS-D1-1.dwg, GPN-PP-026, 08/02/04 01:48:28 PM, Kolenam

DESIGNED: D. SMITH	10-02-01 DATE	
DRAWN: K. WINGFIELD	10-08-01 DATE	
CHECKED: D. MADLANSACAY	3-11-02 DATE	
APPROVED: P. ELMAN	01-2004 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PLAN AND PROFILE
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1472+00 TO 1500+00

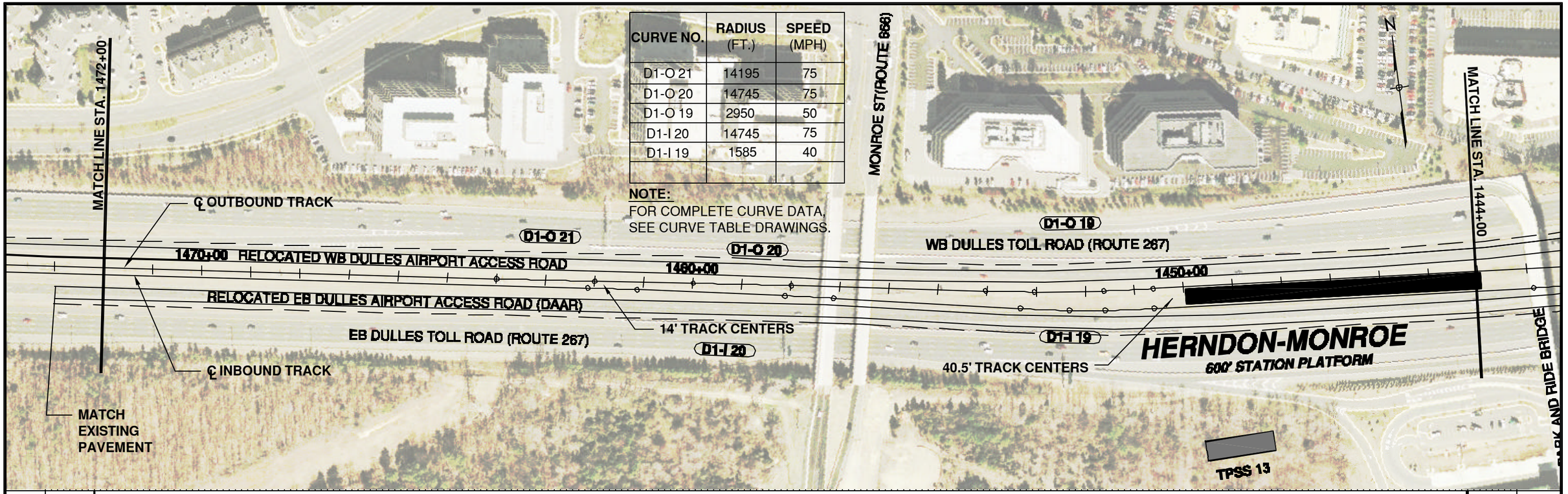
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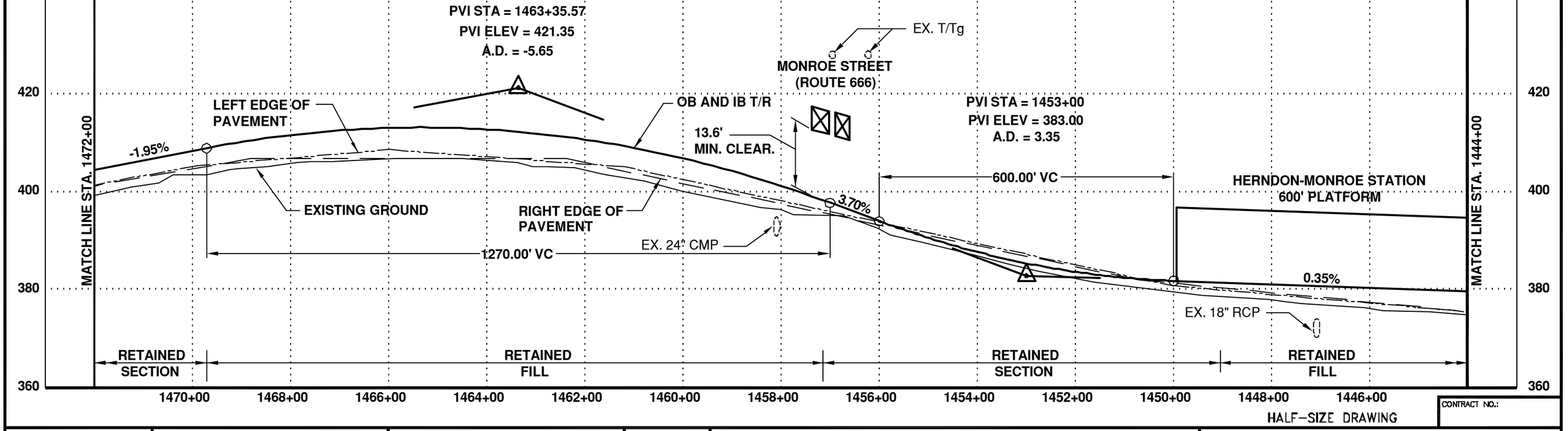
DRAWING NO.: GPN-PP-026

085

CURVE NO.	RADIUS (FT.)	SPEED (MPH)
D1-O 21	14195	75
D1-O 20	14745	75
D1-O 19	2950	50
D1-I 20	14745	75
D1-I 19	1585	40

NOTE:
FOR COMPLETE CURVE DATA, SEE CURVE TABLE DRAWINGS.





HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH	10-02-01 DATE	REFERENCE DRAWINGS	
DRAWN: K. WINGFIELD	10-08-01 DATE	NUMBER	DESCRIPTION
CHECKED: D. MACLANSACAY	3-11-02 DATE		
APPROVED: P. ELMAN	01-2004 DATE		

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PLAN AND PROFILE
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT-HERNDON-MONROE STATION
STATION 1444+00 TO 1472+00

SCALE: H: 1"=100' V: 1"=10' 50 0 100 5 0 10

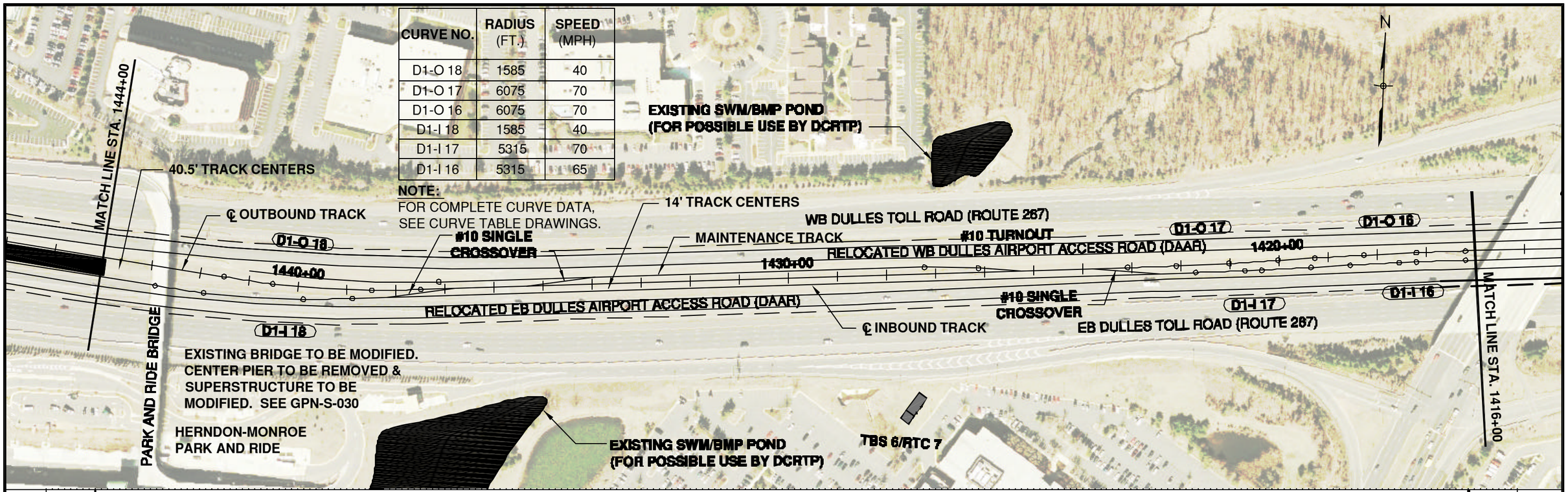
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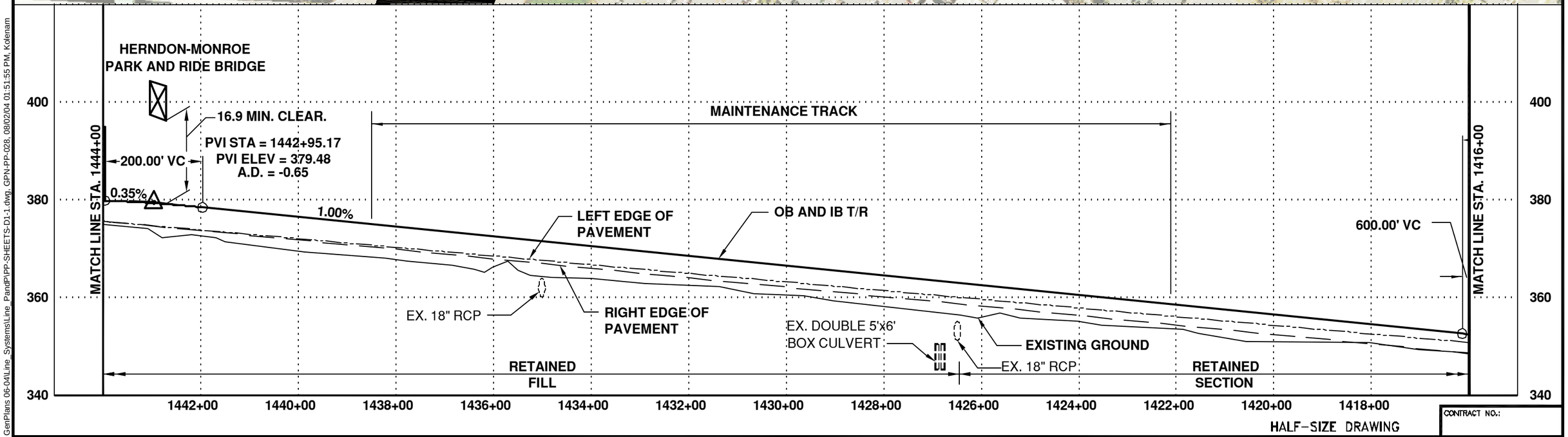
086

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CURVE NO.	RADIUS (FT.)	SPEED (MPH)
D1-O 18	1585	40
D1-O 17	6075	70
D1-O 16	6075	70
D1-I 18	1585	40
D1-I 17	5315	70
D1-I 16	5315	65

NOTE:
FOR COMPLETE CURVE DATA, SEE CURVE TABLE DRAWINGS.





HALF-SIZE DRAWING

CONTRACT NO.:

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Line_P and P\PP-SHEETS-D1-1.dwg, GPN-PP-028, 08/02/04 01:51:55 PM, Kolenan

DESIGNED: D. SMITH 10-02-01
DRAWN: K. WINGFIELD 10-08-01
CHECKED: D. MADLANSACAY 3-11-02
APPROVED: P. ELMAN 01-2004

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

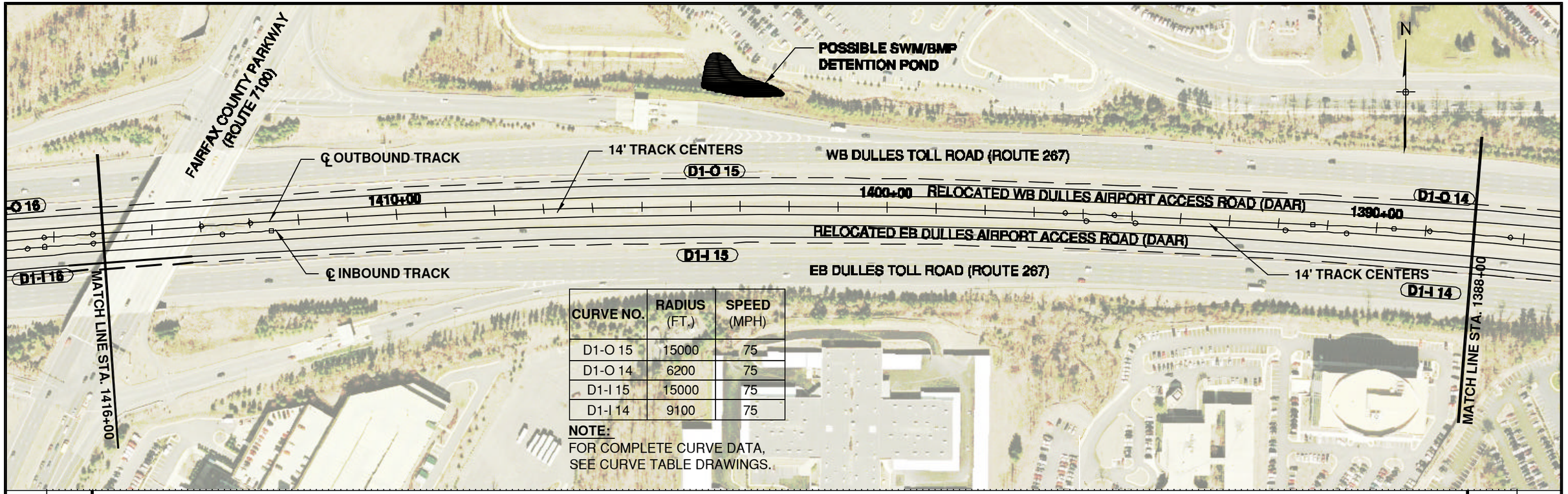
DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS
SUBMITTED
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

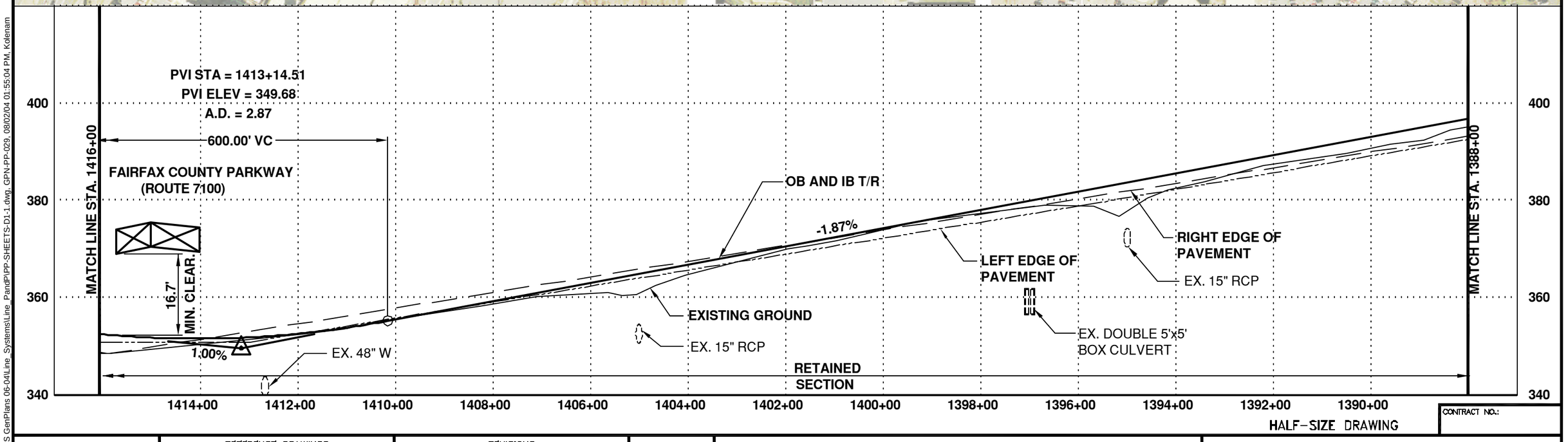
PLAN AND PROFILE
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1416+00 TO 1444+00

SCALE: H: 1"=100' V: 1"=10'
DRAWING NO.: GPN-PP-028
087



CURVE NO.	RADIUS (FT.)	SPEED (MPH)
D1-O 15	15000	75
D1-O 14	6200	75
D1-I 15	15000	75
D1-I 14	9100	75

NOTE:
FOR COMPLETE CURVE DATA, SEE CURVE TABLE DRAWINGS.



HALF-SIZE DRAWING

CONTRACT NO.:

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DESIGNED: D. SMITH	10-02-01 DATE	
DRAWN: K. WINGFIELD	10-08-01 DATE	
CHECKED: D. NADLANSACAY	3-11-02 DATE	
APPROVED: P. ELMAN	01-2004 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

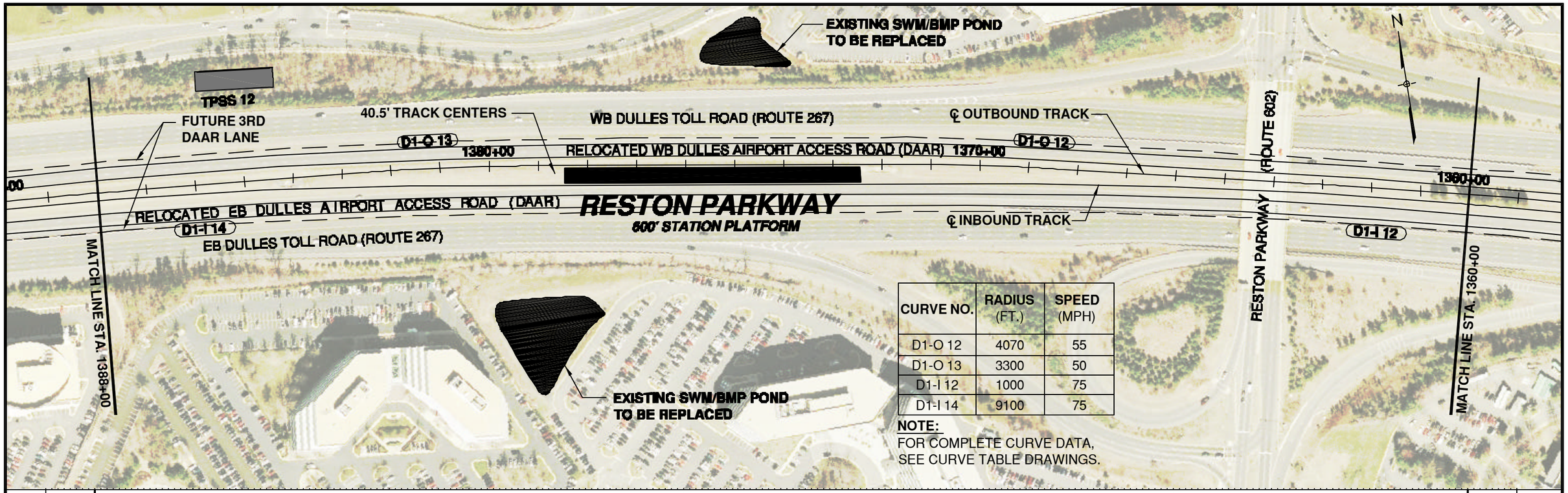
FINAL GENERAL PLANS
JULY 2004

PLAN AND PROFILE
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1388+00 TO 1416+00

SCALE: H: 1"=100' V: 1"=10'

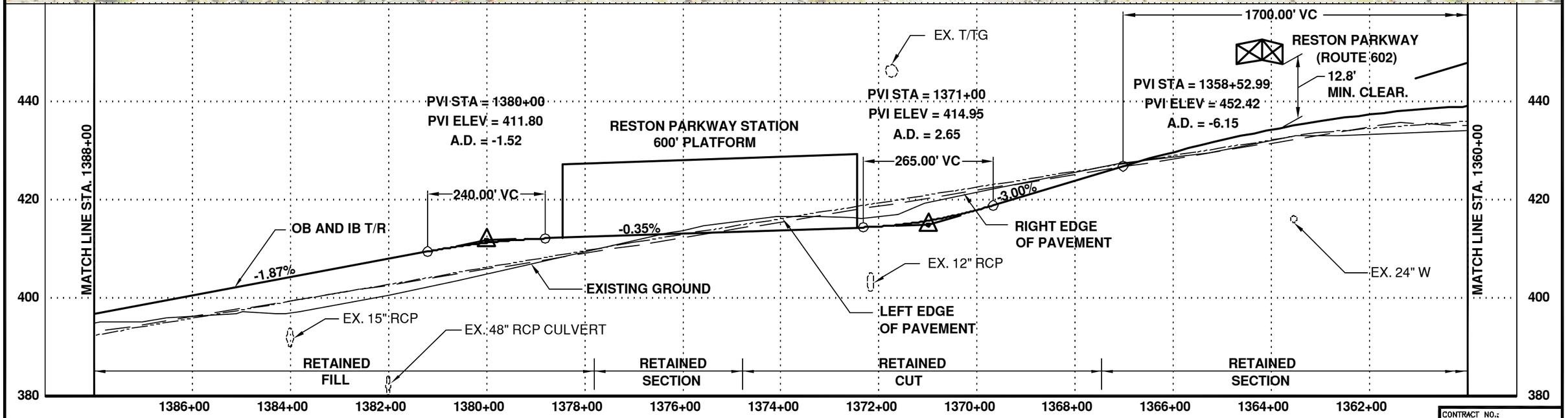
DRAWING NO.: GPN-PP-029

088



CURVE NO.	RADIUS (FT.)	SPEED (MPH)
D1-O 12	4070	55
D1-O 13	3300	50
D1-I 12	1000	75
D1-I 14	9100	75

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.



HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH	10-02-01 DATE	
DRAWN: K. WINGFIELD	10-08-01 DATE	
CHECKED: T. TWYMAN	3-11-02 DATE	
APPROVED: P. ELMAN	01-2004 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED — PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

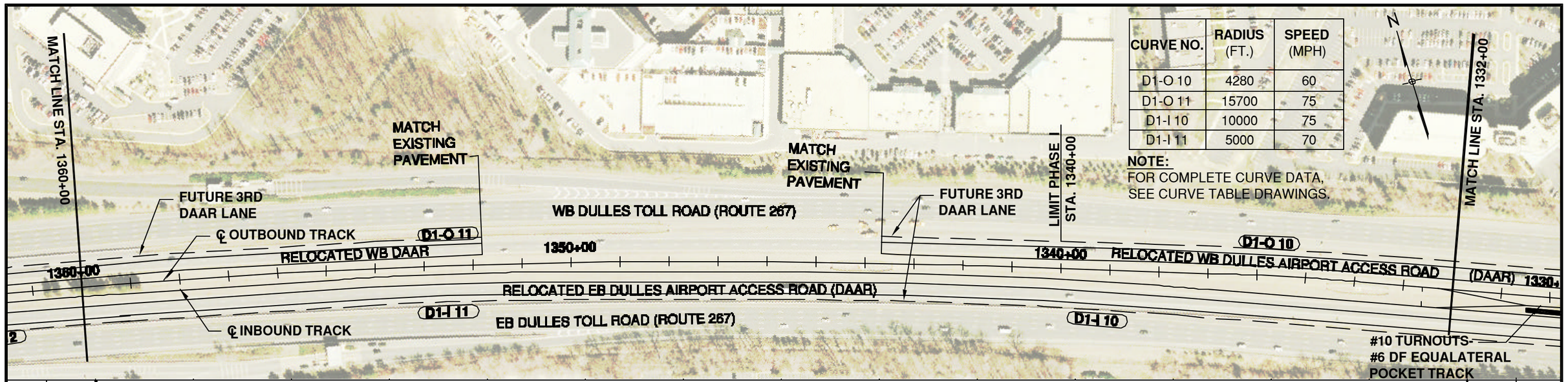
PLAN AND PROFILE
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT–RESTON PARKWAY STATION
STATION 1360+00 TO 1388+00

SCALE: H: 1"=100' V: 1"=10' 5D 0 100 5 0 10

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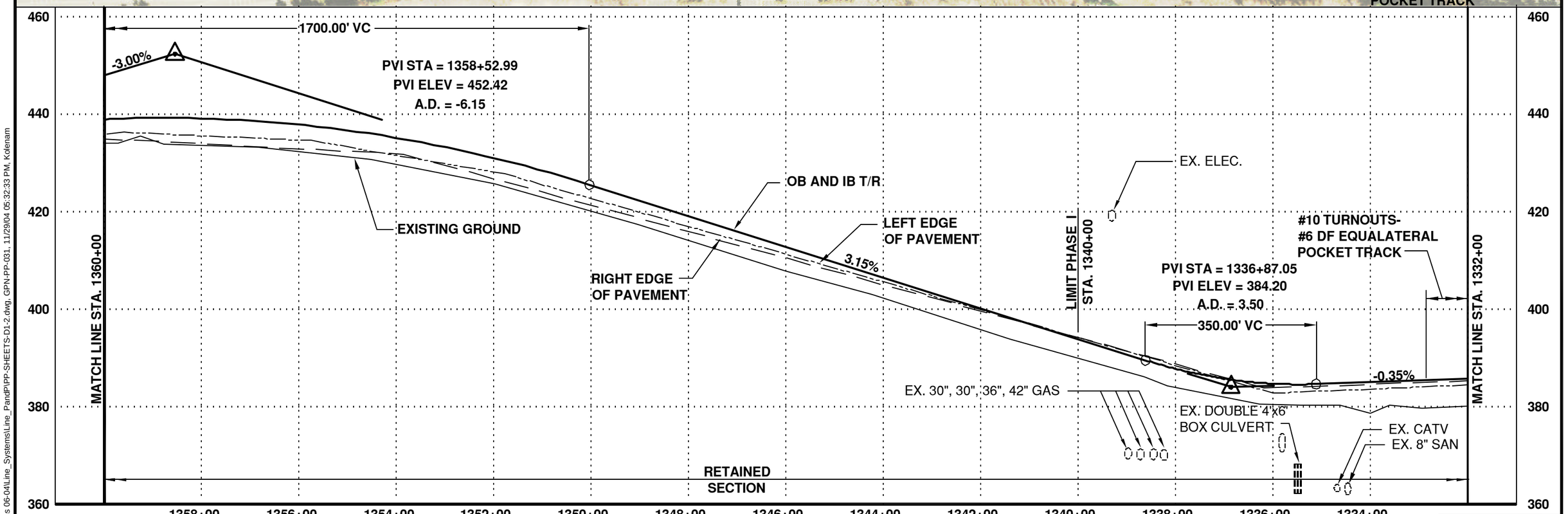
090

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CURVE NO.	RADIUS (FT.)	SPEED (MPH)
D1-O 10	4280	60
D1-O 11	15700	75
D1-I 10	10000	75
D1-I 11	5000	70

NOTE:
FOR COMPLETE CURVE DATA, SEE CURVE TABLE DRAWINGS.



HALF-SIZE DRAWING

CONTRACT NO.:

O:\002_dullesFEIS GenPlans 06-04Line_SystemsLine_PandP\PP-SHEETS-D1-2.dwg, GPN-PP-031, 11/29/04 05:32:33 PM, Kolenam

DESIGNED: D. SMITH	10-02-01 DATE	
DRAWN: K. WINGFIELD	10-08-01 DATE	
CHECKED: R. KASHIF	9-29-03 DATE	
APPROVED: P. ELMAN	01-2004 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PLAN AND PROFILE
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1332+00 TO 1360+00

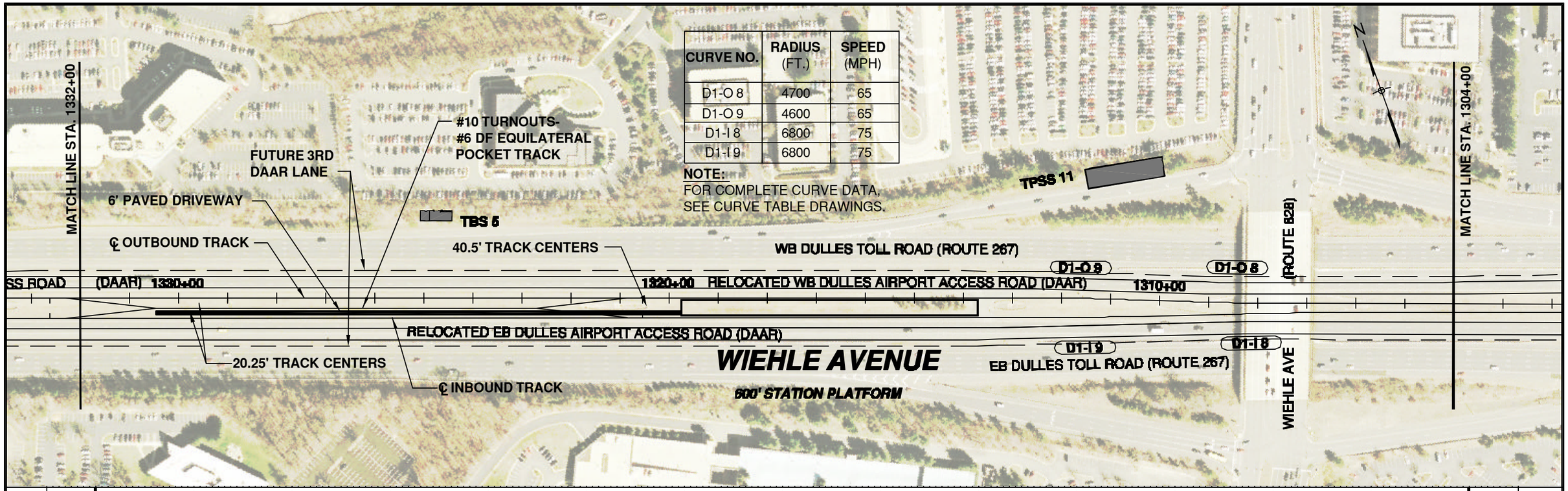
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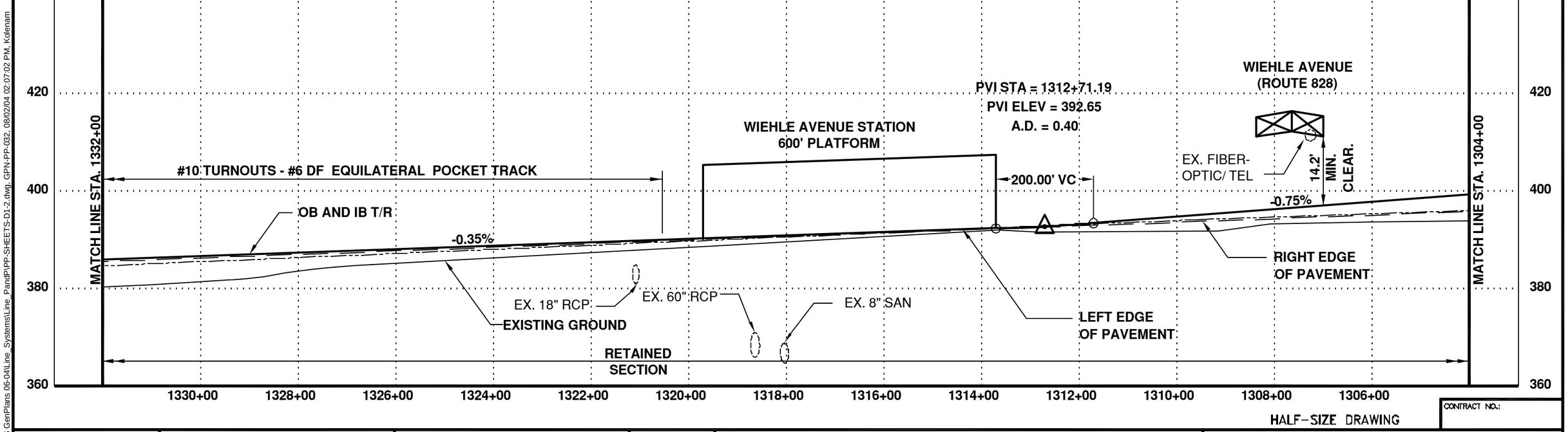
DRAWING NO.: GPN-PP-031

091

CURVE NO.	RADIUS (FT.)	SPEED (MPH)
D1-O 8	4700	65
D1-O 9	4600	65
D1-I 8	6800	75
D1-I 9	6800	75

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.





HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH	10-02-01 DATE	
DRAWN: K. WINGFIELD	10-08-01 DATE	
CHECKED: R. KASHIF	9-29-03 DATE	
APPROVED: P. ELNAN	01-2004 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

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PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PLAN AND PROFILE
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT-WIEHLE AVENUE STATION
STATION 1304+00 TO 1332+00

SCALE: H: 1"=100' 50 0 100
V: 1"=10' 5 0 10

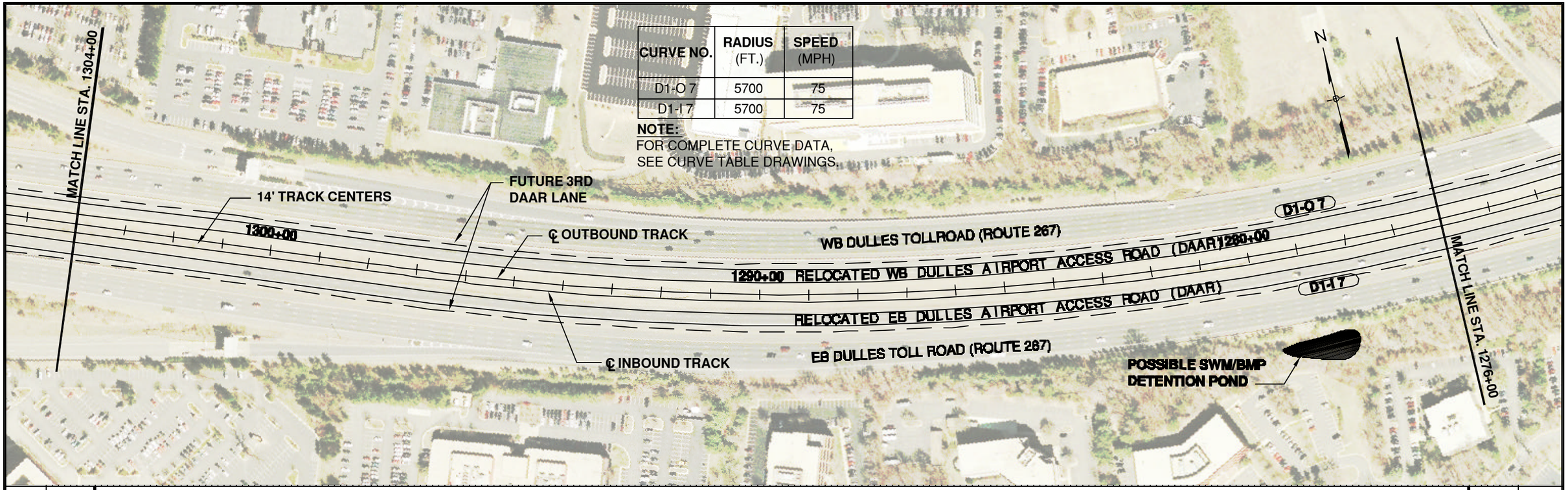
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CURVE NO.	RADIUS (FT.)	SPEED (MPH)
D1-O 7	5700	75
D1-I 7	5700	75

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.



HALF-SIZE DRAWING

CONTRACT NO.:

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Line_P and P\PP-SHEETS-D1-2.dwg, GPN-PP-033, 08/02/04 02:13:43 PM, Kolenam

DESIGNED:	D. SMITH	10-02-01 DATE
DRAWN:	K. WINGFIELD	10-08-01 DATE
CHECKED:	T. TWYMAN	3-11-02 DATE
APPROVED:	P. ELNAN	01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PLAN AND PROFILE
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1276+00 TO 1304+00

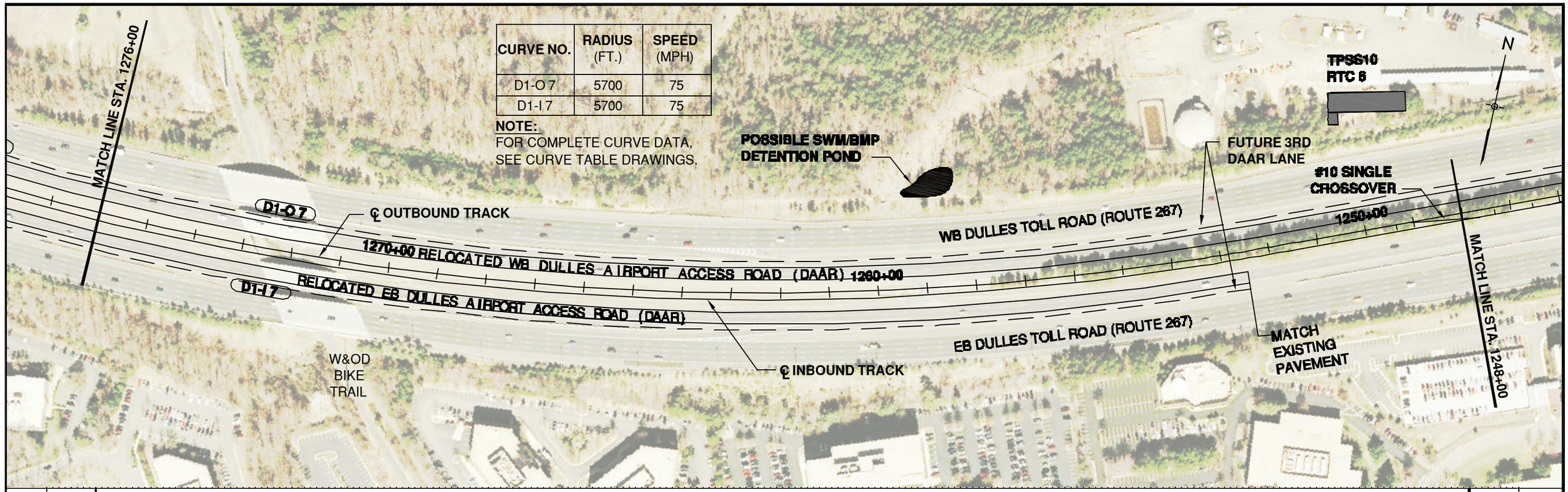
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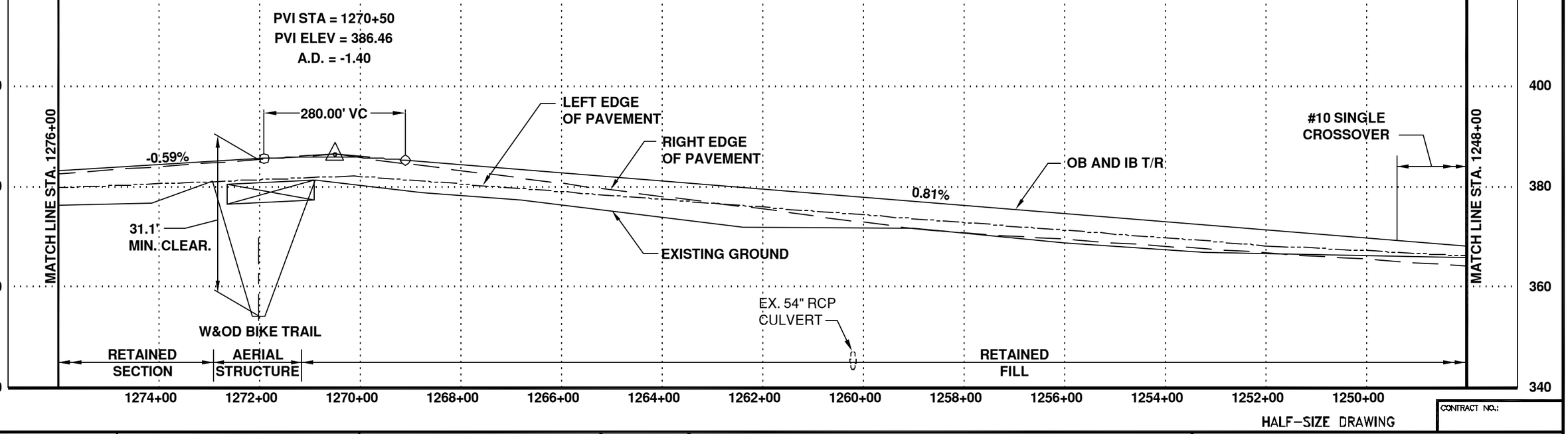
DRAWING NO.: GPN-PP-033

093

CURVE NO.	RADIUS (FT.)	SPEED (MPH)
D1-O 7	5700	75
D1-I 7	5700	75

NOTE:
FOR COMPLETE CURVE DATA, SEE CURVE TABLE DRAWINGS.





HALF-SIZE DRAWING

CONTRACT NO.:

O:\002 dulles\FEIS GenPlans 06-04\Line Systems\Line Pand\PP-SHEETS-D1-2.dwg, GPN-PP-034, 08/02/04 02:20:11 PM, Kolenam

DESIGNED: D. SMITH 10-02-01 DATE
DRAWN: K. WINGFIELD 10-08-01 DATE
CHECKED: T. TWYMAN 3-11-02 DATE
APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS		REVISIONS		
NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PLAN AND PROFILE
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1248+00 TO 1276+00

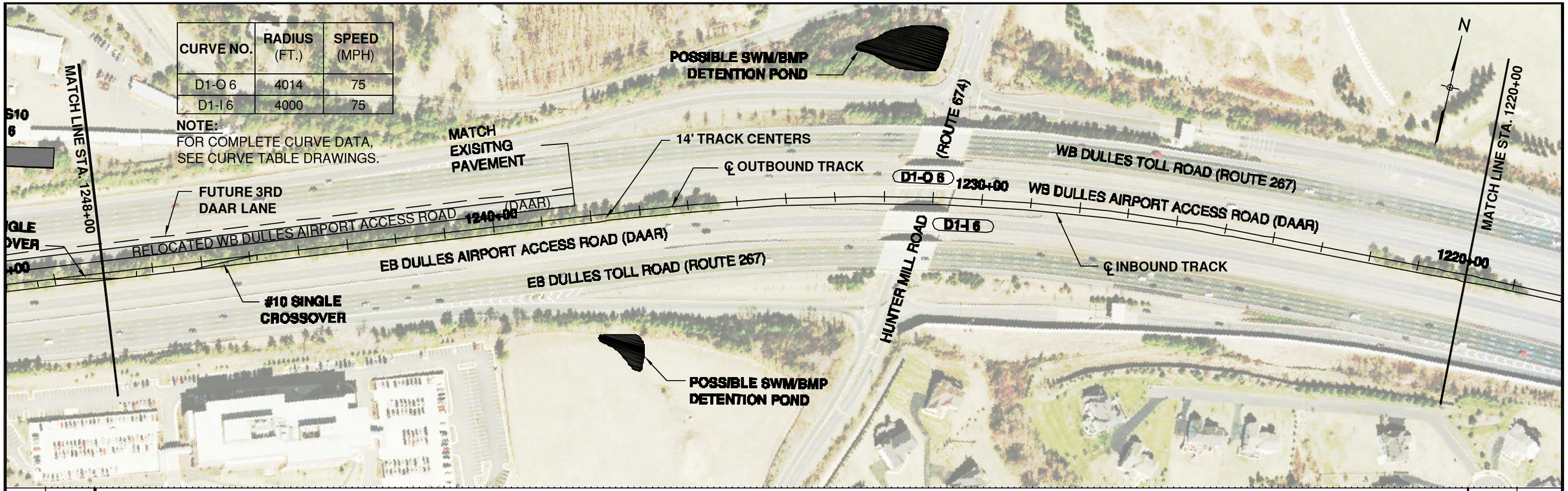
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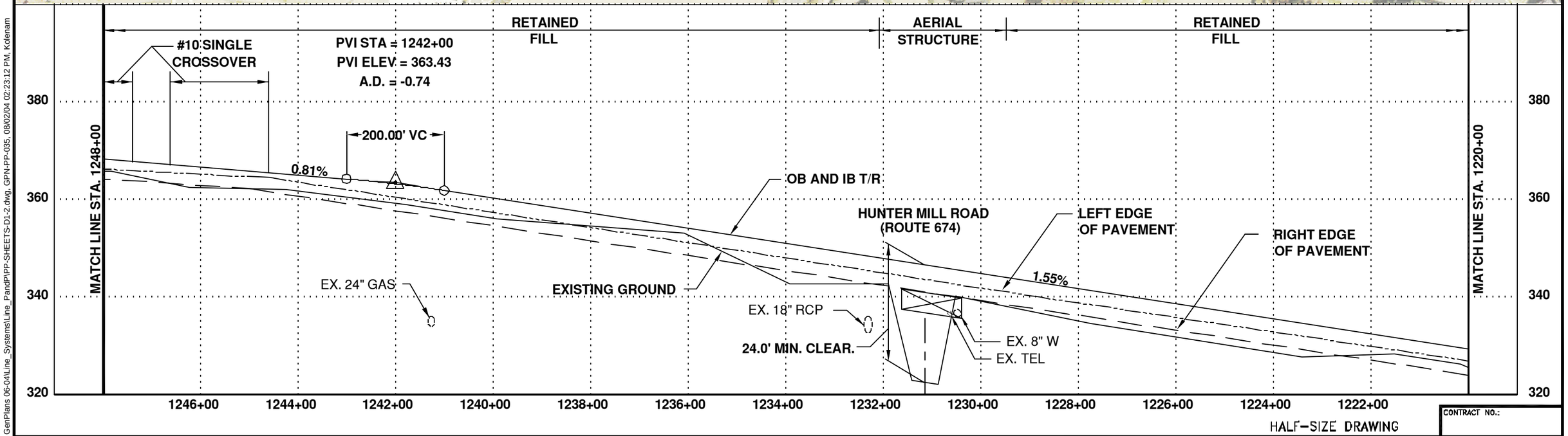
DRAWING NO.: GPN-PP-034

094

CURVE NO.	RADIUS (FT.)	SPEED (MPH)
D1-O 6	4014	75
D1-I 6	4000	75

NOTE:
FOR COMPLETE CURVE DATA, SEE CURVE TABLE DRAWINGS.





HALF-SIZE DRAWING

CONTRACT NO.:

O:\002_dullesIFEIS GenPlans 06-04\Line_SystemsLine_Pand\PP-SHEETS-D1-2.dwg, GPN-PP-035, 08/02/04 02:23:12 PM, Kolenam

DESIGNED: D. SMITH	8-02-01 DATE	
DRAWN: K. WINGFIELD	8-06-01 DATE	
CHECKED: T. TWYMAN	3-11-02 DATE	
APPROVED: P. ELMAN	01-2004 DATE	

REFERENCE DRAWINGS		REVISIONS		
NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

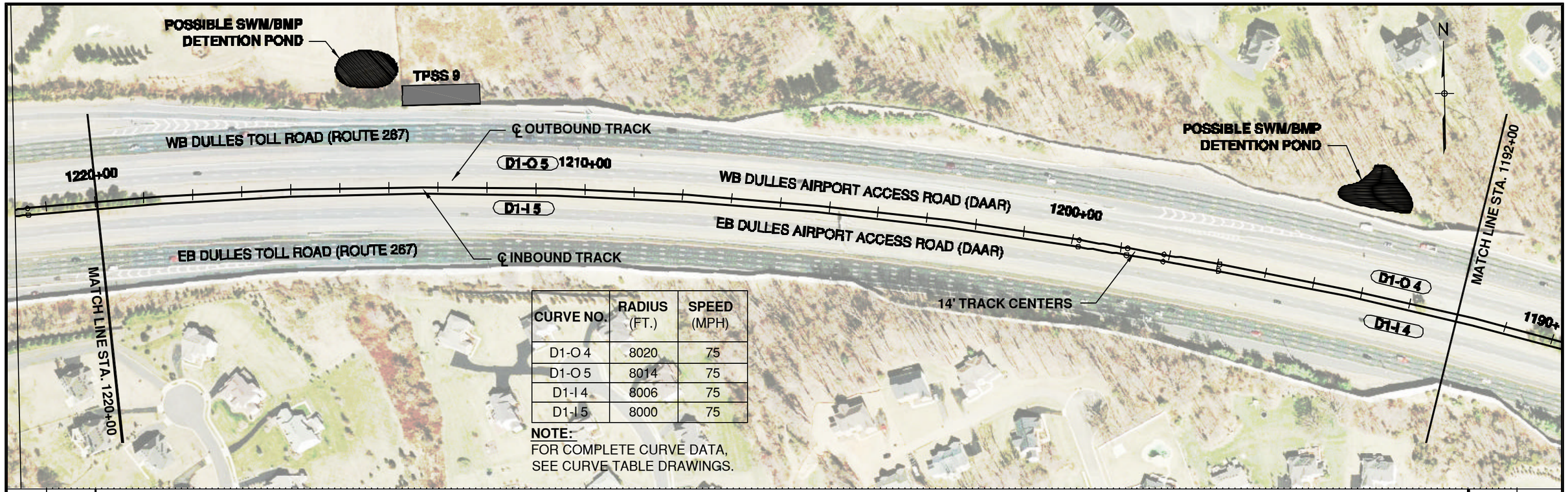
FINAL GENERAL PLANS
JULY 2004

PLAN AND PROFILE
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1220+00 TO 1248+00

SCALE: H: 1"=100' V: 1"=10' 50 0 100 5 0 10

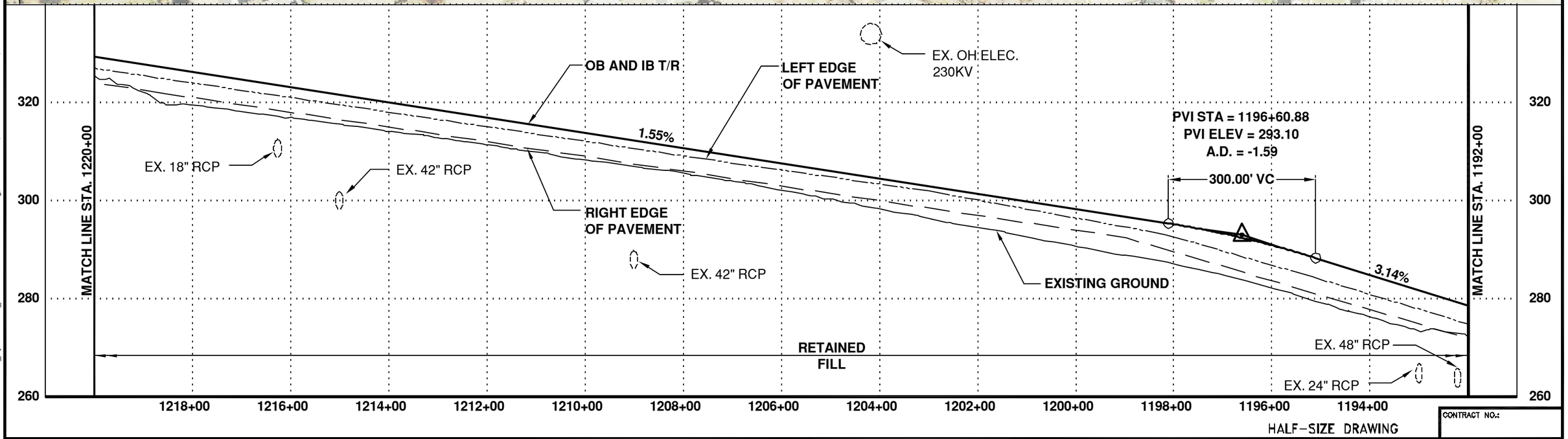
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095



CURVE NO.	RADIUS (FT.)	SPEED (MPH)
D1-O 4	8020	75
D1-O 5	8014	75
D1-I 4	8006	75
D1-I 5	8000	75

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.



HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH	10-02-01 DATE	
DRAWN: K. MINGFIELD	10-31-01 DATE	
CHECKED: T. TWYMAN	3-11-02 DATE	
APPROVED: P. ELMAN	01-2004 DATE	

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PLAN AND PROFILE
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1192+00 TO 1220+00

SCALE: H: 1"=100' V: 1"=10'

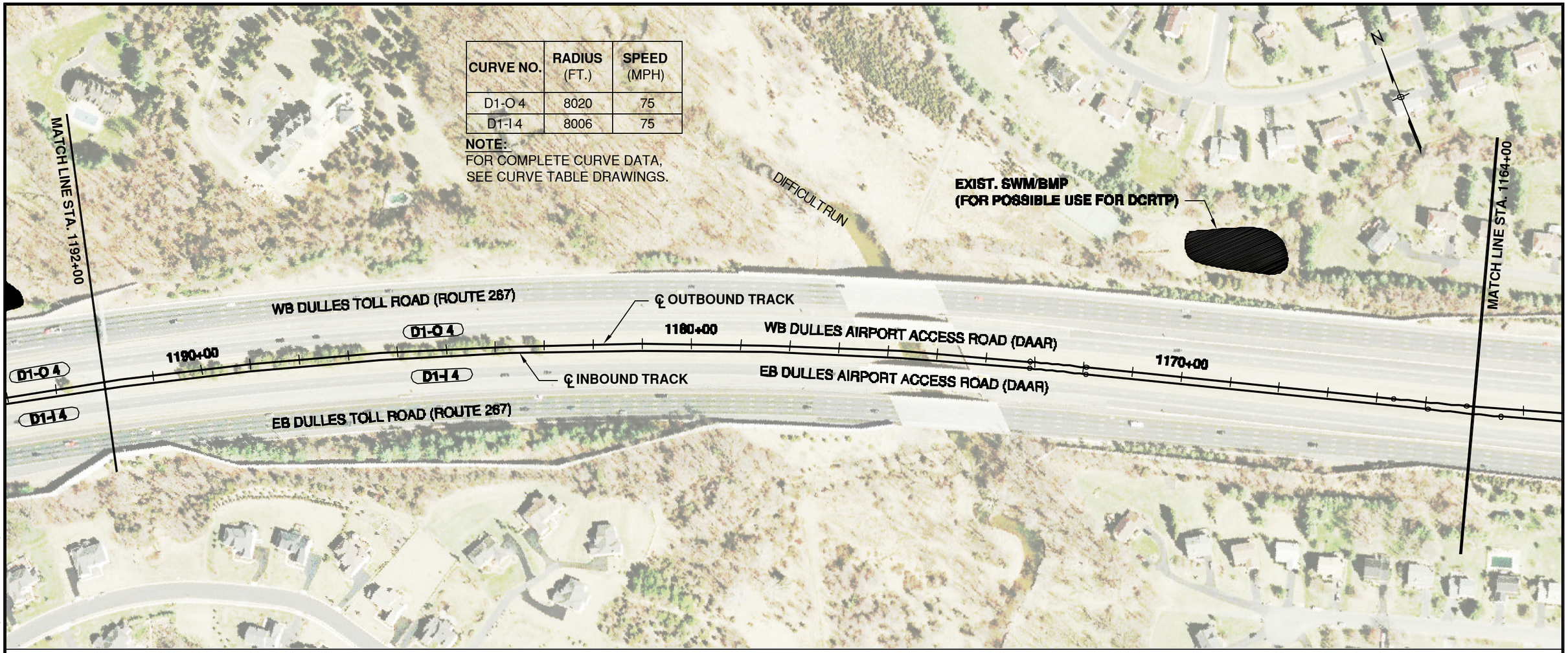
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CURVE NO.	RADIUS (FT.)	SPEED (MPH)
D1-O 4	8020	75
D1-I 4	8006	75

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.



HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH 10-02-01
DRAWN: K. WINGFIELD 10-31-01
CHECKED: T. TWYMAN 3-11-02
APPROVED: P. ELMAN 01-2004
DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

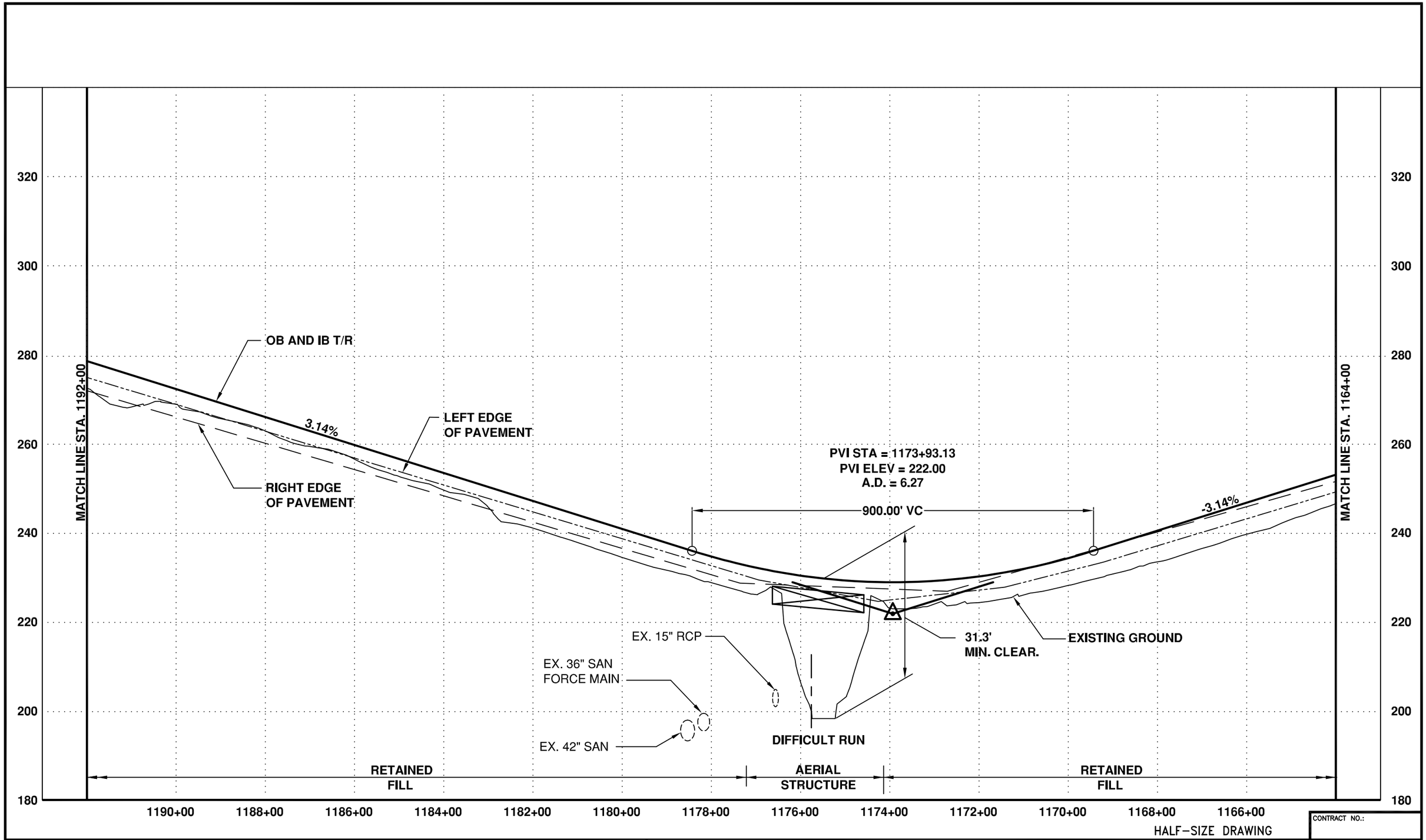
SUBMITTED
CAPITAL TRANSIT CONSULTANTS
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PLAN
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1164+00 TO 1192+00

SCALE: 1"=100' 50 0 50 100
DRAWING NO.: GPN-PP-037
097

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH 10-02-01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: K. WINGFIELD 10-31-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: T. TWYMAN 3-11-02 DATE		
APPROVED: P. ELMAN 01-2004 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PROFILE
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1164+00 TO 1192+00

SCALE: H: 1"=100' V: 1"=10' (50 0 100 / 5 0 10)

DRAWING NO.: GPN-PP-038

098

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CURVE NO.	RADIUS (FT.)	SPEED (MPH)
D1-O 3	6075	75
D1-I 3	5765	75

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.

MATCH LINE STA. 1164+00

WB DULLES TOLL ROAD (ROUTE 267)

1160+00

WB DULLES AIRPORT ACCESS ROAD (DAAR)

D1-O 3

EB DULLES AIRPORT ACCESS ROAD (DAAR)

D1-I 3

EB DULLES TOLL ROAD (ROUTE 267)

℄ OUTBOUND TRACK

1150+00

℄ INBOUND TRACK

BEULAH RD (ROUTE 675)

1140+00

14' TRACK CENTERS

MATCH LINE STA. 1136+00

POSSIBLE BMP
ONLY POND

N

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HALF-SIZE DRAWING

CONTRACT NO.:

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DESIGNED: D. SMITH 10-02-01 DATE
DRAWN: K. WINGFIELD 10-31-01 DATE
CHECKED: T. TWYMAN 3-11-02 DATE
APPROVED: P. ELMAN 01-2004 DATE

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

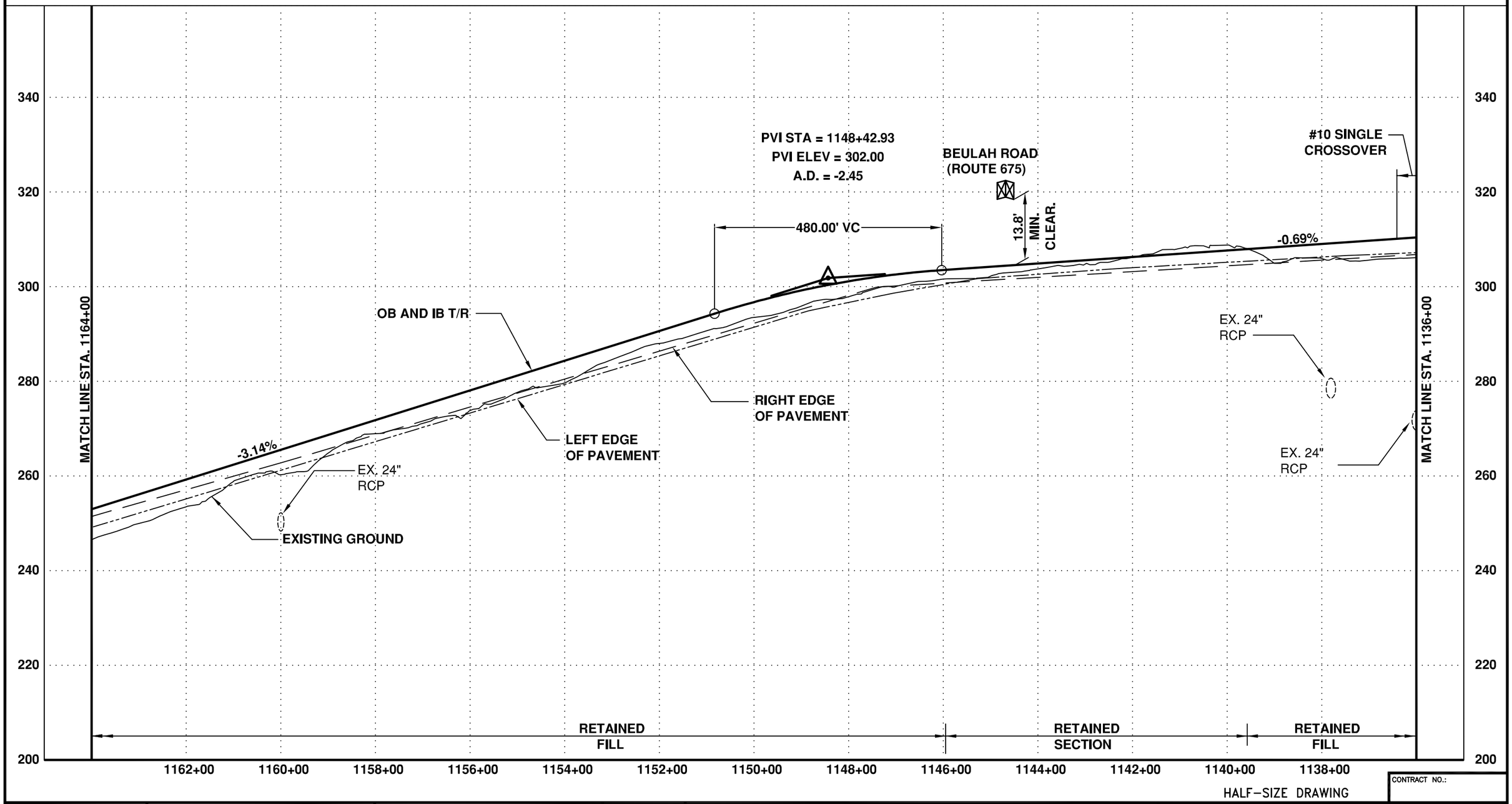
FINAL GENERAL PLANS
JULY 2004

PLAN
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1136+00 TO 1164+00

SCALE: 1"=100' 50 0 50 100

DRAWING NO.: GPN-PP-039

099



HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH 10-02-01	REFERENCE DRAWINGS	REVISIONS
DRAWN: K. WINGFIELD 10-31-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: T. TWYMAN 3-11-02		
APPROVED: P. ELMAN 01-2004		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

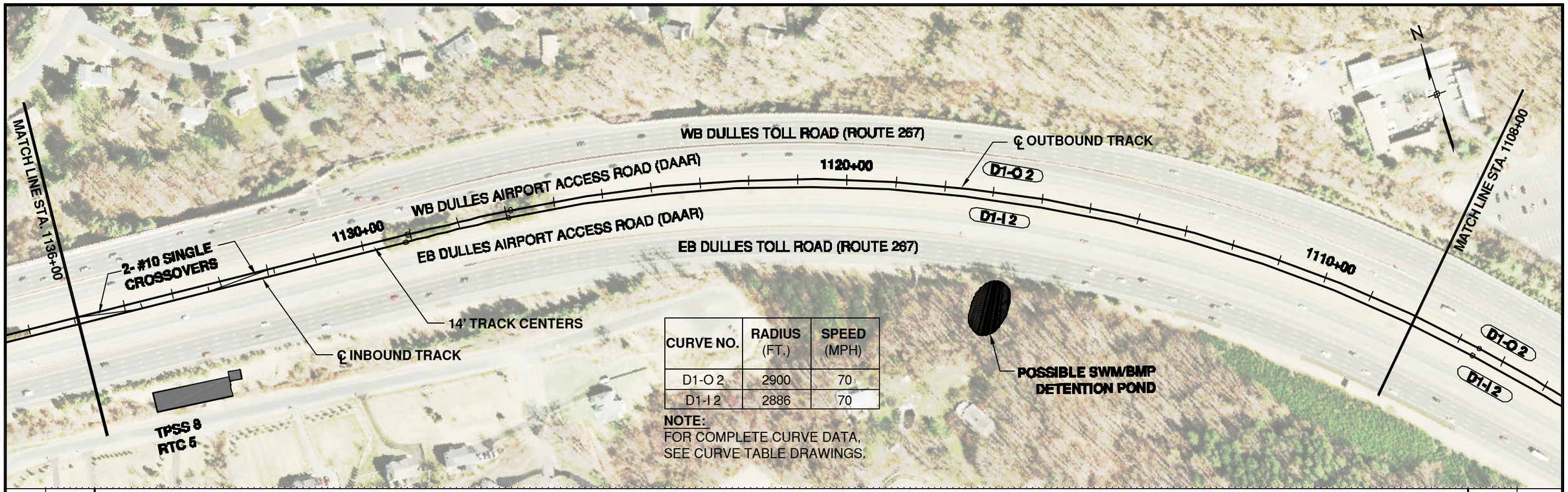
PROFILE
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1136+00 TO 1164+00

SCALE: H: 1"=100' V: 1"=10' (50 0 100 / 5 0 10)

DRAWING NO.: GPN-PP-040

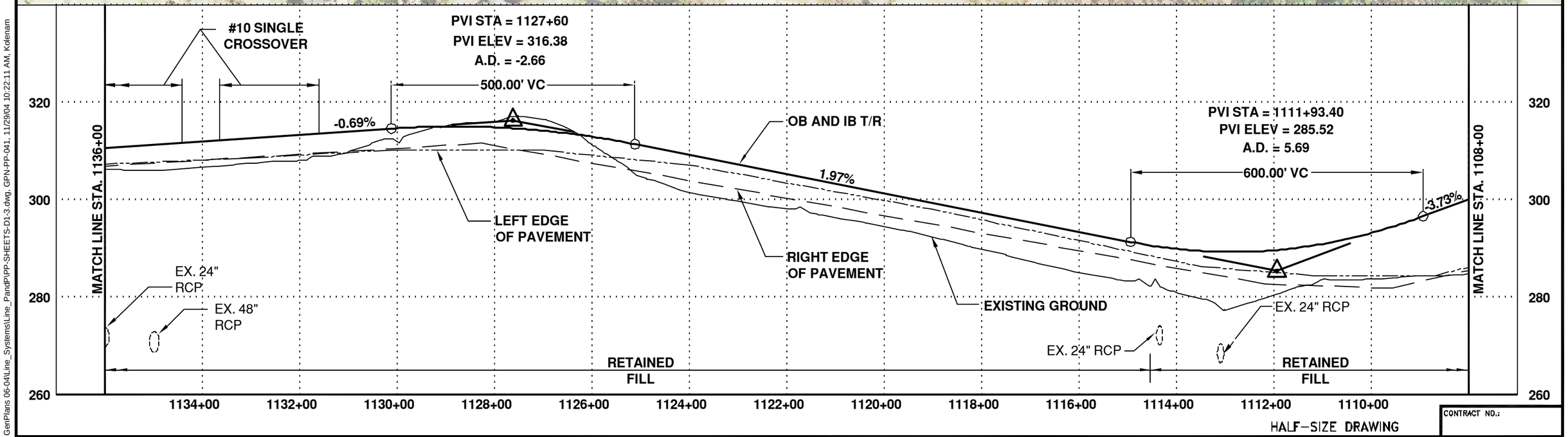
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CURVE NO.	RADIUS (FT.)	SPEED (MPH)
D1-O 2	2900	70
D1-I 2	2886	70

NOTE:
FOR COMPLETE CURVE DATA, SEE CURVE TABLE DRAWINGS.



HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH 10-02-01
DRAWN: K. WINCFIELD 10-31-01
CHECKED: T. TYYMAN 3-11-02
APPROVED: P. ELMAN 01-2004

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PLAN AND PROFILE
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1108+00 TO 1136+00

SCALE: H: 1"=100' V: 1"=10'

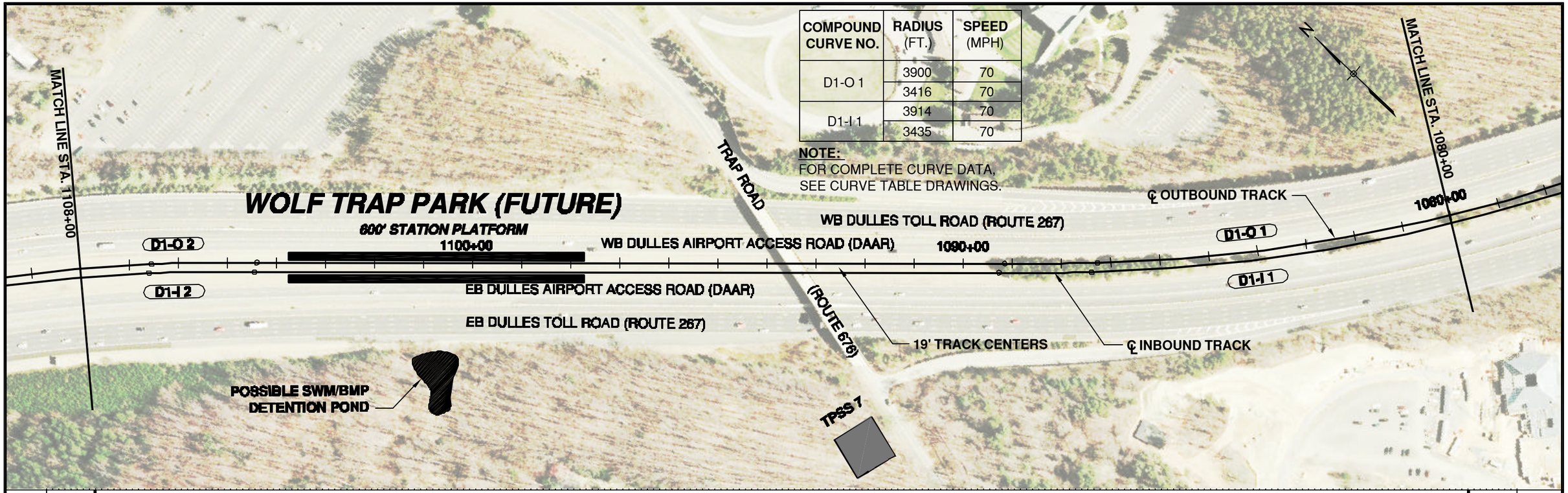
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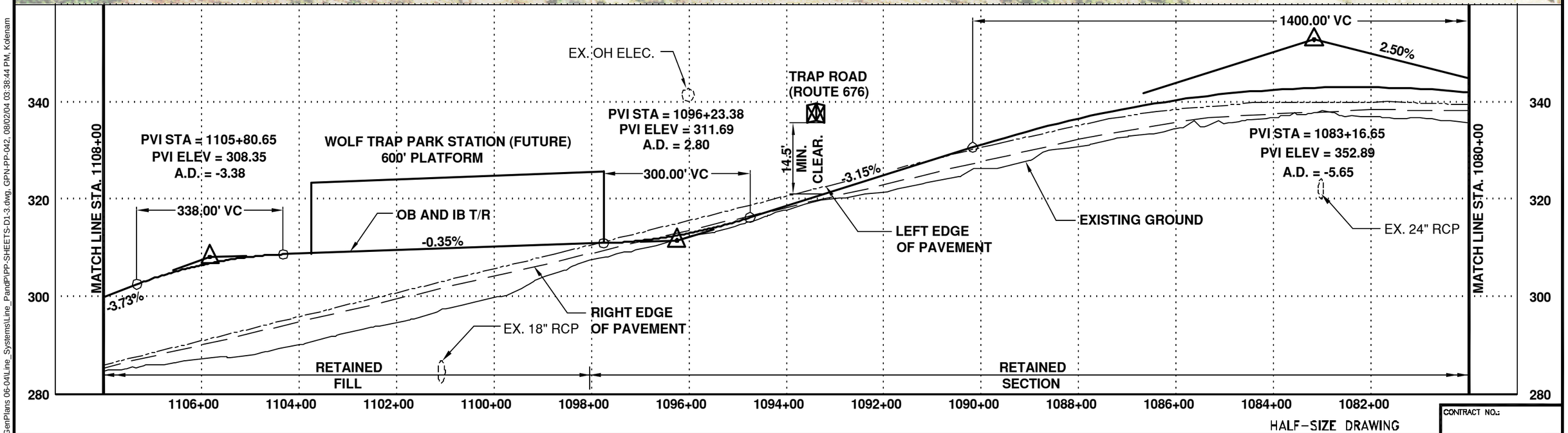
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COMPOUND CURVE NO.	RADIUS (FT.)	SPEED (MPH)
D1-O 1	3900	70
	3416	70
D1-I 1	3914	70
	3435	70

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.





HALF-SIZE DRAWING

CONTRACT NO.:

O:\002_dullesIFEIS GenPlans 06-04\Line_SystemsLine_PandP\PP-SHEETS-D1-3.dwg, GPN-PP-042, 08/02/04 03:38:44 PM, Kolenam

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DRAWN: K. WINGFIELD	10-31-01 DATE	
CHECKED: T. TWYMAN	3-11-02 DATE	
APPROVED: P. ELMAN	01-2004 DATE	

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

SUBMITTED — CAPITAL TRANSIT CONSULTANTS
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PLAN AND PROFILE
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT–WOLF TRAP PARK STATION (FUTURE)
STATION 1080+00 TO 1108+00

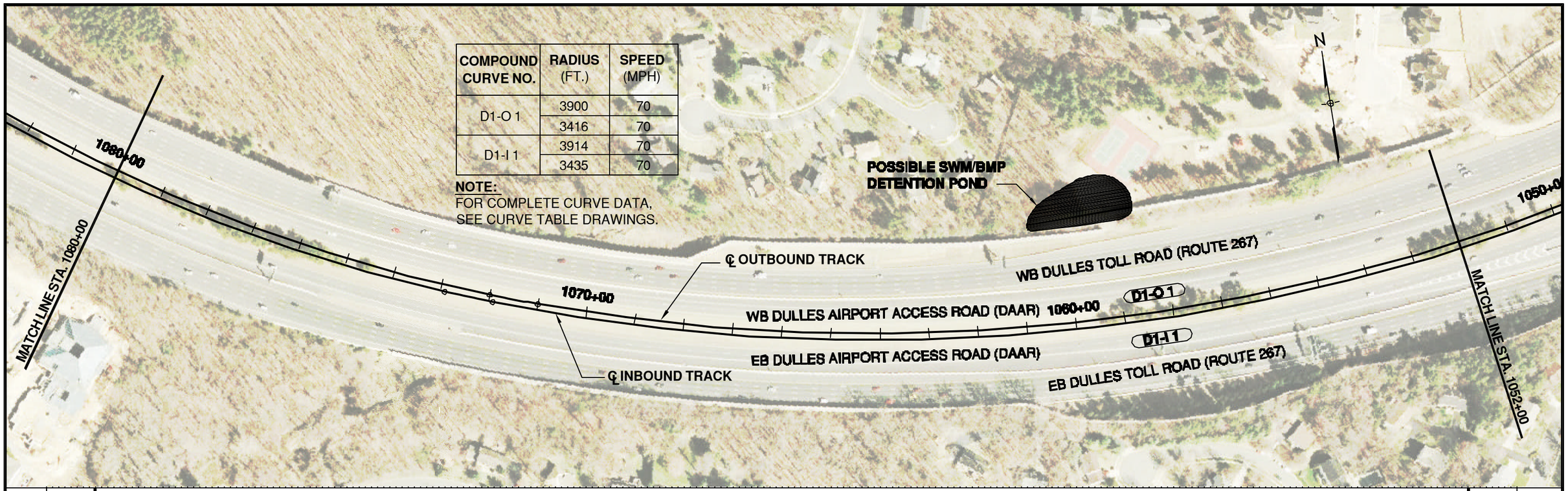
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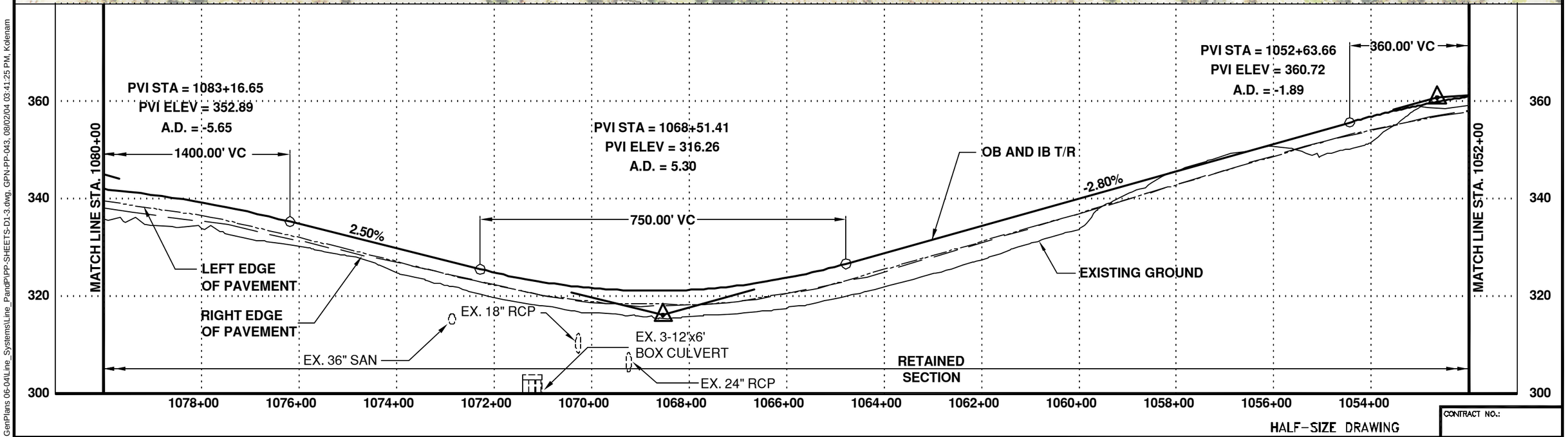
DRAWING NO.: GPN–PP–042

102

COMPOUND CURVE NO.	RADIUS (FT.)	SPEED (MPH)
D1-O 1	3900	70
	3416	70
D1-I 1	3914	70
	3435	70

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.





HALF-SIZE DRAWING

CONTRACT NO.:

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Line_P and P\PP-SHEETS-D1-3.dwg, GPN-PP-043, 08/02/04 03:41:25 PM, Kolenam

DESIGNED: D. SMITH	10-02-01 DATE	
DRAWN: K. WINGFIELD	10-31-01 DATE	
CHECKED: T. TWYMAN	3-11-02 DATE	
APPROVED: P. ELNAN	01-2004 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

SUBMITTED — CAPITAL TRANSIT CONSULTANTS
Dana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PLAN AND PROFILE
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
STATION 1052+00 TO 1080+00

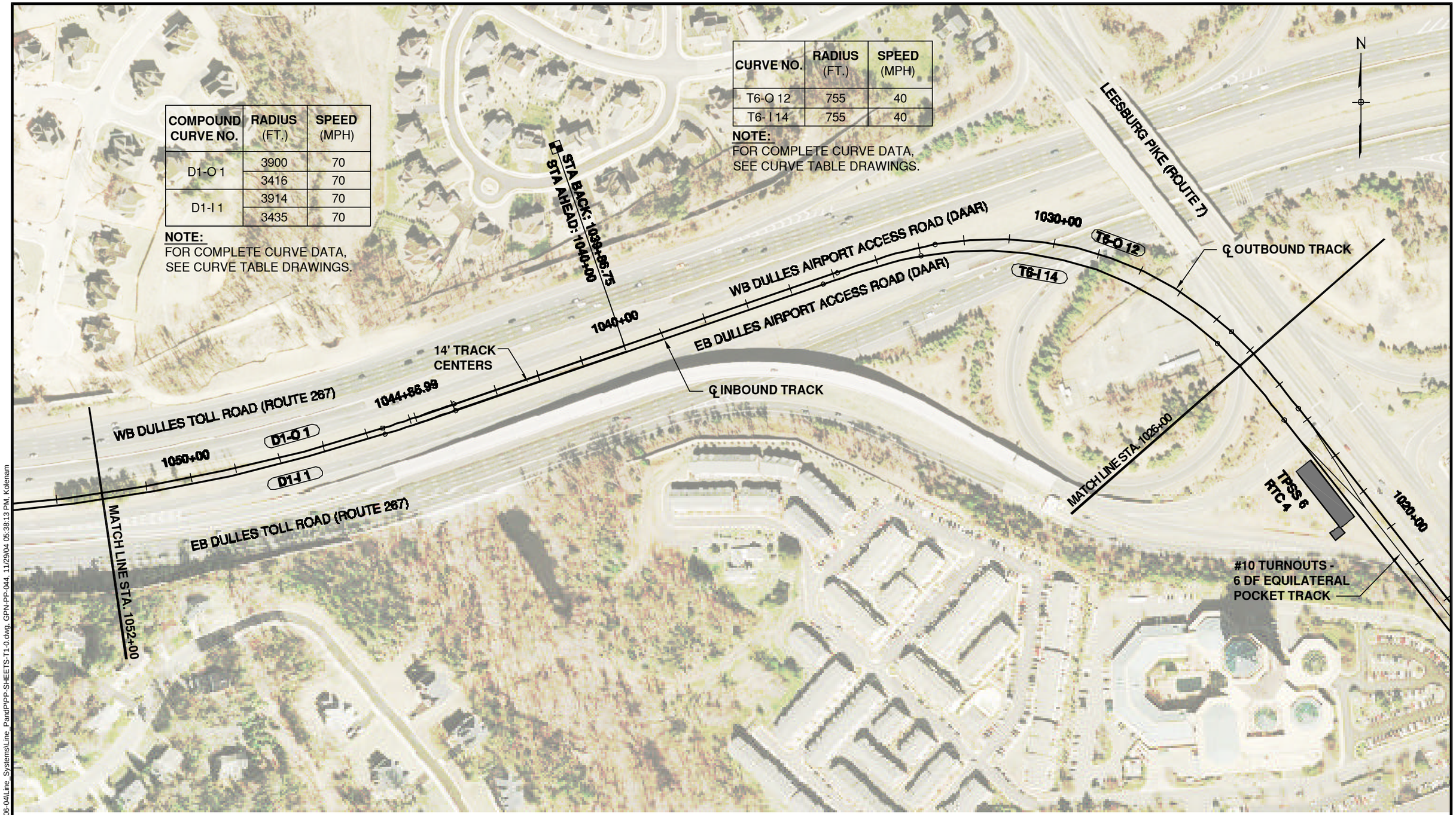
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DRAWING NO.: GPN-PP-043
103

COMPOUND CURVE NO.	RADIUS (FT.)	SPEED (MPH)
D1-O 1	3900	70
	3416	70
D1-I 1	3914	70
	3435	70

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.

CURVE NO.	RADIUS (FT.)	SPEED (MPH)
T6-O 12	755	40
T6- I 14	755	40

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.



HALF-SIZE DRAWING

CONTRACT NO.:

REFERENCE DRAWINGS		REVISIONS		
NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION

DESIGNED: D. MADJANSACAY 07-01-01 DATE
DRAWN: D. MADSEN 07-05-01 DATE
CHECKED: R. KASHIF 3-11-02 DATE
APPROVED: P. ELMAN 01-2004 DATE

DULLES CORRIDOR RAPID TRANSIT PROJECT

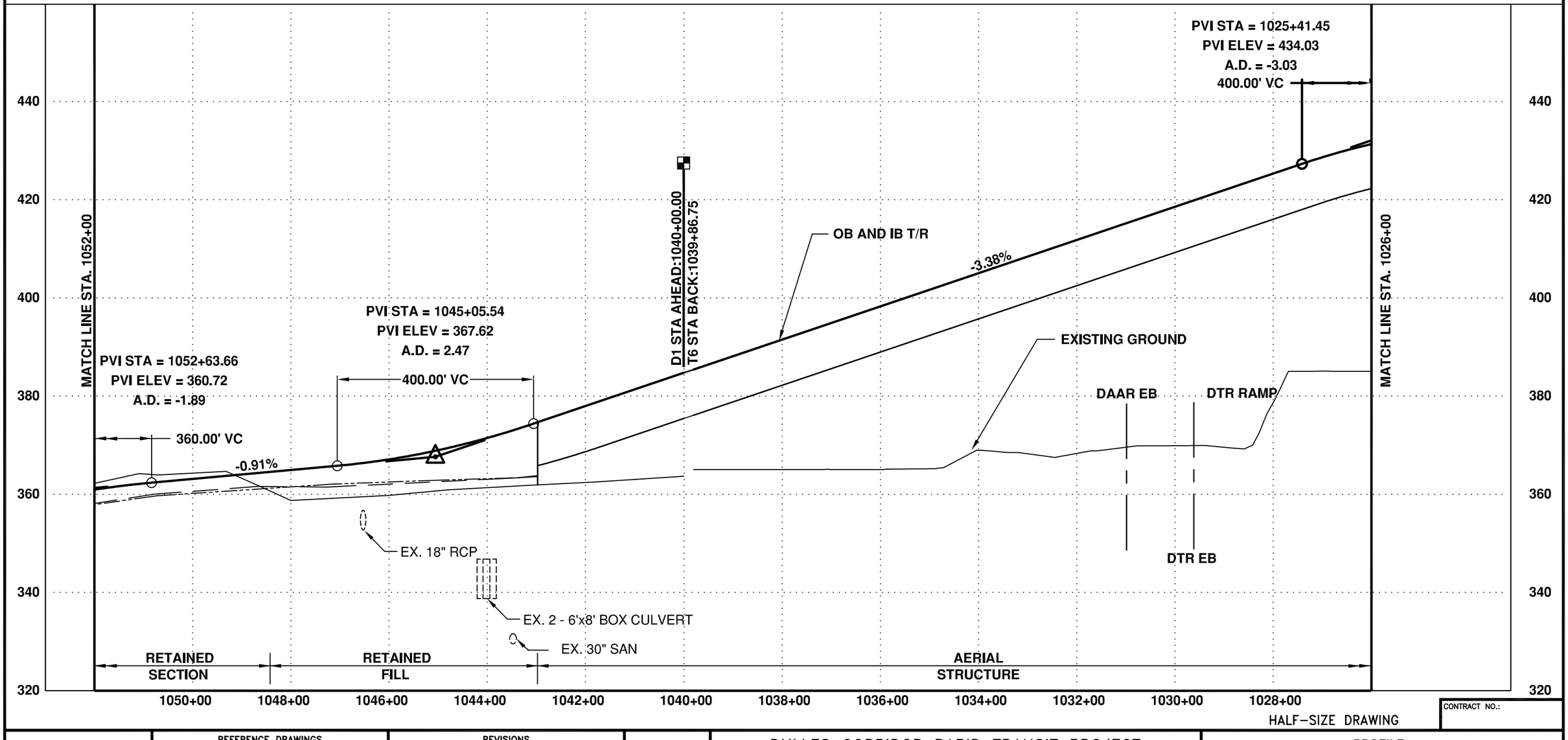
CAPITAL TRANSIT CONSULTANTS
SUBMITTED
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PLAN
TYSONS CORNER
T6 ALIGNMENT
STATION 1026+00 TO 1052+00

SCALE: 1"=100' 50 0 50 100
DRAWING NO.: GPN-PP-044
104

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADLANSACAY 07-01-01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: R. KASHIF 07-06-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. KASHIF 3-11-02 DATE		
APPROVED: P. ELMAN 01-2004 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

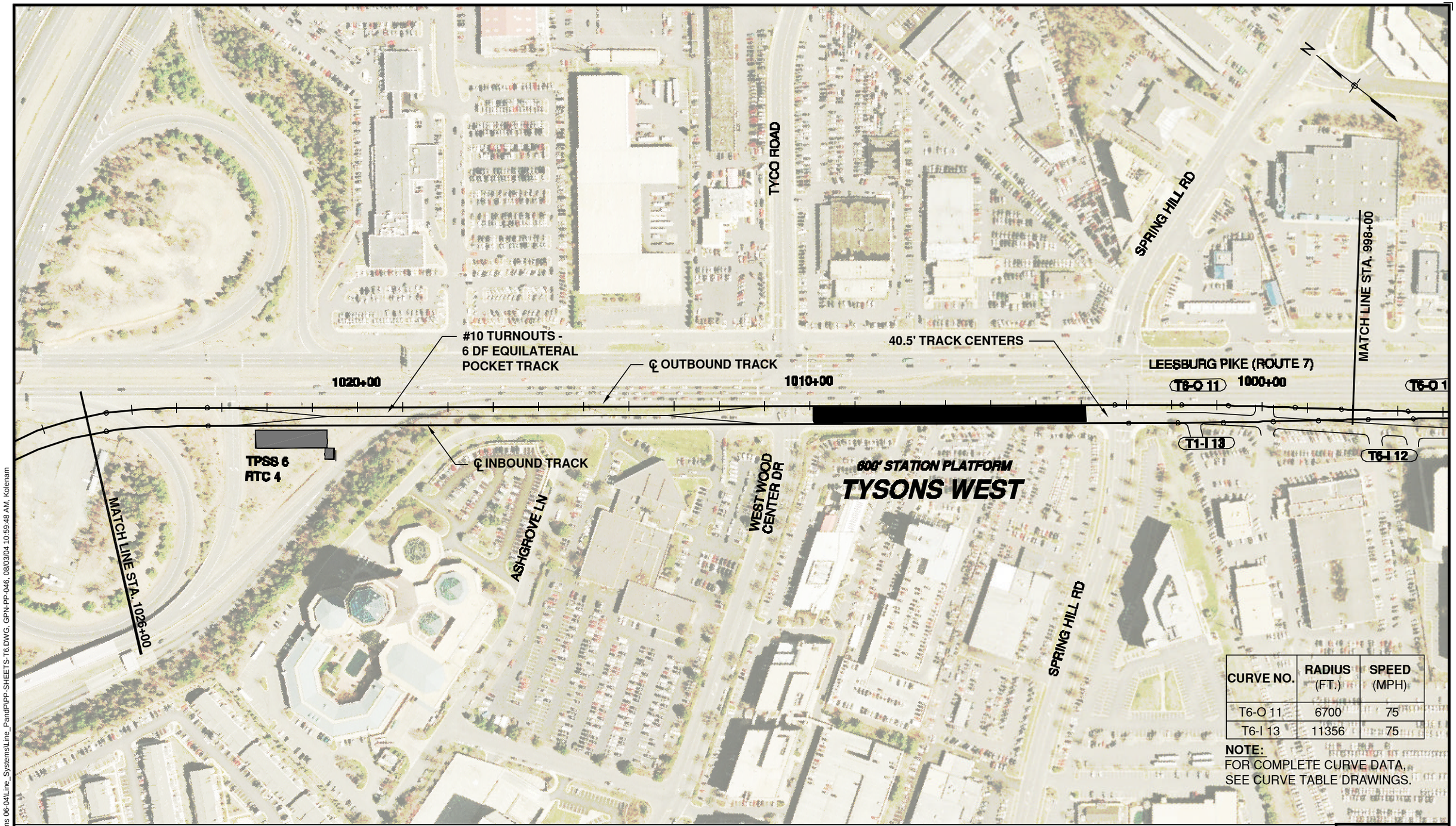
PROFILE
TYSONS CORNER
T6 ALIGNMENT
STATION 1026+00 TO 1052+00

SCALE: H: 1"=100' V: 1"=10' (50 0 100 / 5 0 10)

DRAWING NO.: GPN-PP-045

105

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CURVE NO.	RADIUS (FT.)	SPEED (MPH)
T6-O 11	6700	75
T6-I 13	11356	75

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MACLANSACAY	07-01-01	DATE
DRAWN: K. WINGFIELD	07-05-01	DATE
CHECKED: R. KASHIF	3-11-02	DATE
APPROVED: P. ELMAN	01-2004	DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

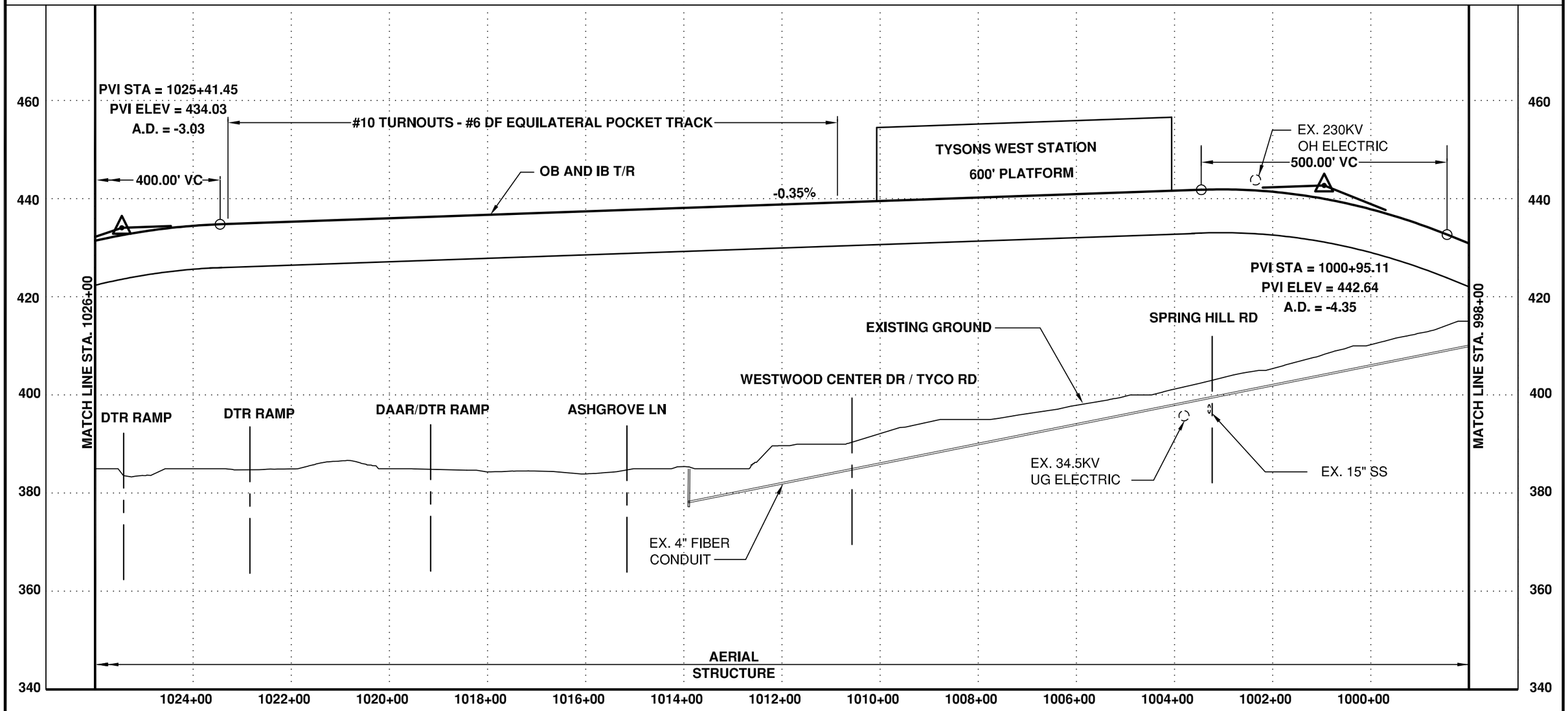
PLAN
TYSONS CORNER
T6 ALIGNMENT – TYSONS WEST STATION
STATION 998+00 TO 1026+00

SCALE: 1"=100' (50 0 50 100)

DRAWING NO.: GPN-PP-046

106

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADLANSACAY 07-01-01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: K. WINGFIELD 07-05-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: D. MADLANSACAY 3-11-02 DATE		
APPROVED: P. ELMAN 01-2004 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

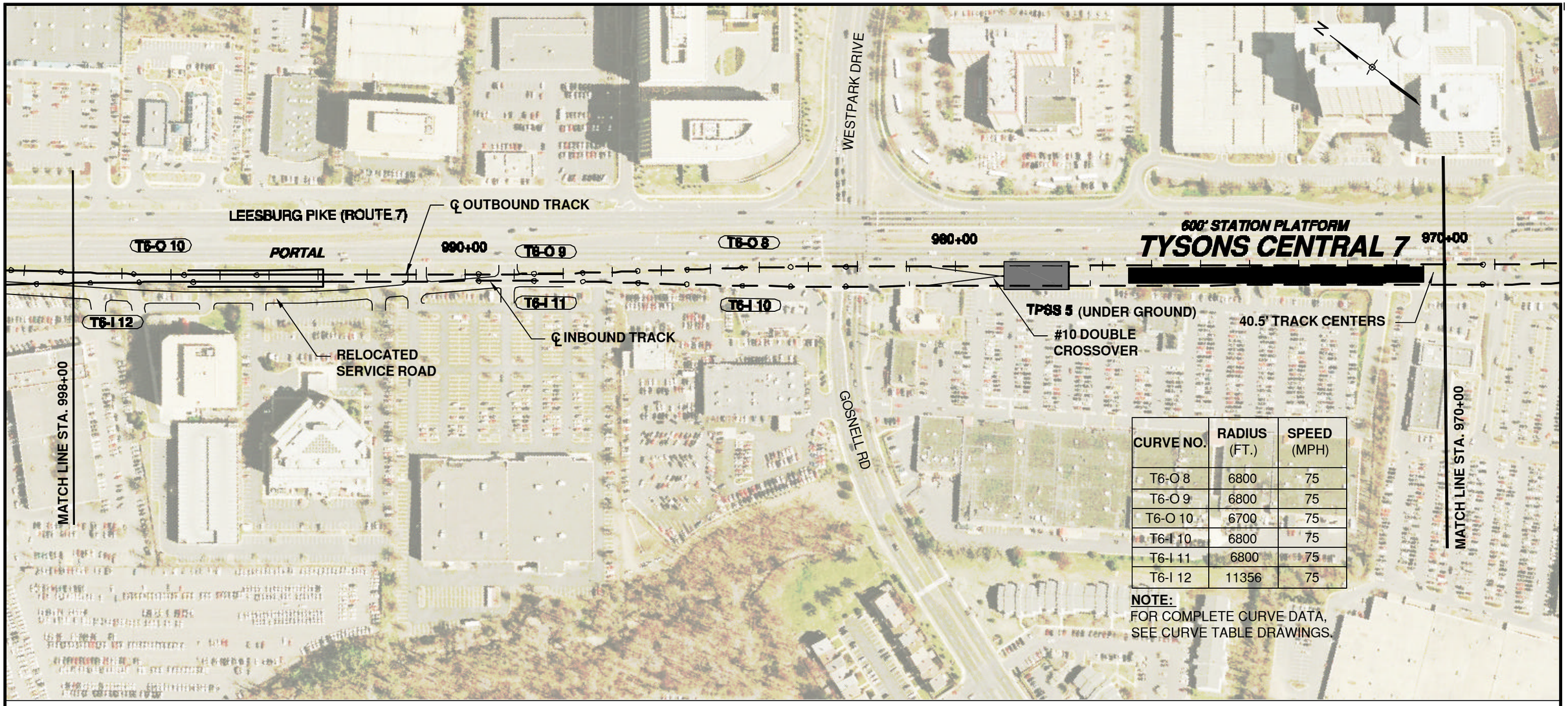
FINAL GENERAL PLANS
JULY 2004

PROFILE
TYSONS CORNER
T6 ALIGNMENT – TYSONS WEST STATION
STATION 998+00 TO 1026+00

SCALE:

DRAWING NO.: GPN-PP-047

107



CURVE NO.	RADIUS (FT.)	SPEED (MPH)
T6-O 8	6800	75
T6-O 9	6800	75
T6-O 10	6700	75
T6-I 10	6800	75
T6-I 11	6800	75
T6-I 12	11356	75

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADLANSACKY	07-01-01 DATE	
DRAWN: K. WINGFIELD	07-05-01 DATE	
CHECKED: R. KASHF	9-28-03 DATE	
APPROVED: P. ELNAN	01-2004 DATE	

REFERENCE DRAWINGS		REVISIONS		
NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

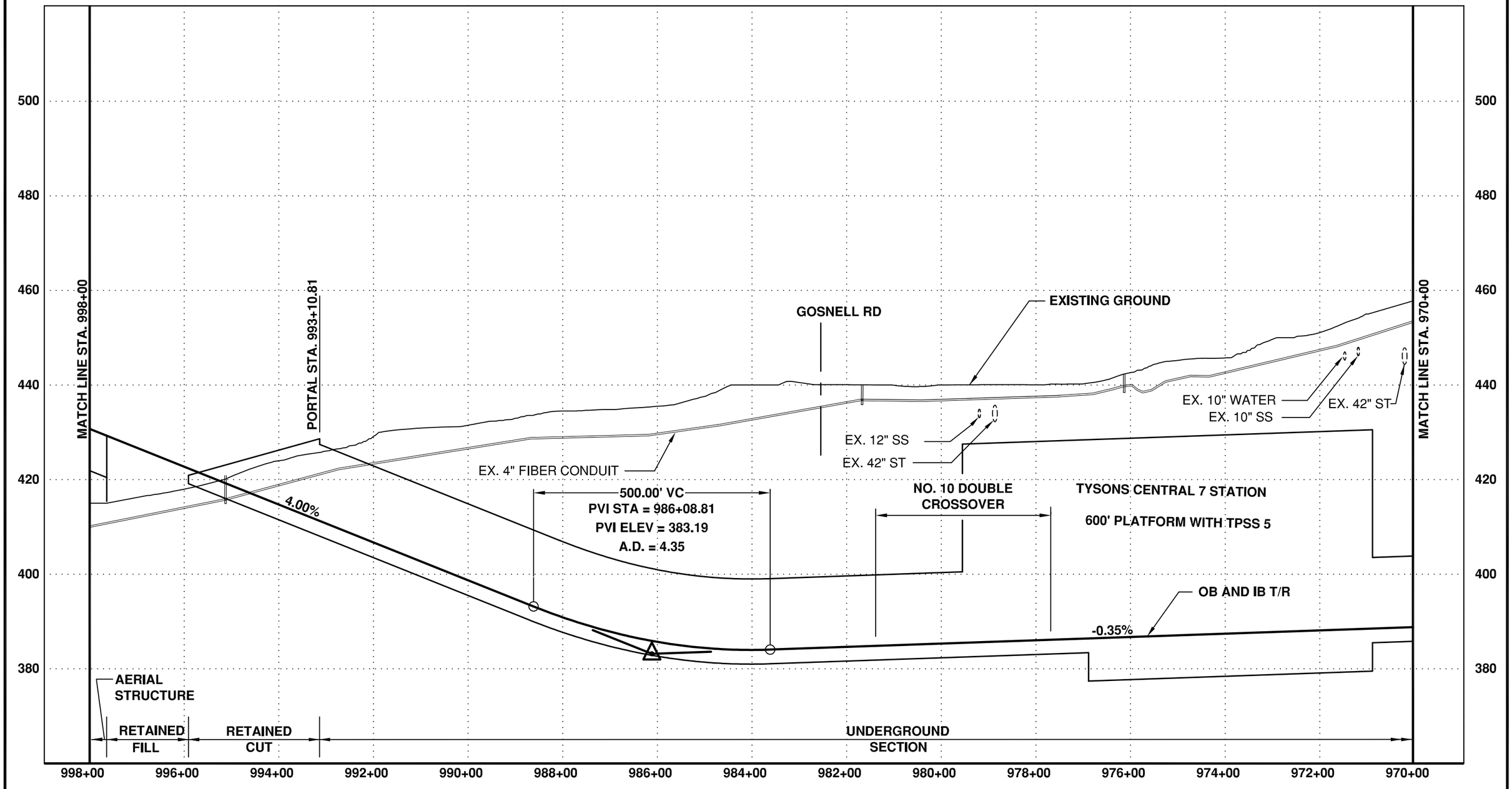
PLAN
TYSONS CORNER
T6 ALIGNMENT – TYSONS CENTRAL 7
STATION 970+00 TO 998+00

SCALE: 1"=100' (50 0 50 100)

DRAWING NO.: GPN-PP-103

108

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HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADLANSACAY 07–01–01	REFERENCE DRAWINGS	REVISIONS
DRAWN: K. WINGFIELD 07–05–01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. KASHIF 9–29–03		
APPROVED: P. ELMAN 01–2004		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

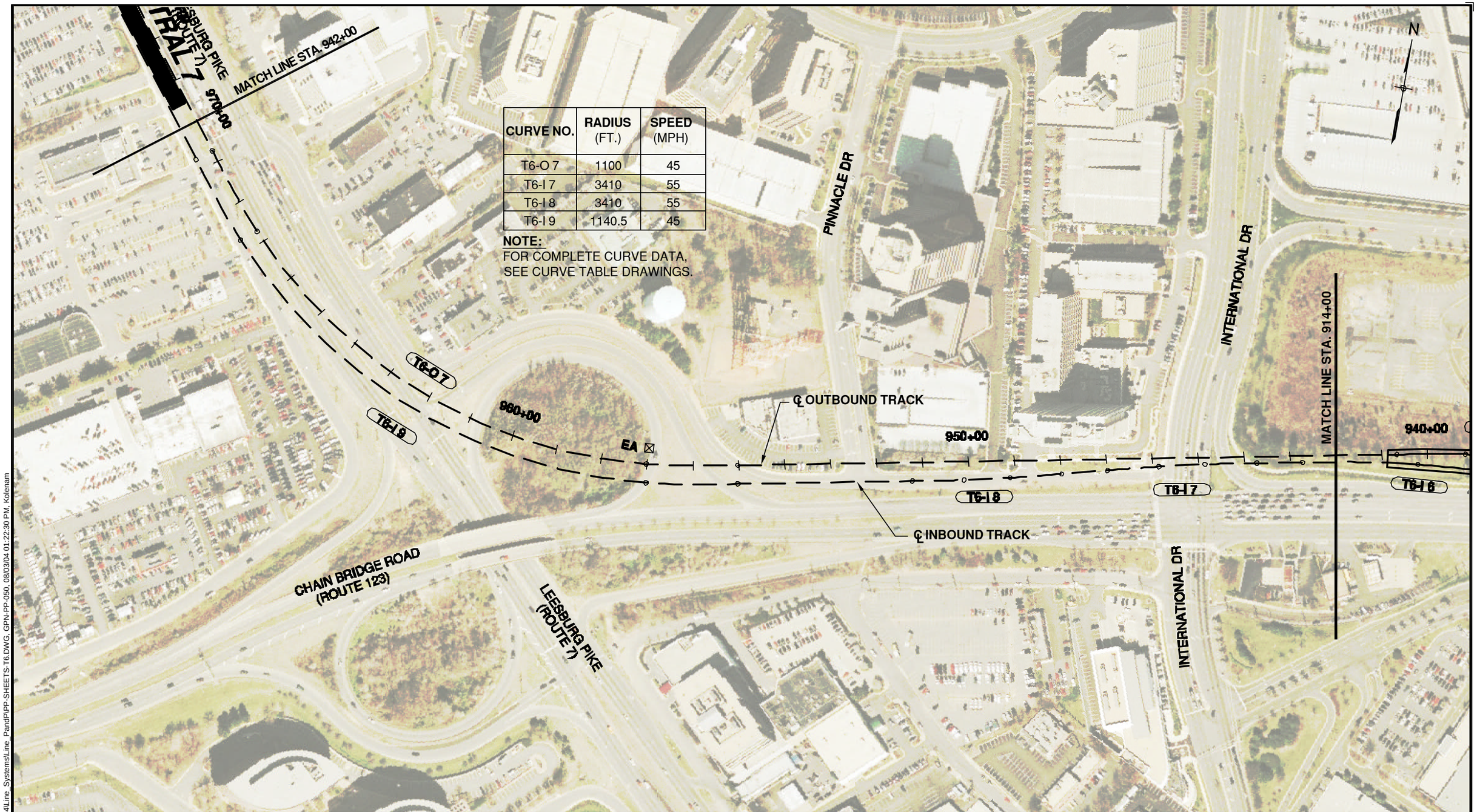
PROFILE
TYSONS CORNER
T6 ALIGNMENT – TYSONS CENTRAL 7
STATION 970+00 TO 998+00

SCALE:

DRAWING NO.: GPN–PP–103A

109

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CURVE NO.	RADIUS (FT.)	SPEED (MPH)
T6-O 7	1100	45
T6-I 7	3410	55
T6-I 8	3410	55
T6-I 9	1140.5	45

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADLANSACAY 07-01-01
DRAWN: K. WINDFIELD 07-05-01
CHECKED: R. KASHIF 3-11-002
APPROVED: P. ELMAN 01-2004

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

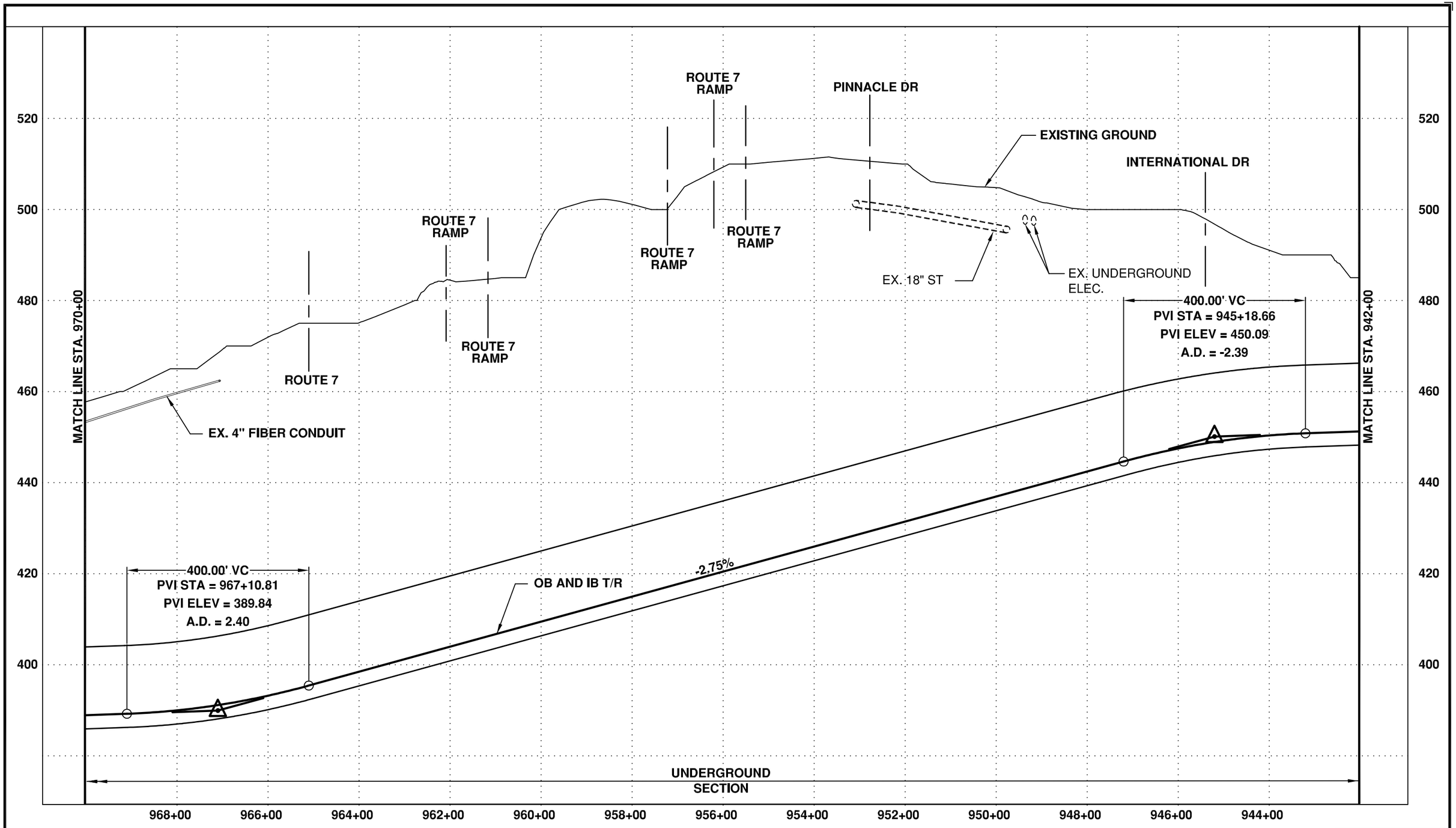
PLAN
TYSONS CORNER
T6 ALIGNMENT
STATION 942+00 TO 970+00

SCALE: 1"=100' 50 0 50 100

DRAWING NO.: GPN-PP-050

110

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADLANSACAY	07-01-01 DATE
DRAWN: K. WINGFIELD	07-05-01 DATE
CHECKED: R. KASHIF	3-11-02 DATE
APPROVED: P. ELMAN	01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

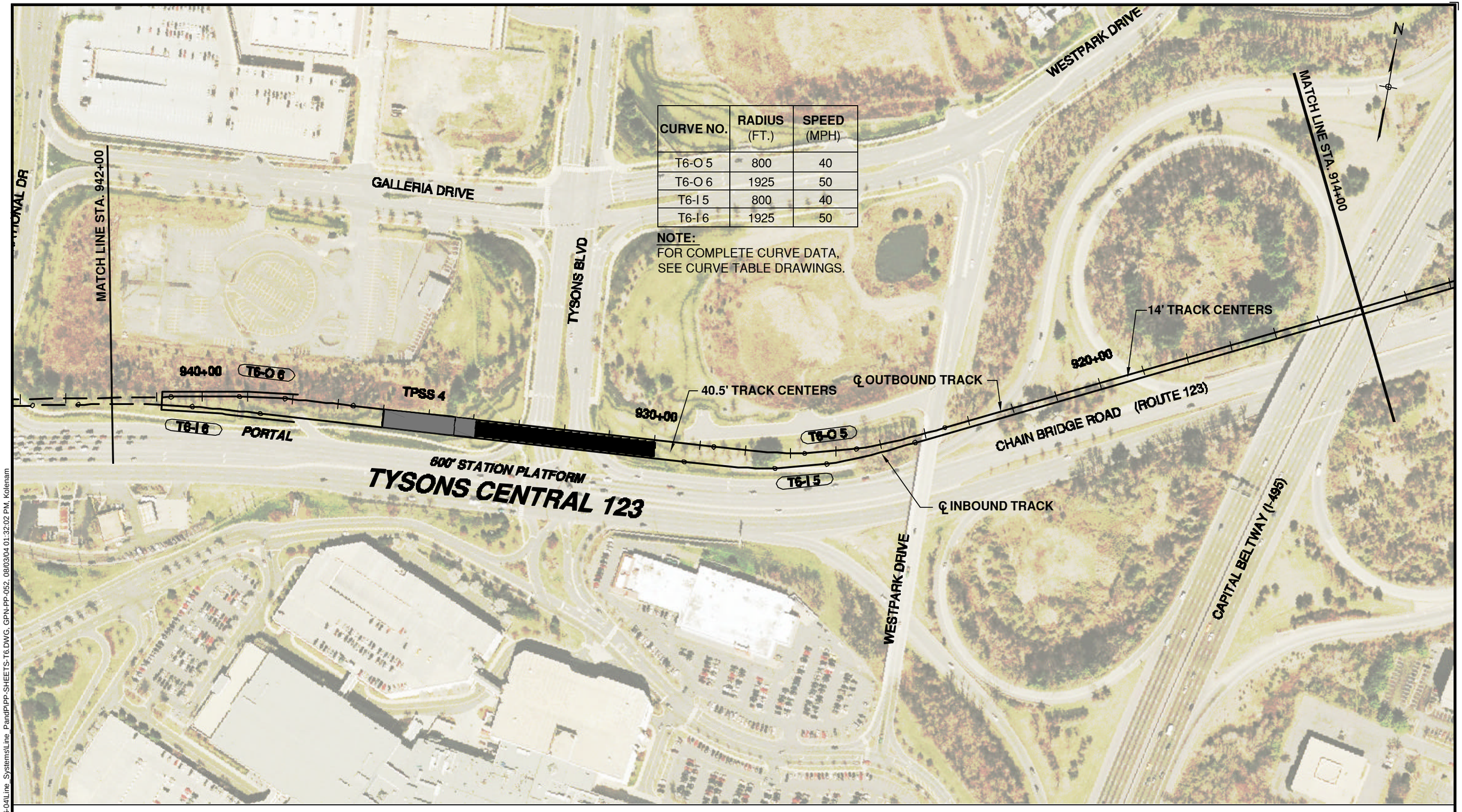
PROFILE
TYSONS CORNER
T6 ALIGNMENT
STATION 942+00 TO 970+00

SCALE:

DRAWING NO.: GPN-PP-051

111

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CURVE NO.	RADIUS (FT.)	SPEED (MPH)
T6-O 5	800	40
T6-O 6	1925	50
T6-I 5	800	40
T6-I 6	1925	50

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.

O:\002_dullesFEIS GenPlans 06-04Line_SystemsLine_PandP\PP-SHEETS-T6.DWG, GPN-PP-052, 08/03/04 01:32:02 PM, Kolenam

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADJANSACAY 07-01-01 DATE
DRAWN: K. WINGFIELD 07-05-01 DATE
CHECKED: R. KASHIF 3-11-002 DATE
APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Hernandez
PROJECT MANAGER

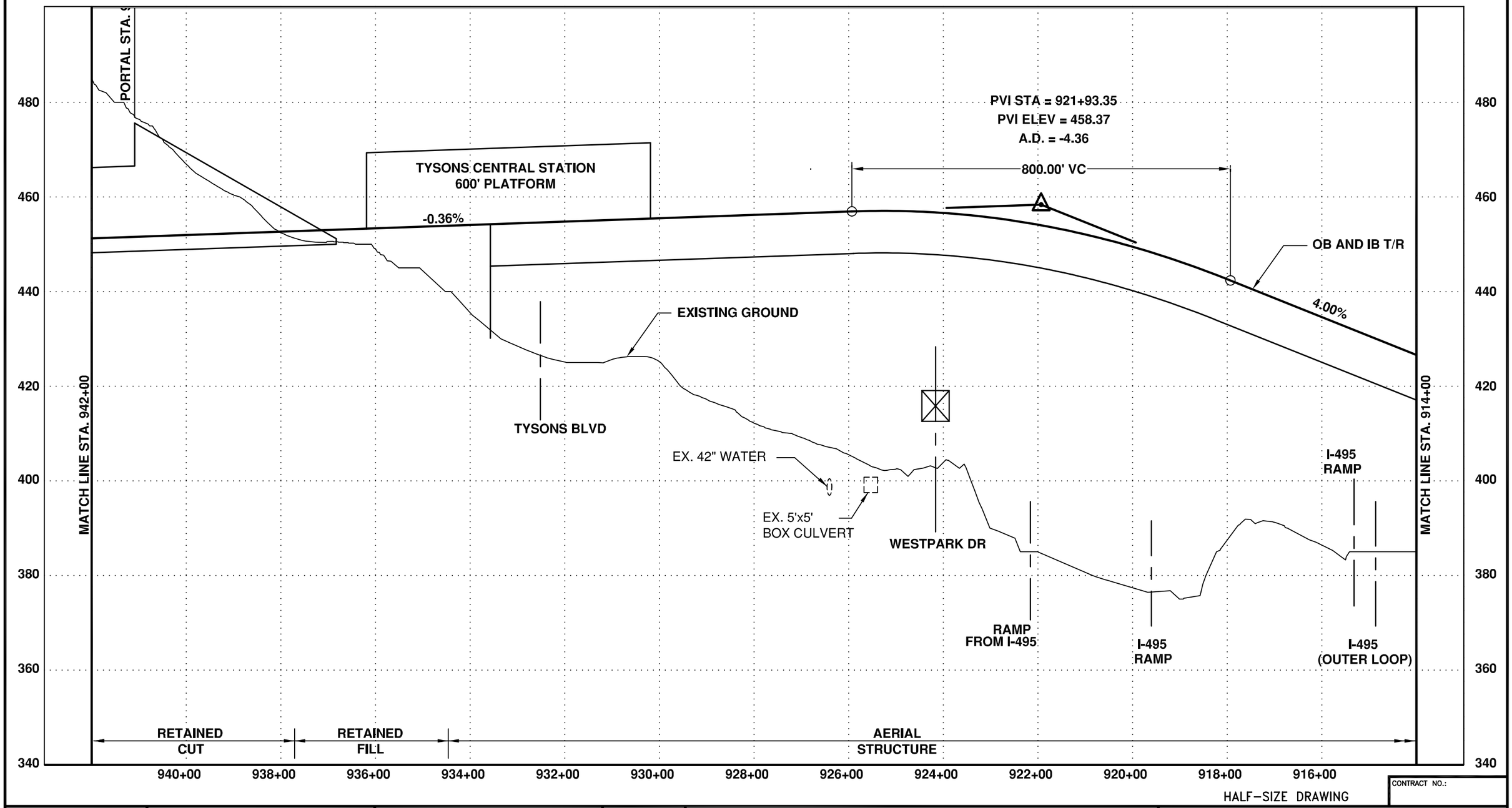
FINAL GENERAL PLANS
JULY 2004

PLAN
TYSONS CORNER
T6 ALIGNMENT – TYSONS CENTRAL 123 STATION
STATION 914+00 TO 942+00

SCALE: 1"=100' 50 0 50 100

DRAWING NO.: GPN-PP-052

112



HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADLANSACAY 07–01–01	REFERENCE DRAWINGS	REVISIONS
DRAWN: K. WINGFIELD 07–05–01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. KASHIF 3–11–02		
APPROVED: P. ELMAN 01–2004		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

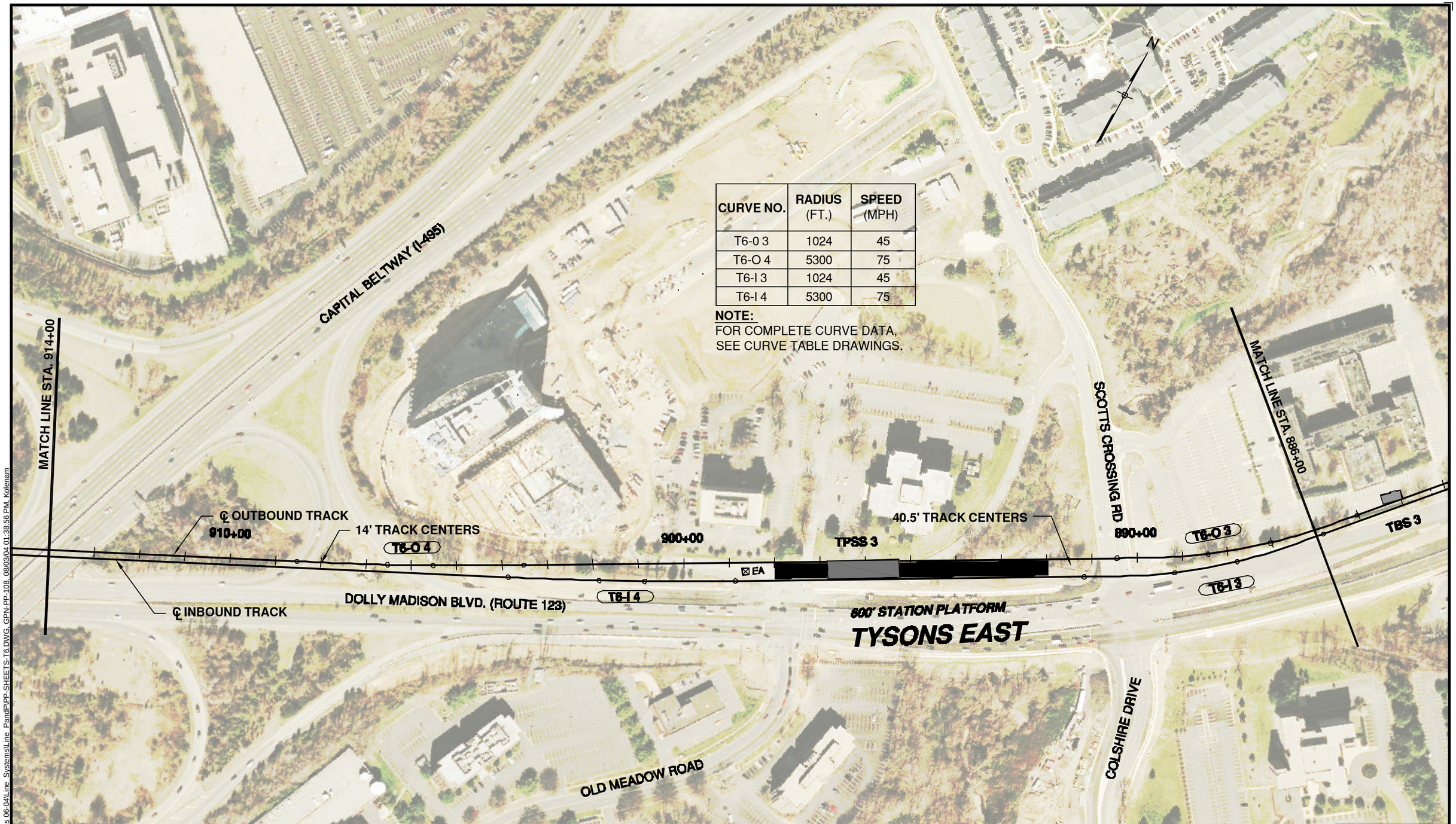
PROFILE
TYSONS CORNER
T6 ALIGNMENT – TYSONS CENTRAL 123 STATION
STATION 914+00 TO 942+00

SCALE: H: 1"=100' V: 1"=10' (50 0 100 / 5 0 10)

DRAWING NO.: GPN–PP–053

113

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CURVE NO.	RADIUS (FT.)	SPEED (MPH)
T6-0 3	1024	45
T6-O 4	5300	75
T6-I 3	1024	45
T6-I 4	5300	75

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. NADLANSADAY 07-01-01 DATE
DRAWN: K. WINGFIELD 07-05-01 DATE
CHECKED: R. KASHIF 9-29-03 DATE
APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

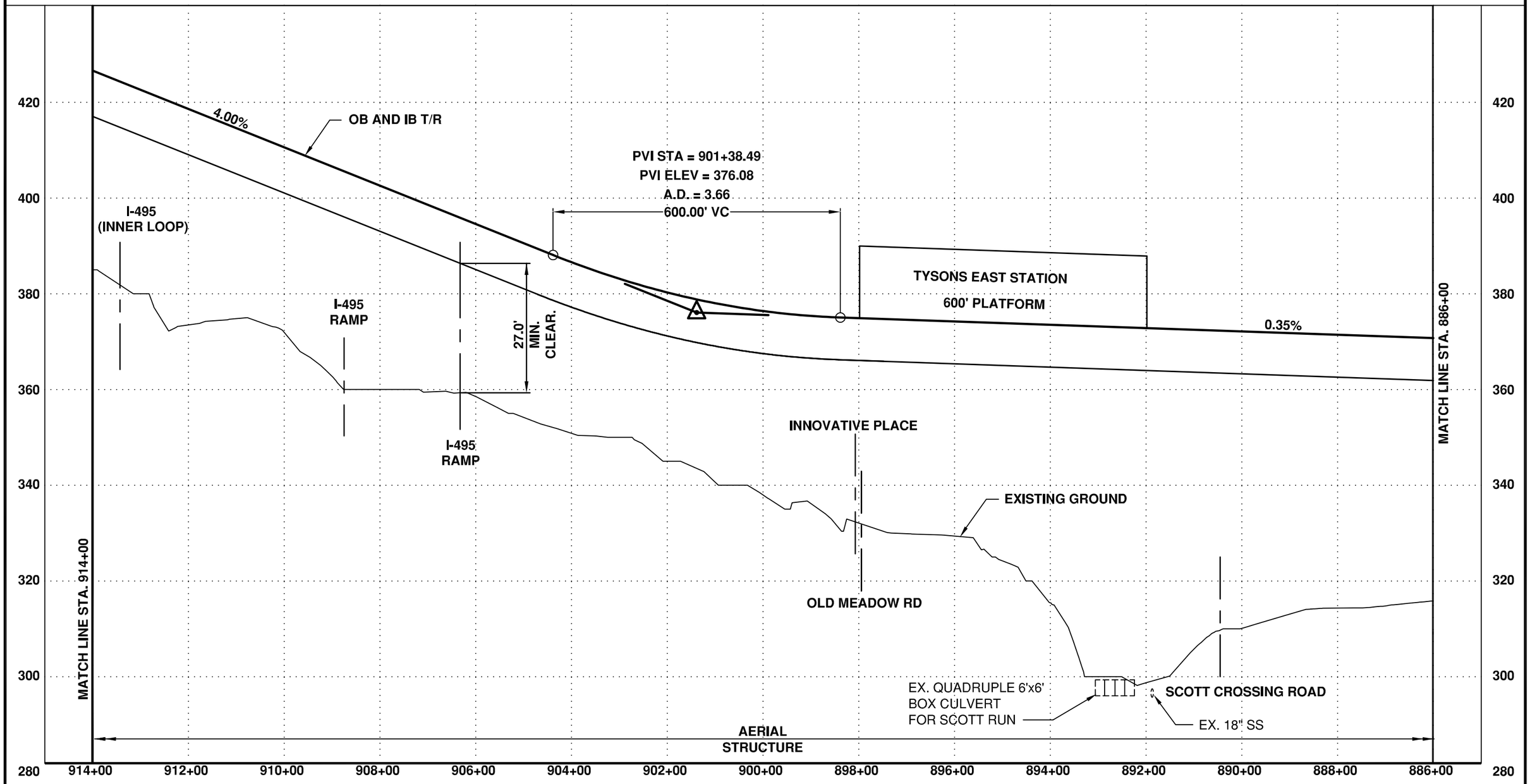
CAPITAL TRANSIT CONSULTANTS
SUBMITTED
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PLAN
TYSONS CORNER
T6 ALIGNMENT – TYSONS EAST STATION
STATION 886+00 TO 914+00

SCALE: 1"=100' 50 0 50 100
DRAWING NO.: GPN-PP-108
114

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HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. KASHIF 07–01–01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: K. WINGFIELD 07–05–01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. KASHIF 9–29–03 DATE		
APPROVED: P. ELMAN 01–2004 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

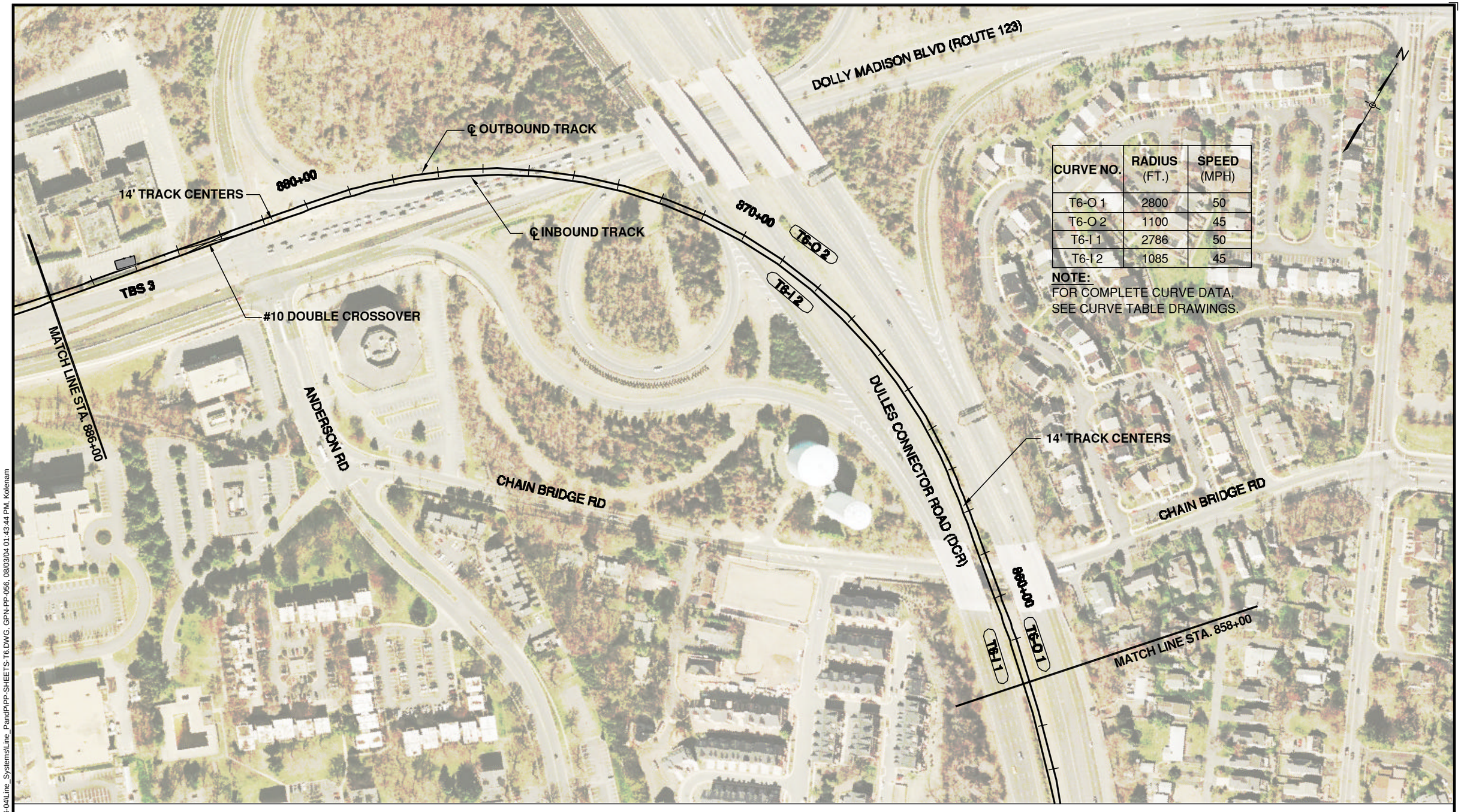
FINAL GENERAL PLANS
JULY 2004

PROFILE
TYSONS CORNER
T6 ALIGNMENT – TYSONS EAST STATION
STATION 886+00 TO 914+00

SCALE:

DRAWING NO.: GPN–PP–109

115



CURVE NO.	RADIUS (FT.)	SPEED (MPH)
T6-O 1	2800	50
T6-O 2	1100	45
T6-I 1	2786	50
T6-I 2	1085	45

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADLANSACAY	07-01-01	DATE
DRAWN: K. WINGFIELD	07-03-01	DATE
CHECKED: R. KASHF	8-29-03	DATE
APPROVED: P. ELMAN	01-2004	DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

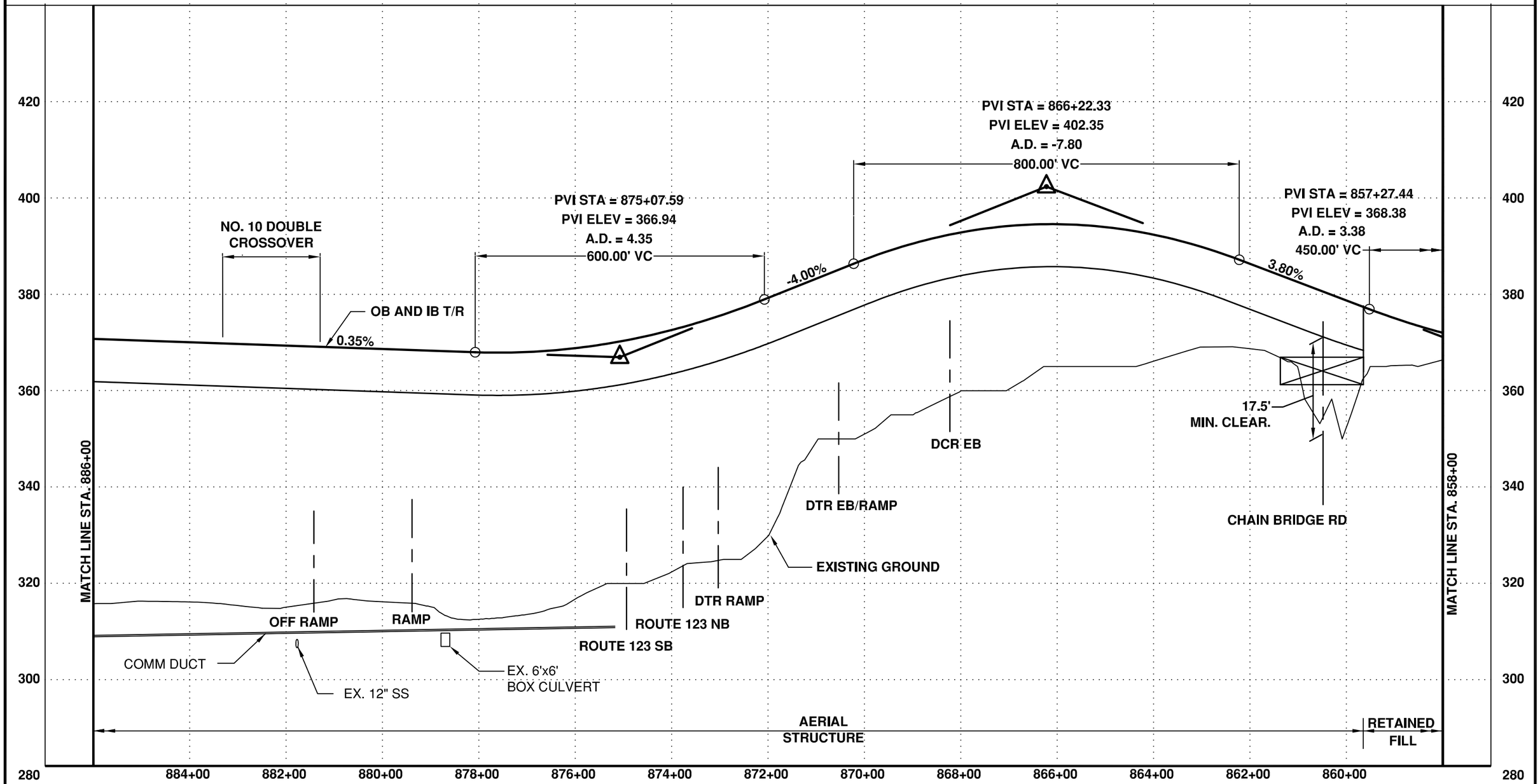
PLAN
TYSONS CORNER
T6 ALIGNMENT
STATION 858+00 TO 886+00

SCALE: 1"=100' (0 50 100)

DRAWING NO.: GPN-PP-056

116

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Line_Pand\PPP-SHEETS-T6.DWG, GPN-PP-056, 08/03/04 01:43:44 PM, Kolenam



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HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADLANSACAY 07–01–01	REFERENCE DRAWINGS	REVISIONS
DRAWN: K. WINGFIELD 07–05–01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. KASHIF 9–29–03		
APPROVED: P. ELMAN 10–2004		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PROFILE
TYSONS CORNER
T6 ALIGNMENT
STATION 858+00 TO 886+00

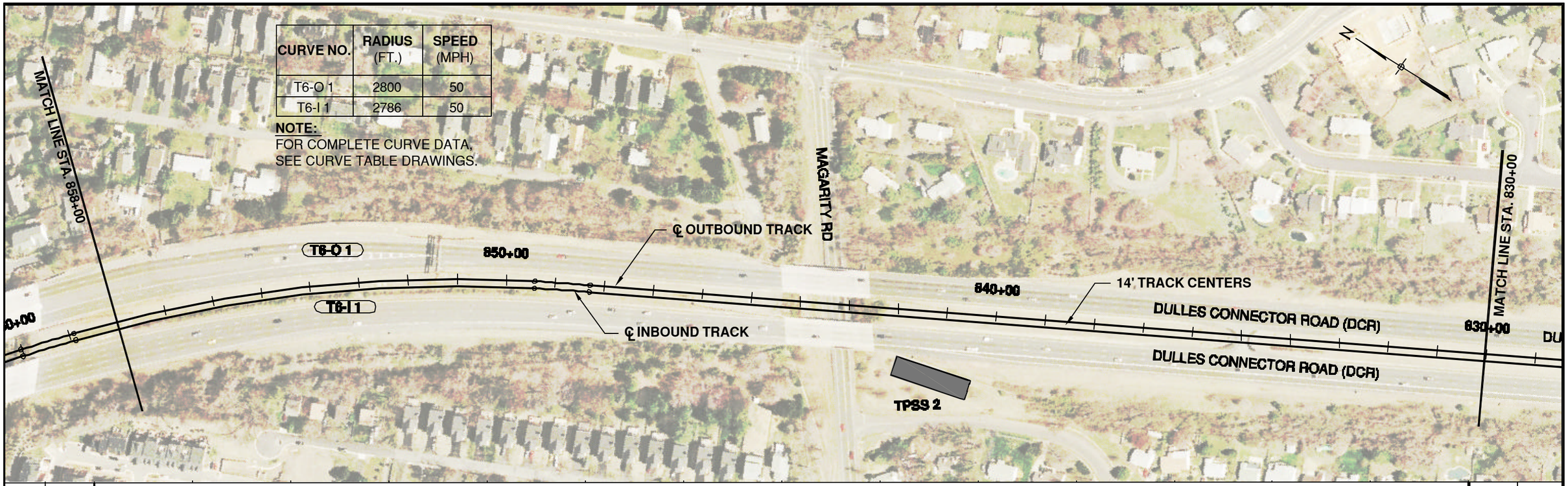
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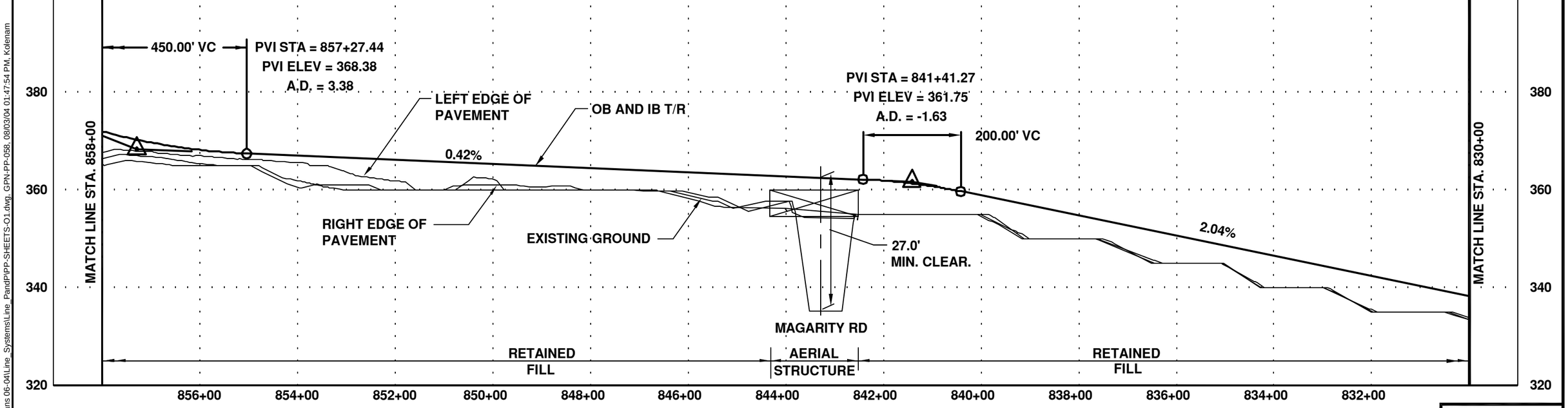
DRAWING NO.: GPN–PP–057

117

CURVE NO.	RADIUS (FT.)	SPEED (MPH)
T6-O 1	2800	50
T6-I 1	2786	50

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.





HALF-SIZE DRAWING

CONTRACT NO.:

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DESIGNED: D. MADLANSACAY	10-04-01 DATE	
DRAWN: K. WINCFIELD	10-08-01 DATE	
CHECKED: R. KASHIF	9-29-03 DATE	
APPROVED: P. ELMAN	01-2004 DATE	

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Darryl C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PLAN AND PROFILE
ORANGE LINE CONNECTION
O1 ALIGNMENT
STATION 830+00 TO 858+00

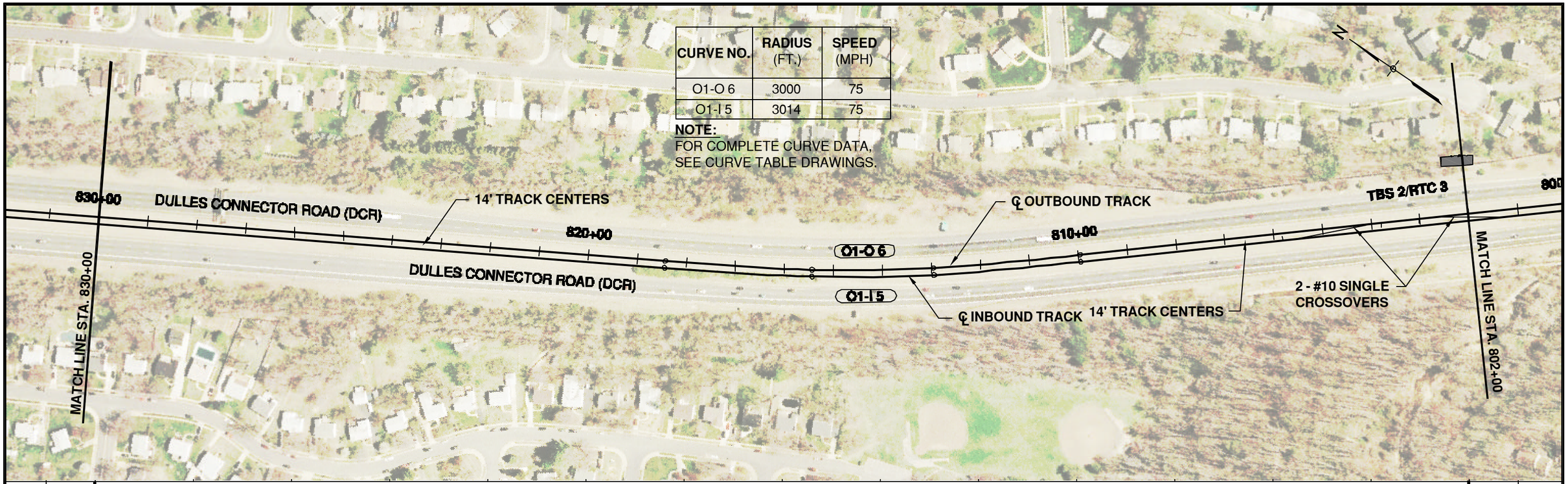
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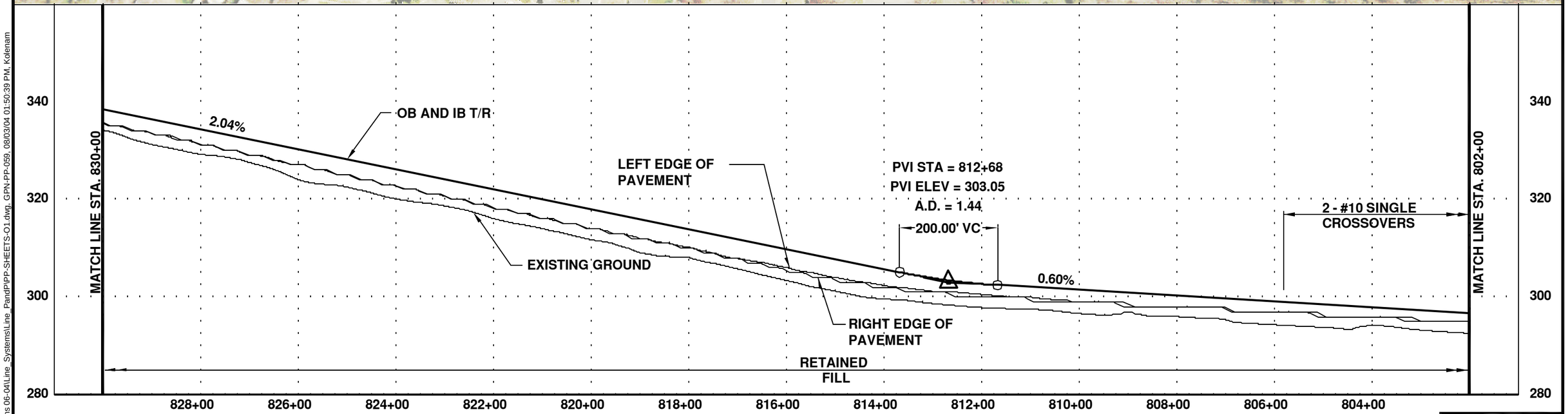
DRAWING NO.: GPN-PP-058

118

CURVE NO.	RADIUS (FT.)	SPEED (MPH)
O1-O 6	3000	75
O1-I 5	3014	75

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.





HALF-SIZE DRAWING

CONTRACT NO.:

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Line_PandP\PP-SHEETS-O1.dwg, GPN-PP-059, 08/03/04 01:50:39 PM, Kolenam

DESIGNED: D. MACLANSACAY	10-04-01	
DRAWN: K. WINGFIELD	10-08-01	
CHECKED: R. KASHIF	0-20-03	
APPROVED: P. ELMAN	01-2004	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

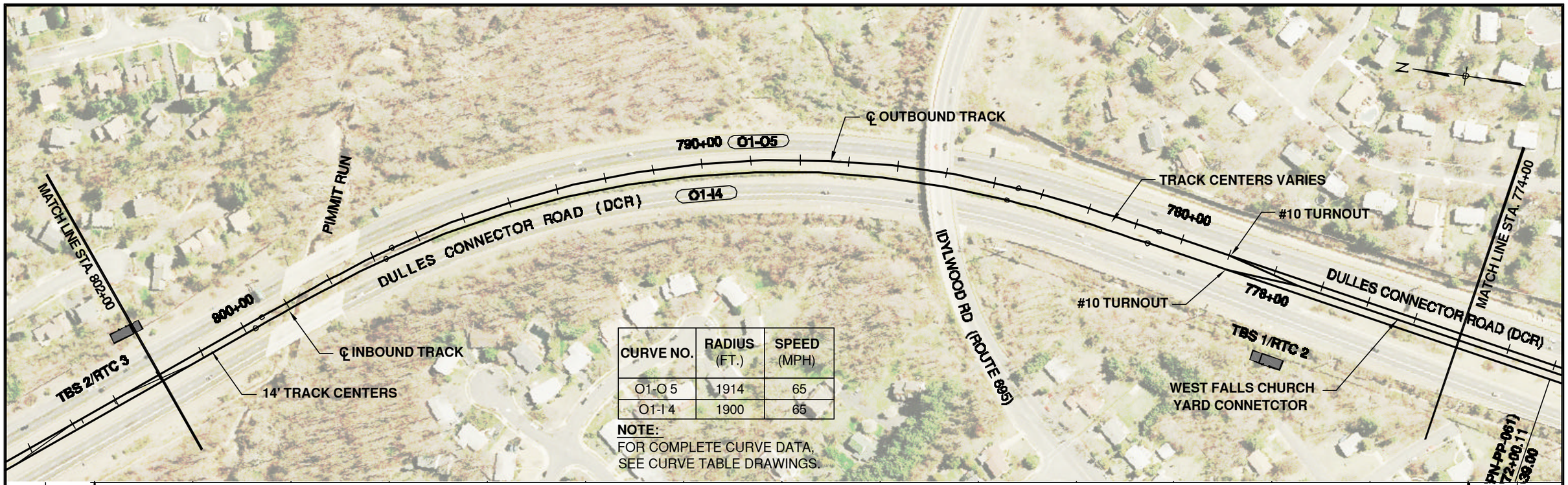
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PLAN AND PROFILE
ORANGE LINE CONNECTION
O1 ALIGNMENT
STATION 802+00 TO 830+00

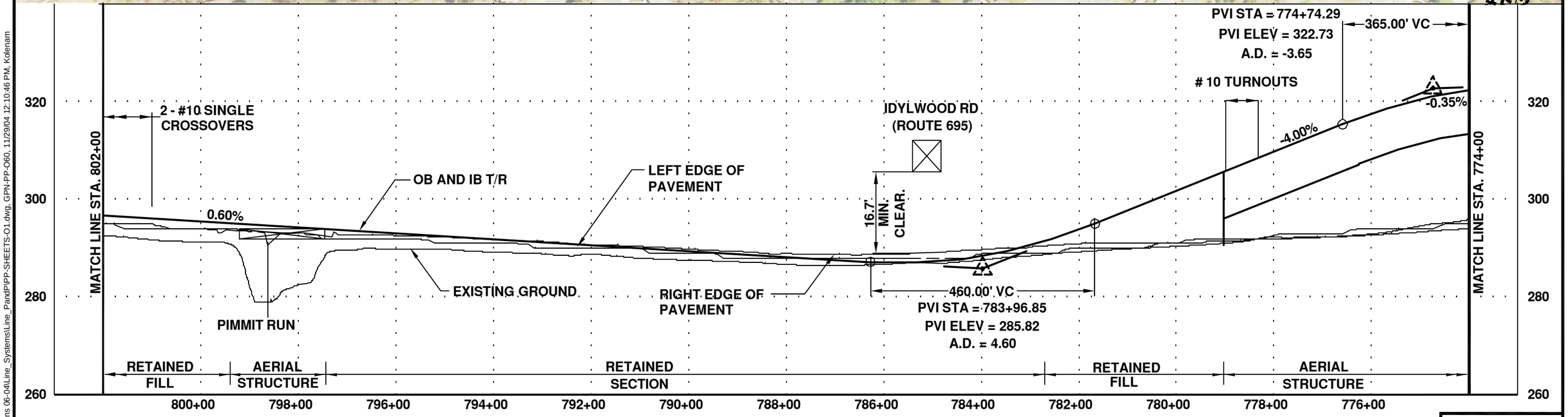
SCALE: H: 1"=100' 50 0 100
V: 1"=10' 5 0 10

DRAWING NO.: GPN-PP-059



CURVE NO.	RADIUS (FT.)	SPEED (MPH)
O1-O 5	1914	65
O1-I 4	1900	65

NOTE:
FOR COMPLETE CURVE DATA, SEE CURVE TABLE DRAWINGS.



HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADLANSACAY 10-04-01
DRAWN: K. WINGFIELD 10-08-01
CHECKED: R. KASHIF 9-29-03
APPROVED: P. ELNAN 01-2004

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PLAN AND PROFILE
ORANGE LINE CONNECTION
O1 ALIGNMENT
STATION 774+00 TO 802+00

SCALE: H: 1"=100' 50 0 100
V: 1"=10' 5 0 10

DRAWING NO.: GPN-PP-060

120

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Line_PandP\PP-SHEETS-O1.dwg, GPN-PP-O60, 11/29/04 12:10:46 PM, Kolenam

CURVE NO.	RADIUS (FT.)	SPEED (MPH)
O1-O 4	1000	50
O1-I 3	1000	50

NOTE:
FOR COMPLETE CURVE DATA,
SEE CURVE TABLE DRAWINGS.

N

DULLES CONNECTOR ROAD (DCR)

MATCH LINE STA. 774+00

TC 2

STA AHEAD: OB 772+00.11
STA BACK: IB 773+39.00

770+00

570+00

15' TRACK CENTERS

566+00

℄ OUTBOUND TRACK

WFY-02

PORTAL

℄ WEST FALLS CHURCH
YARD CONNECTOR

760+00

O1-04

O1-I3

760+00

℄ INBOUND TRACK

MATCH LINE STA. 746+00

O1-03

O1-I2

HAYCOCK RD

750+00

510+00

750+00

COVER BOX

WFY-01

560+00

PORTAL

EXISTING OB K LINE

PROPOSED
STORAGE TRACKS

556+71.77

TPSS 1

WB INTERSTATE
ROUTE 66

520+00

EB INTERSTATE
ROUTE 66

EXISTING IB K LINE

HALF-SIZE DRAWING

CONTRACT NO.:

REFERENCE DRAWINGS		REVISIONS		
NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION

DESIGNED: D. NADLANSACAY 10-04-01 DATE
DRAWN: K. WINCFIELD 10-08-01 DATE
CHECKED: R. KASHIF 9-29-03 DATE
APPROVED: P. ELMAN 01-2004 DATE

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

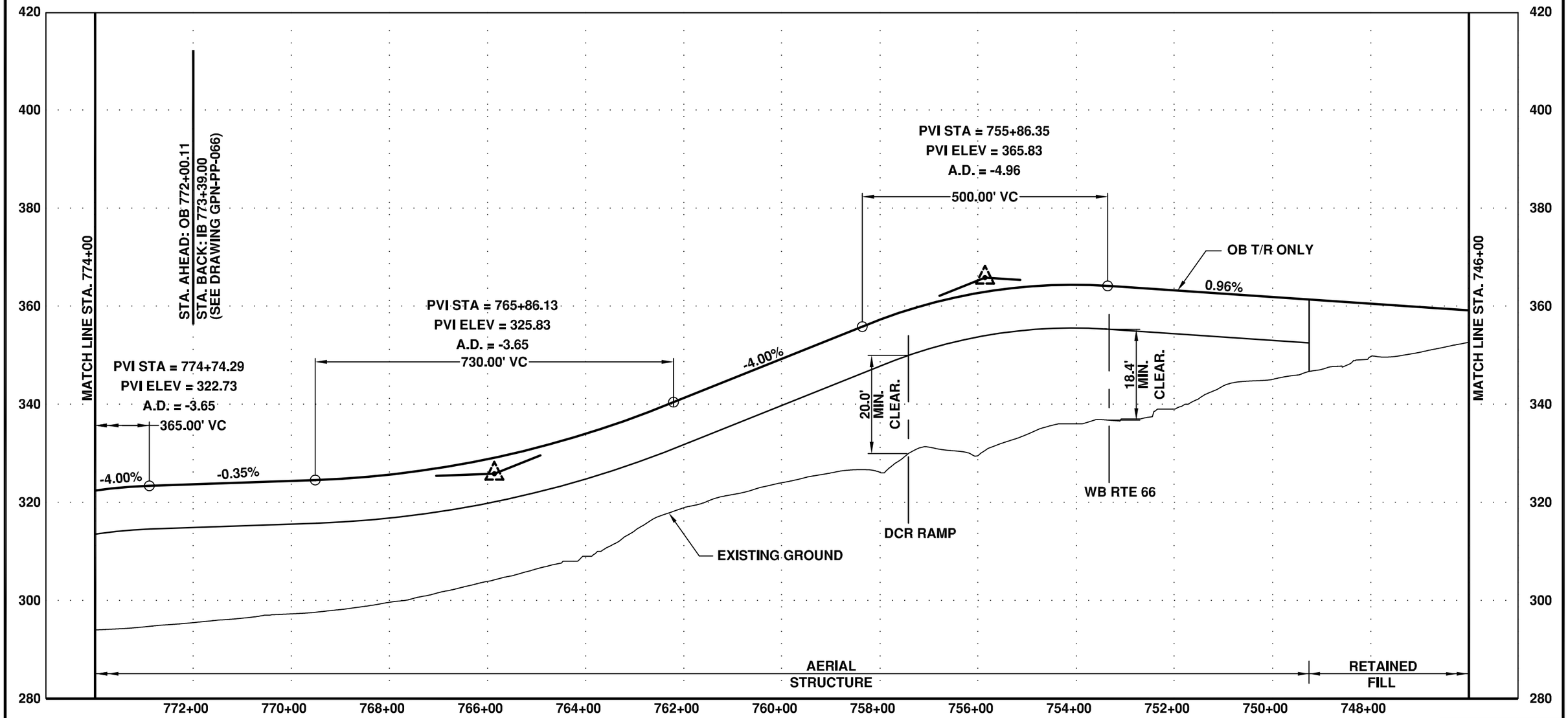
PLAN
ORANGE LINE CONNECTION
O1 ALIGNMENT (OB AND IB)
STATION 746+00 TO 774+00

SCALE: 1"=100' 50 0 50 100

DRAWING NO.: GPN-PP-061

121

O:\002_dulles\FEIS GenPlans 06-04\Line_SystemsLine_PandP\PP-SHEETS-O1.dwg, GPN-PP-061, 08/03/04 02:24:54 PM, Kolenam



HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADLANSACAY	10-04-01 DATE
DRAWN: K. WINGFIELD	10-08-01 DATE
CHECKED: R. KASHIF	9-29-03 DATE
APPROVED: P. ELMAN	10-2004 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

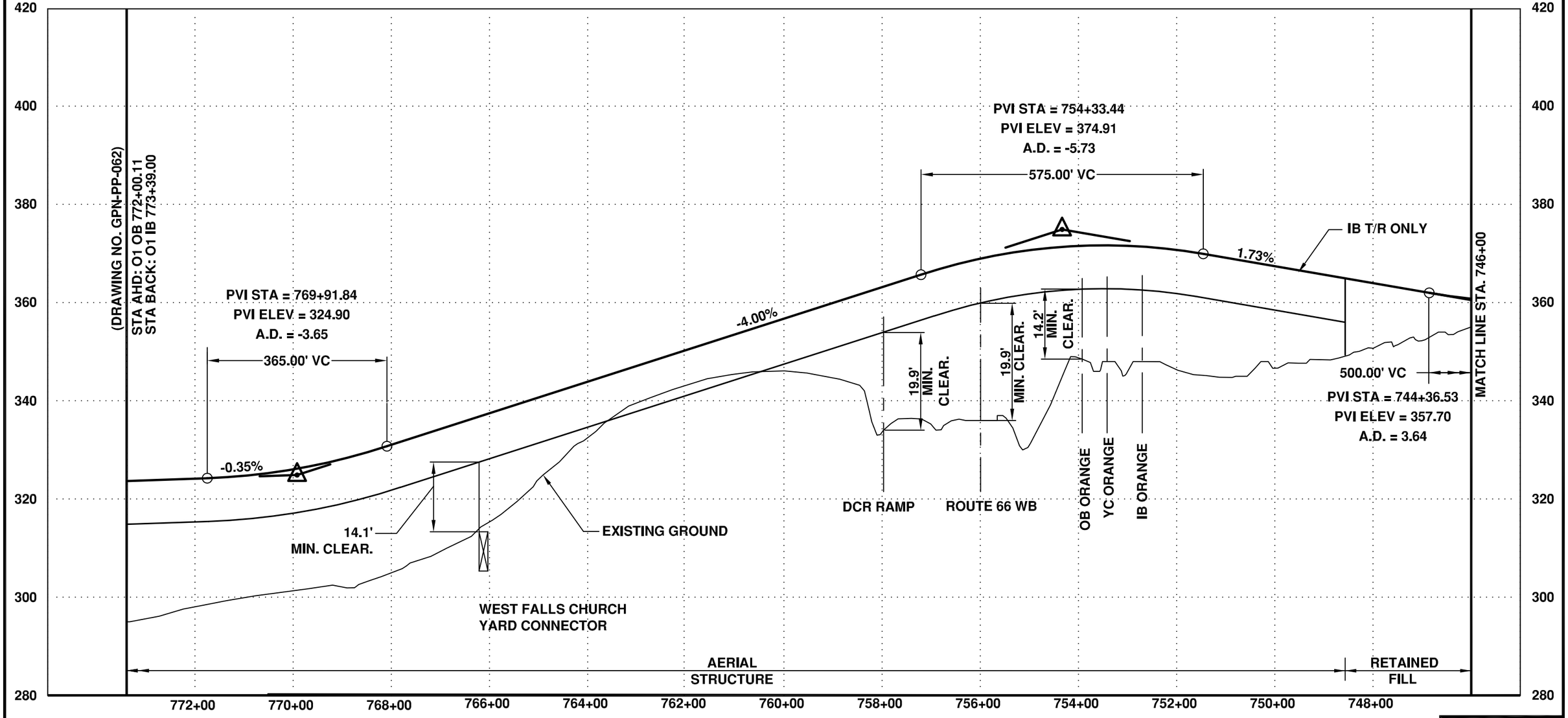
PROFILE
ORANGE LINE CONNECTION
01 ALIGNMENT (OB)
STATION 746+00 TO 774+00

SCALE: H: 1"=100' V: 1"=10' (50 0 100 / 5 0 10)

DRAWING NO.: GPN-PP-062

122

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Line_Pand\PP-SHEETS-O1.dwg, GPN-PP-062, 08/03/04 02:28:01 PM, Kolenam



HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADLANSACAY 10-04-01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: S. MURDAUGH 10-08-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: D. MADLANSACAY 9-29-03 DATE		
APPROVED: P. ELMAN 01-2004 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PROFILE
ORANGE LINE CONNECTION
O1 ALIGNMENT (IB)
STATION 746+00 TO 774+00

SCALE: H: 1"=100' (50 0 100) V: 1"=10' (5 0 10)

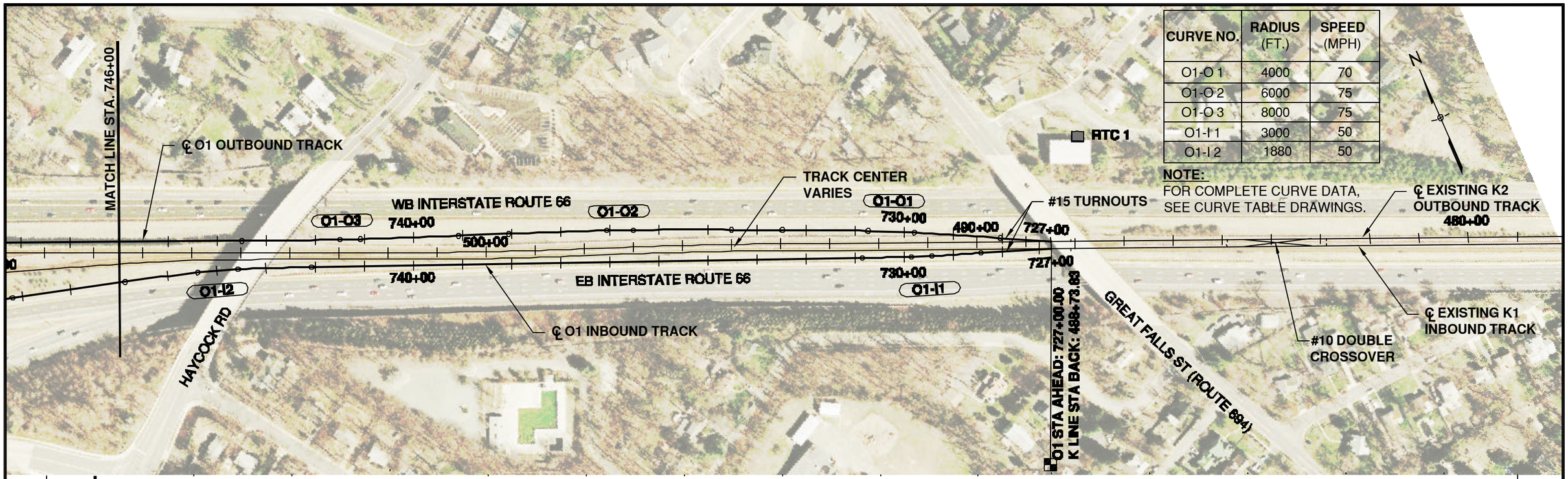
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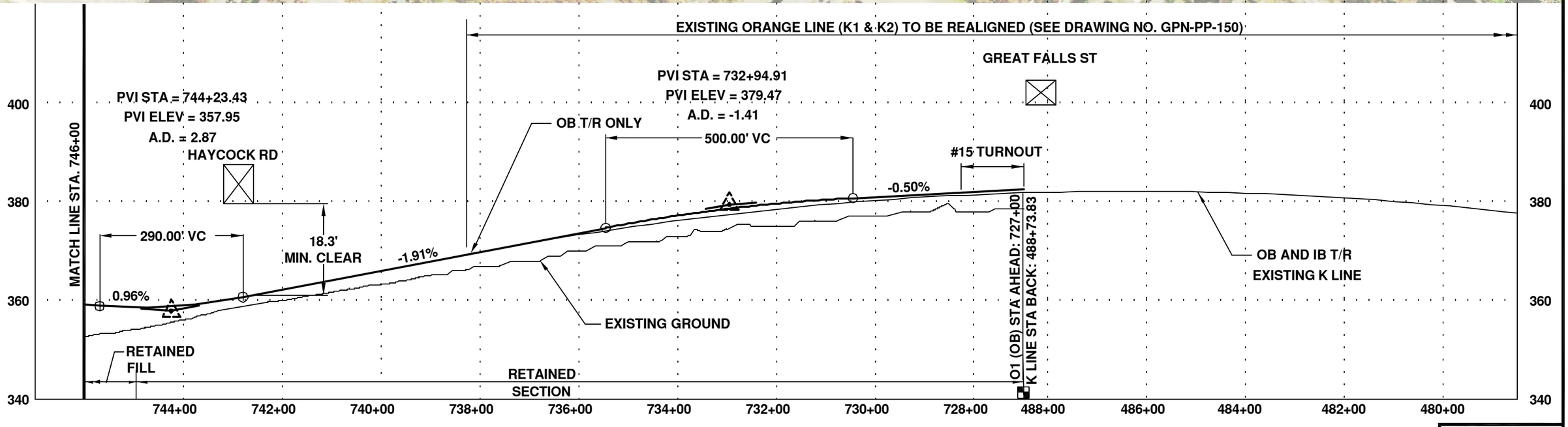
123

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CURVE NO.	RADIUS (FT.)	SPEED (MPH)
O1-O 1	4000	70
O1-O 2	6000	75
O1-O 3	8000	75
O1-I 1	3000	50
O1-I 2	1880	50

NOTE:
FOR COMPLETE CURVE DATA, SEE CURVE TABLE DRAWINGS.





HALF-SIZE DRAWING

CONTRACT NO.:

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Line_PandP\PP-SHEETS-O1.dwg, GPN-PP-064, 08/03/04 03:15:35 PM, Kolenam

DESIGNED: D. MADLANSACAY	10-04-01 DATE	
DRAWN: K. WINGFIELD	10-06-01 DATE	
CHECKED: R. KASHIF	9-29-03 DATE	
APPROVED: P. ELMAN	9-2003 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

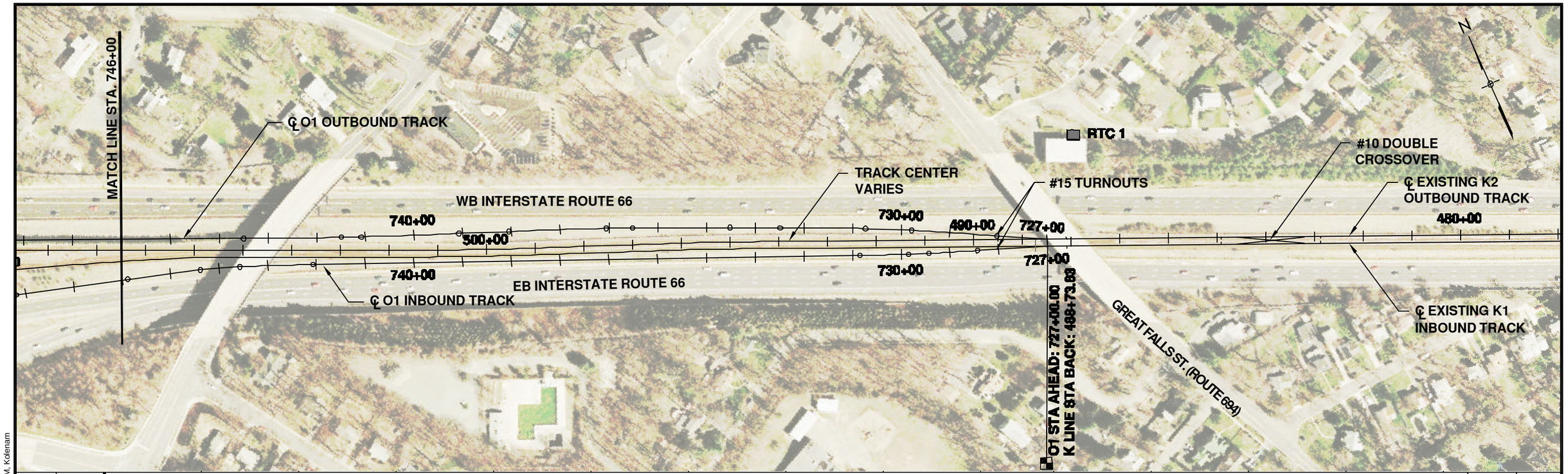
FINAL GENERAL PLANS
JULY 2004

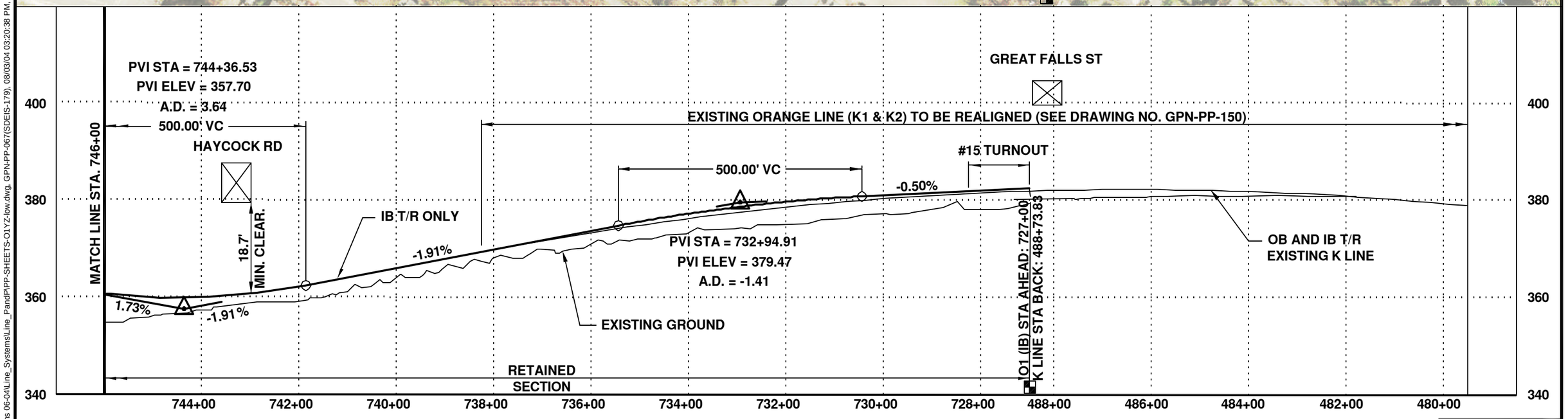
PLAN AND PROFILE
ORANGE LINE CONNECTION
O1 ALIGNMENT (OB)
STATION 727+00 TO 746+00

SCALE: H: 1"=100' V: 1"=10'

DRAWING NO.: GPN-PP-064

124





HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADLANSACAY 10-04-01	REFERENCE DRAWINGS	REVISIONS
DRAWN: S. MURDAUGH 10-08-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. KASHIF 9-20-03		
APPROVED: P. ELMAN 01-2004		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

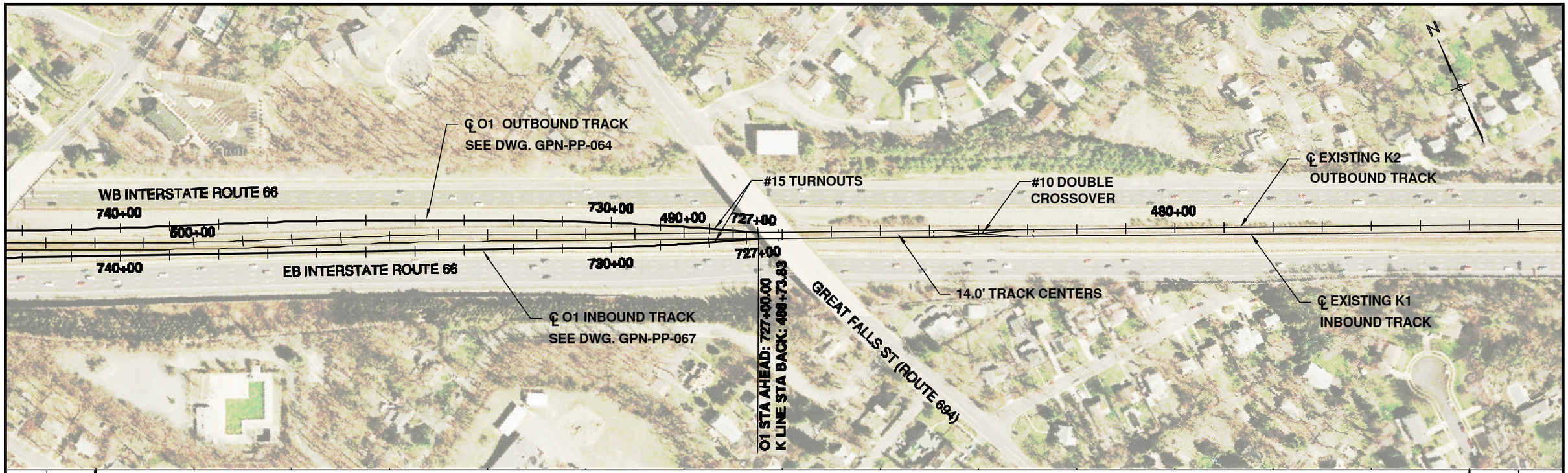
PLAN AND PROFILE
ORANGE LINE CONNECTION
O1 ALIGNMENT (IB)
STATION 727+00 TO 746+00

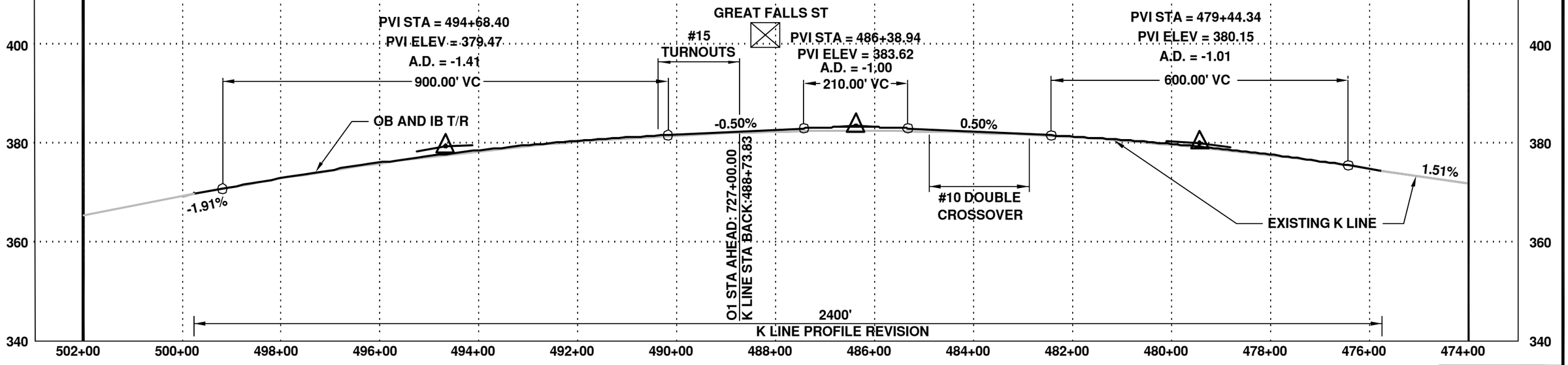
SCALE: H: 1"=100' V: 1"=10'

DRAWING NO.: GPN-PP-067

125

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HALF–SIZE DRAWING

CONTRACT NO.:

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DESIGNED: D. NADLANSADAY 10–07–01	REFERENCE DRAWINGS	REVISIONS
DRAWN: D. NADSEN 10–10–01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: D. NADLANSADAY 3–11–02		
APPROVED: P. ELMAN 5–2002		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

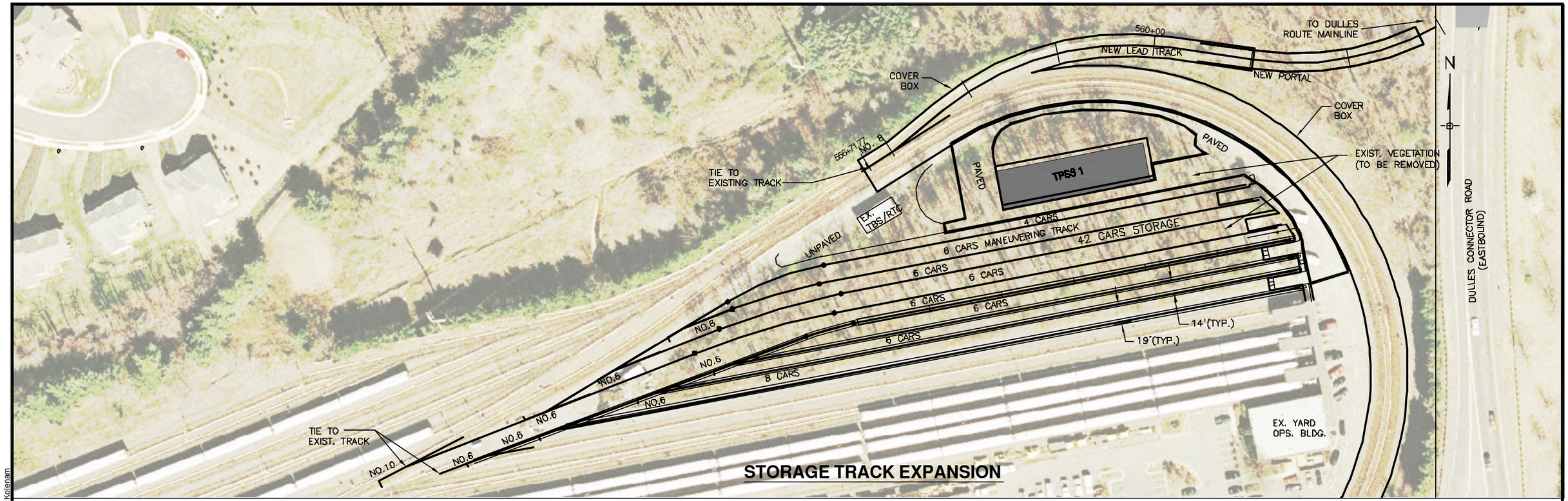
FINAL GENERAL PLANS
JULY 2004

PLAN AND PROFILE
ORANGE LINE CONNECTION
EXISTING K ALIGNMENT
STATION 474+00 TO 500+00

SCALE: H: 1"=100' V: 1"=10' 50 0 100 5 0 10

DRAWING NO.: GPN–PP–150

126



HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. MADLANSACAY 11-08-01	REFERENCE DRAWINGS	REVISIONS	DULLES CORRIDOR RAPID TRANSIT PROJECT
DRAWN: D. MADSEN 11-08-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION	CAPITAL TRANSIT CONSULTANTS
CHECKED: R. KASHIF 9-29-03			SUBMITTED — PROJECT MANAGER
APPROVED: P. ELNAN 01-2004			FINAL GENERAL PLANS JULY 2004

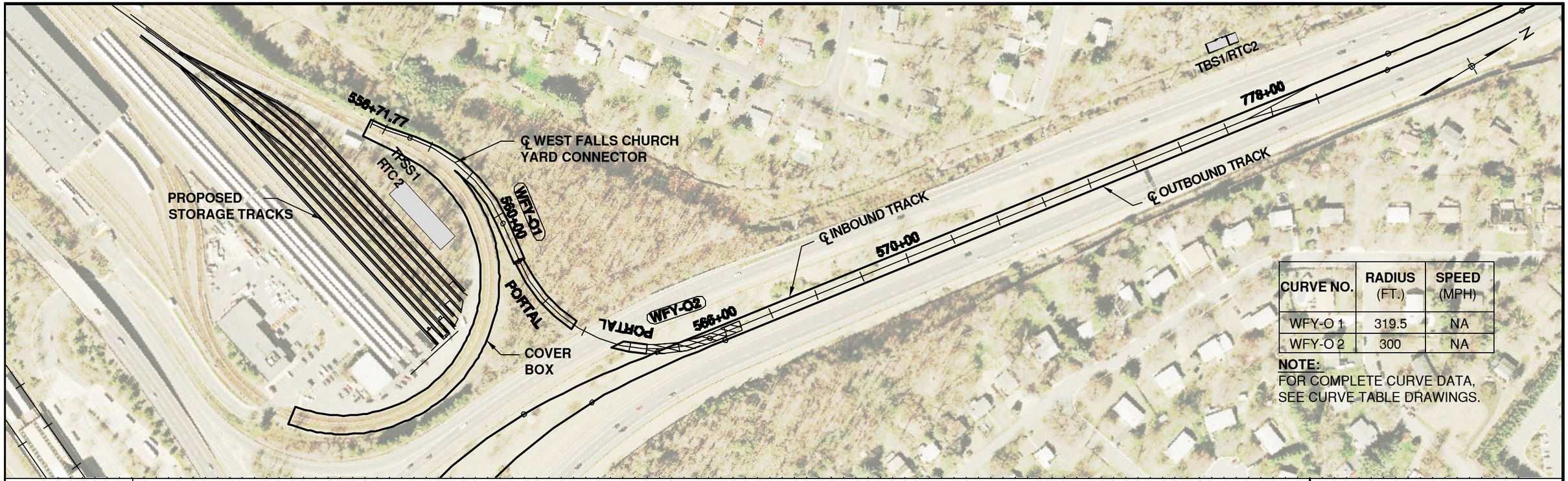
PLAN
ORANGE LINE CONNECTION
WEST FALLS YARD SITE

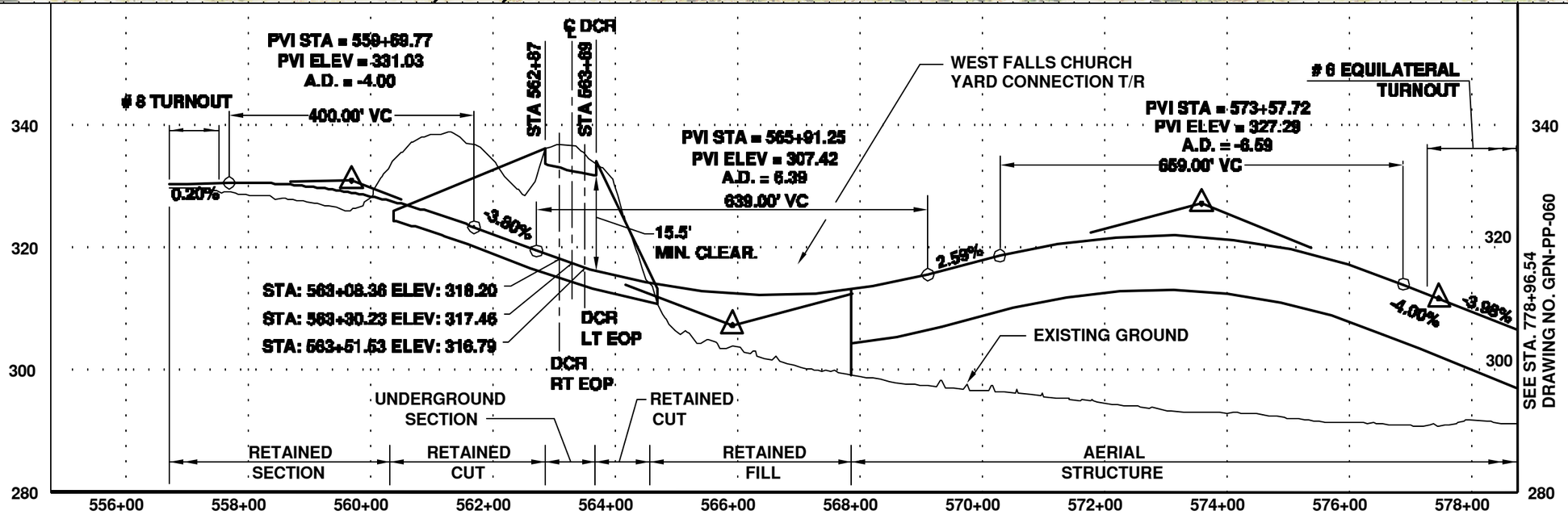
SCALE: 1"=50' (25 0 25 50)

DRAWING NO.: GPN-PP-168

127

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HALF-SIZE DRAWING

CONTRACT NO.:

	REFERENCE DRAWINGS		REVISIONS		
	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION

DESIGNED: B. NADIANSADAY 07-05-01 DATE
DRAWN: S. MURDAUGH 07-08-01 DATE
CHECKED: R. KASHF 8-23-03 DATE
APPROVED: P. ELMAN 01-2004 DATE

DULLES CORRIDOR RAPID TRANSIT PROJECT

SUBMITTED — CAPITAL TRANSIT CONSULTANTS — PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PLAN AND PROFILE
ORANGE LINE CONNECTION
01 ALIGNMENT – YARD CONNECTION
STATION 555+00 TO 578+96.54

SCALE: H: 1"=100' V: 1"=10'
DRAWING NO.: GPN-PP-063
128

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Line_PandP\PP-SHEETS-01Y-low.dwg, GPN-PP-063, 11/29/04 05:41:27 PM, Kolenam

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Tangent Data					
		1774+00						
		1791+40.28						
		Length:	1740.28	Course:	N 24-01-08 W			
			Spiral Curve Data					
	TS	1791+40.28						
	SPI							
	SC	1792+40.28						
		Length:	100.00	L Tan:	66.67			
		Radius:	3000.00	S Tan:	33.33			
		Theta:	0-57-18	P:	0.14			
		X:	100.00	K:	50.00			
		Y:	0.56	A:	547.72			
		Chord:	100.00	Course:	N 24-20-14 W			
		Ts:	456.34					
			Circular Curve Data					
	SC	1792+40.28				50	2.00	1.34
	RP							
	SC	1799+48.01						
		Delta:	13-31-00	Type:	LEFT			
L1-O1		Radius:	3000.00	DOC:	01-54-35			
		Length:	707.73	Tangent:	355.52			
		Mid-Ord:	20.85	External:	20.99			
		Chord:	706.09	Course:	N 31-43-56 W			
		Es:	27.53					
			Spiral Curve Data					
	SC	1799+48.01						
	SPI							
	PC	1800+48.01						
		Length:	100.00	L Tan:	66.67			
		Radius:	3000.00	S Tan:	33.33			
		Theta:	0-57-18	P:	0.14			
		X:	100.00	K:	50.00			
		Y:	0.56	A:	547.72			
		Chord:	100.00	Course:	N 39-07-38 W			
		Ts:	456.34					
			Tangent Data					
		1800+48.01						
		1802+15.21						
		Length:	167.20	Course:	N 39-26-44 W			
			Spiral Curve Data					
	TS	1802+15.21						
	SPI							
	SC	1803+77.71						
		Length:	162.50	L Tan:	108.37			
		Radius:	962.13	S Tan:	54.20			
		Theta:	4-50-19	P:	1.14			
		X:	162.38	K:	81.23			
		Y:	4.57	A:	395.41			
		Chord:	162.45	Course:	N 41-03-29 W			
		Ts:	162.77					
			Spiral Curve Data					
L1-O2	SC	1803+77.71				40	3.25	3.42
	SPI							
	PC	1805+40.21						
		Length:	162.50	L Tan:	108.37			
		Radius:	962.13	S Tan:	54.20			
		Theta:	4-50-19	P:	1.14			
		X:	162.38	K:	81.23			
		Y:	4.57	A:	395.41			
		Chord:	162.45	Course:	N 47-30-35 W			
		Ts:	162.77					
			Tangent Data					
		1805+40.21						
		1812+70.37						
		Length:	730.16	Course:	N 49-07-21 W			

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Spiral Curve Data					
	TS	1812+70.37						
	SPI							
	SC	1814+82.87						
		Length:	212.50	L Tan:	141.81			
		Radius:	755.00	S Tan:	70.97			
		Theta:	8-03-47	P:	2.49			
		X:	212.08	K:	106.18			
		Y:	9.95	A:	400.55			
		Chord:	212.31	Course:	N 51-48-35 W			
		Ts:	352.99					
			Circular Curve Data					
	SC	1814+82.87				40	4.25	4.25
	RP							
	SC	1817+45.98						
		Delta:	19-58-02	Type:	LEFT			
L1-O3		Radius:	755.00	DOC:	07-35-20			
		Length:	263.11	Tangent:	132.90			
		Mid-Ord:	11.43	External:	11.61			
		Chord:	261.78	Course:	N 67-10-09 W			
		Es:	41.68					
			Spiral Curve Data					
	SC	1817+45.98						
	SPI							
	PC	1819+58.48						
		Length:	212.50	L Tan:	141.81			
		Radius:	755.00	S Tan:	70.97			
		Theta:	8-03-47	P:	2.49			
		X:	212.08	K:	106.18			
		Y:	9.95	A:	400.55			
		Chord:	212.31	Course:	N 82-31-44 W			
		Ts:	352.99					
			Tangent Data					
		1819+58.48						
		1825+94.52						
		Length:	636.04	Course:	N 85-12-58 W			
			Spiral Curve Data					
	TS	1825+94.52						
	SPI							
	SC	1826+94.52						
		Length:	100.00	L Tan:	66.67			
		Radius:	2800.00	S Tan:	33.33			
		Theta:	1-01-23	P:	0.15			
		X:	100.00	K:	50.00			
		Y:	0.60	A:	529.15			
		Chord:	100.00	Course:	N 85-33-26 W			
		Ts:	166.97					
			Circular Curve Data					
	SC	1826+94.52				50	2.00	1.58
	RP							
	SC	1828+28.30						
		Delta:	02-44-16	Type:	LEFT			
L1-O4		Radius:	2800.00	DOC:	02-02-47			
		Length:	133.79	Tangent:	66.91			
		Mid-Ord:	0.80	External:	0.80			
		Chord:	133.77	Course:	N 87-36-29 W			
		Es:	2.59					
			Spiral Curve Data					
	SC	1828+28.30						
	SPI							
	PC	1829+28.30						
		Length:	100.00	L Tan:	66.67			
		Radius:	2800.00	S Tan:	33.33			
		Theta:	1-01-23	P:	0.15			
		X:	100.00	K:	50.00			
		Y:	0.60	A:	529.15			
		Chord:	100.00	Course:	N 89-39-32 W			
		Ts:	166.97					
			Tangent Data					
		1829+28.30						
		1835+66.67						
		Length:	638.36	Course:	N 90-00-00 W			

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Spiral Curve Data					
	TS	1835+66.67						
	SPI							
	SC	1837+16.67						
		Length:	355.00	L Tan:	100.01			
		Radius:	2287.00	S Tan:	50.01			
		Theta:	2-13-56	P:	0.49			
		X:	149.98	K:	75.00			
		Y:	1.95	A:	537.35			
		Chord:	149.99	Course:	N 89-15-21 W			
		Ts:	718.14					
			Circular Curve Data					
	SC	1837+16.67				75	6.00	3.87
	RP							
	SC	1848+07.77						
		Delta:	32-28-32	Type:	RIGHT			
L1-O5		Radius:	2287.00	DOC:	02-58-35			
		Length:	1091.10	Tangent:	560.64			
		Mid-Ord:	76.79	External:	79.98			
		Chord:	1076.56	Course:	N 71-31-48 W			
		Es:	105.06					
			Spiral Curve Data					
	SC	1848+07.77						
	SPI							
	PC	1849+57.77						
		Length:	355.00	L Tan:	100.01			
		Radius:	2287.00	S Tan:	50.01			
		Theta:	2-13-56	P:	0.49			
		X:	149.98	K:	75.00			
		Y:	1.95	A:	537.35			
		Chord:	149.99	Course:	N 53-48-14 W			
		Ts:	718.14					
			Tangent Data					
		1849+57.77						
		1861+95.82						
		Length:	1238.04	Course:	N 53-03-35 W			
			Spiral Curve Data					
	TS	1861+95.82						
	SPI							
	SC	1863+10.82						
		Length:	115.00	L Tan:	76.67			
		Radius:	10100.00	S Tan:	38.33			
		Theta:	0-19-34	P:	0.05			
		X:	115.00	K:	57.50			
		Y:	0.22	A:	1077.73			
		Chord:	115.00	Course:	N 52-57-04 W			
		Ts:	135.42					
			Circular Curve Data					
	SC	1863+10.82				75	2.00	0.23
	RP							
	SC	1863+51.65						
		Delta:	00-13-54	Type:	RIGHT			
L1-O6		Radius:	10100.00	DOC:	00-34-02			
		Length:	40.83	Tangent:	20.42			
		Mid-Ord:	0.02	External:	0.02			
		Chord:	40.83	Course:	N 52-37-04 W			
		Es:	0.36					
			Spiral Curve Data					
	SC	1863+51.65						
	SPI							
	PC	1864+66.65						
		Length:	115.00	L Tan:	76.67			
		Radius:	10100.00	S Tan:	38.33			
		Theta:	0-19-34	P:	0.05			
		X:	115.00	K:	57.50			
		Y:	0.22	A:	1077.73			
		Chord:	115.00	Course:	N 52-17-04 W			
		Ts:	135.42					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Tangent Data					
		1864+66.65						
		1865+59.60						
		Length:	92.95	Course:	N 52-10-33 W			
			Spiral Curve Data					
	TS	1865+59.60						
	SPI							
	SC	1866+59.60						
		Length:	100.00	L Tan:	66.67			
		Radius:	19000.00	S Tan:	33.33			
		Theta:	0-09-03	P:	0.02			
		X:	100.00	K:	50.00			
		Y:	0.09	A:	1378.40			
		Chord:	100.00	Course:	N 52-13-34 W			
		Ts:	343.18					
			Circular Curve Data					
	SC	1866+59.60				75	1.00	0.19
	RP							
	SC	1871+45.91						
		Delta:	01-27-59	Type:	LEFT			
L1-O7		Radius:	19000.00	DOC:	00-18-06			
		Length:	486.31	Tangent:	243.17			
		Mid-Ord:	1.56	External:	1.56			
		Chord:	486.30	Course:	N 53-03-35 W			
		Es:	2.28					
			Spiral Curve Data					
	SC	1871+45.91						
	SPI							
	PC	1872+45.91						
		Length:	100.00	L Tan:	66.67			
		Radius:	19000.00	S Tan:	33.33			
		Theta:	0-09-03	P:	0.02			
		X:	100.00	K:	50.00			
		Y:	0.09	A:	1378.40			
		Chord:	100.00	Course:	N 53-53-37 W			
		Ts:	343.18					

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH 09-28-01 DATE
DRAWN: D. MADSEN 09-28-01 DATE
CHECKED: R. KASHIF 03-11-02 DATE
APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS
SUBMITTED Diana C Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

CURVE TABLE
OUTBOUND ALIGNMENT
L1 DATA
CURVE L1-01 TO L1-07

SCALE: NO SCALE
DRAWING NO.: GPN-PP-200
129

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E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Tangent Data					
		1872+45.91						
		1873+38.58						
		Length:	92.67	Course:	N 53-56-38 W			
			Spiral Curve Data					
	TS	1873+38.58						
	SPI							
	SC	1874+53.58						
		Length:	115.00	L Tan:	76.67			
		Radius:	10100.00	S Tan:	38.33			
		Theta:	0-19-34	P:	0.05			
		X:	115.00	K:	57.50			
		Y:	0.22	A:	1077.73			
		Chord:	115.00	Course:	N 53-50-06 W			
		Ts:	135.42					
			Circular Curve Data					
	SC	1874+53.58				75	2.00	0.23
	RP							
	SC	1874+94.42						
L1-O8		Delta:	00-13-54	Type:	RIGHT			
		Radius:	10100.00	DOC:	00-34-02			
		Length:	40.84	Tangent:	20.42			
		Mid-Ord:	0.02	External:	0.02			
		Chord:	40.84	Course:	N 53-30-06 W			
		Es:	0.36					
			Spiral Curve Data					
	SC	1874+94.42						
	SPI							
	PC	1876+09.42						
		Length:	115.00	L Tan:	76.67			
		Radius:	10100.00	S Tan:	38.33			
		Theta:	0-19-34	P:	0.05			
		X:	115.00	K:	57.50			
		Y:	0.22	A:	1077.73			
		Chord:	115.00	Course:	N 53-10-06 W			
		Ts:	135.42					
			Tangent Data					
		1876+09.42						
		1881+07.88						
		Length:	498.46	Course:	N 53-03-35 W			
			Spiral Curve Data					
	TS	1881+07.88						
	SPI							
	SC	1884+07.88						
		Length:	300.00	L Tan:	200.04			
		Radius:	2500.00	S Tan:	100.03			
		Theta:	3-26-16	P:	1.50			
		X:	299.89	K:	149.98			
		Y:	6.00	A:	866.03			
		Chord:	299.95	Course:	N 54-12-20 W			
		Ts:	452.92					
			Circular Curve Data					
	SC	1884+07.88				75	6.00	3.02
	RP							
	SC	1887+10.46						
L1-O9		Delta:	06-56-05	Type:	LEFT			
		Radius:	2500.00	DOC:	02-17-31			
		Length:	302.58	Tangent:	151.48			
		Mid-Ord:	4.58	External:	4.58			
		Chord:	302.40	Course:	N 59-57-53 W			
		Es:	19.78					
			Spiral Curve Data					
	SC	1887+10.46						
	SPI							
	PC	1890+10.46						
		Length:	300.00	L Tan:	200.04			
		Radius:	2500.00	S Tan:	100.03			
		Theta:	3-26-16	P:	1.50			
		X:	299.89	K:	149.98			
		Y:	6.00	A:	866.03			
		Chord:	299.95	Course:	N 65-43-27 W			
		Ts:	452.92					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Tangent Data					
		1890+10.46						
		1897+57.91						
		Length:	747.45	Course:	N 66-52-12 W			
			Spiral Curve Data					
	TS	1897+57.91						
	SPI							
	SC	1899+77.91						
		Length:	220.00	L Tan:	146.83			
		Radius:	755.00	S Tan:	73.48			
		Theta:	8-20-52	P:	2.67			
		X:	219.53	K:	109.92			
		Y:	10.67	A:	407.55			
		Chord:	219.79	Course:	N 64-05-16 W			
		Ts:	296.11					
			Circular Curve Data					
	SC	1899+77.91				40	4.25	4.25
	RP							
	SC	1901+21.78						
L1-O10		Delta:	10-55-03	Type:	RIGHT			
		Radius:	755.00	DOC:	07-35-20			
		Length:	143.86	Tangent:	72.15			
		Mid-Ord:	3.42	External:	3.44			
		Chord:	143.65	Course:	N 53-03-48 W			
		Es:	25.21					
			Spiral Curve Data					
	SC	1901+21.78						
	SPI							
	PC	1903+41.78						
		Length:	220.00	L Tan:	146.83			
		Radius:	755.00	S Tan:	73.48			
		Theta:	8-20-52	P:	2.67			
		X:	219.53	K:	109.92			
		Y:	10.67	A:	407.55			
		Chord:	219.79	Course:	N 42-02-20 W			
		Ts:	296.11					
			Tangent Data					
		1903+41.78						
		1915+59.04						
		Length:	1217.27	Course:	N 39-15-25 W			
			Spiral Curve Data					
	TS	1915+59.04						
	SPI							
	SC	1917+84.04						
		Length:	225.00	L Tan:	150.00			
		Radius:	5020.00	S Tan:	75.00			
		Theta:	1-17-02	P:	0.42			
		X:	224.99	K:	112.50			
		Y:	1.68	A:	1062.78			
		Chord:	224.99	Course:	N 38-49-44 W			
		Ts:	445.39					
			Circular Curve Data					
	SC	1917+84.04				75	4.25	0.24
	RP							
	SC	1922+23.79						
L1-O11		Delta:	05-01-09	Type:	RIGHT			
		Radius:	5020.00	DOC:	01-08-29			
		Length:	439.75	Tangent:	220.02			
		Mid-Ord:	4.81	External:	4.82			
		Chord:	439.61	Course:	N 35-27-48 W			
		Es:	11.44					
			Spiral Curve Data					
	SC	1922+23.79						
	SPI							
	PC	1924+48.79						
		Length:	225.00	L Tan:	150.00			
		Radius:	5020.00	S Tan:	75.00			
		Theta:	1-17-02	P:	0.42			
		X:	224.99	K:	112.50			
		Y:	1.68	A:	1062.78			
		Chord:	224.99	Course:	N 32-05-52 W			
		Ts:	445.39					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Tangent Data					
		1924+48.79						
		1929+93.00						
		Length:	544.21	Course:	N 31-40-11 W			
			Spiral Curve Data					
	TS	1929+93.00						
	SPI							
	SC	1931+33.00						
		Length:	140.00	L Tan:	93.34			
		Radius:	2510.00	S Tan:	46.67			
		Theta:	1-35-52	P:	0.33			
		X:	139.99	K:	70.00			
		Y:	1.30	A:	592.79			
		Chord:	140.00	Course:	N 32-12-09 W			
		Ts:	867.67					
			Circular Curve Data					
	SC	1931+33.00				55	2.75	2.08
	RP							
	SC	1945+37.48						
L1-O12		Delta:	32-03-36	Type:	LEFT			
		Radius:	2510.00	DOC:	02-16-58			
		Length:	1404.48	Tangent:	721.16			
		Mid-Ord:	97.60	External:	101.54			
		Chord:	1386.23	Course:	N 49-17-52 W			
		Es:	124.01					
			Spiral Curve Data					
	SC	1945+37.48						
	SPI							
	PC	1946+77.48						
		Length:	140.00	L Tan:	93.34			
		Radius:	2510.00	S Tan:	46.67			
		Theta:	1-35-52	P:	0.33			
		X:	139.99	K:	70.00			
		Y:	1.30	A:	592.79			
		Chord:	140.00	Course:	N 66-23-35 W			
		Ts:	867.67					
			Tangent Data					
		1946+77.48						
		1947+09.36						
		Length:	31.88	Course:	N 66-55-32 W			

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH 09-28-01 DATE
DRAWN: D. MADSEN 09-28-01 DATE
CHECKED: R. KASHIF 03-11-02 DATE
APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS
SUBMITTED Diana C Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

CURVE TABLE
OUTBOUND ALIGNMENT
L1 DATA
CURVE L1-08 TO L1-012

SCALE: NO SCALE
DRAWING NO.: GPN-PP-201
130

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
	Tangent Data							
		1714+41.62						
		1716+24.95						
		Length:	183.33	Course:	S 55-10-09 W			
	Circular Curve Data							
	PC	1716+24.95				N/A	0.00	N/A
	RP							
Y15-O1	PT	1724+36.03						
		Delta:	140-49-24	Type:	LEFT			
		Radius:	330.00	DOC:	17-21-44			
		Length:	811.08	Tangent:	927.34			
		Mid-Ord:	219.36	External:	654.31			
		Chord:	621.80	Course:	S 15-14-32 E			
		Es:	654.31					
	Tangent Data							
		1724+36.03						
		1736+77.98						
		Length:	1241.95	Course:	S 85-39-14 E			
	Circular Curve Data							
	PC	1736+77.98				N/A	0.00	N/A
	RP							
Y15-O2	PT	1738+64.61						
		Delta:	01-31-39	Type:	LEFT			
		Radius:	7000.00	DOC:	00-49-07			
		Length:	186.62	Tangent:	93.32			
		Mid-Ord:	0.62	External:	0.62			
		Chord:	186.62	Course:	S 86-10-53 E			
		Es:	0.62					
	Tangent Data							
		1738+64.61						
		1739+78.08						
		Length:	113.47	Course:	S 87-10-53 E			
	Circular Curve Data							
	PC	1739+78.08				N/A	0.00	N/A
	RP							
Y15-O3	PT	1741+64.70						
		Delta:	01-31-39	Type:	LEFT			
		Radius:	7000.00	DOC:	00-49-07			
		Length:	186.62	Tangent:	93.32			
		Mid-Ord:	0.62	External:	0.62			
		Chord:	186.62	Course:	S 86-25-04 E			
		Es:	0.62					
	Tangent Data							
		1741+64.70						
		1764+19.44						
		Length:	2254.74	Course:	S 85-39-14 E			
	Circular Curve Data							
	PC	1764+19.44				N/A	0.00	N/A
	RP							
	PT	1776+58.95						
		Delta:	118-21-54	Type:	LEFT			
		Radius:	000.00	DOC:	00-32-57			
	Circular Curve Data							
	PC	1781+74.30				N/A	0.00	N/A
	RP							
Y15-O5	PT	1782+77.14						
		Delta:	05-53-32	Type:	LEFT			
		Radius:	1000.00	DOC:	05-43-46			
		Length:	102.84	Tangent:	51.47			
		Mid-Ord:	1.32	External:	1.32			
		Chord:	102.80	Course:	N 26-57-54 W			
		Es:	1.32					
	Tangent Data							
		1782+77.14						
		1783+81.53						
		Length:	104.39	Course:	N 26-54-40 W			

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH 09-28-01 DATE

DRAWN: D. MADSEN 09-28-01 DATE

CHECKED: R. KASHIF 03-11-02 DATE

APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

CURVE TABLE
OUTBOUND ALIGNMENT
Y15 DATA
CURVE Y15-01 TO Y15-05

SCALE: NO SCALE

DRAWING NO.: GPN-PP-202

131

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E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Tangent Data					
		1572+47.37						
		1596+98						
		Length:	2450.63	Course:	S 88-42-36 W			
			Spiral Curve Data					
	TS	1596+98						
	SPI							
	SC	1599+28						
		Length:	230.00	L Tan:	153.44			
		Radius:	1000.00	S Tan:	76.76			
		Theta:	6-35-20	P:	2.20			
		X:	229.70	K:	114.95			
		Y:	8.81	A:	479.58			
		Chord:	229.86	Course:	S 86-30-50 W			
		Ts:	829.70					
			Circular Curve Data					
	SC	1599+28				45	4.00	4.12
	RP							
	SC	1609+37.03						
A1-O1		Delta:	57-48-48	Type:	LEFT			
		Radius:	1000.00	DOC:	05-43-46			
		Length:	1009.03	Tangent:	552.18			
		Mid-Ord:	124.59	External:	142.32			
		Chord:	966.77	Course:	S 53-12-52 W			
		Es:	230.97					
			Spiral Curve Data					
	SC	1609+37.03						
	SPI							
	PC	1611+67.03						
		Length:	230.00	L Tan:	153.44			
		Radius:	1000.00	S Tan:	76.76			
		Theta:	6-35-20	P:	2.20			
		X:	229.70	K:	114.95			
		Y:	8.81	A:	479.58			
		Chord:	229.86	Course:	S 19-54-53 W			
		Ts:	829.70					
			Tangent Data					
		1611+67.03						
		1629+35.51						
		Length:	1768.48	Course:	S 17-43-07 W			
			Spiral Curve Data					
	TS	1629+35.51						
	SPI							
	SC	1631+55.51						
		Length:	220.00	L Tan:	146.83			
		Radius:	755.00	S Tan:	73.48			
		Theta:	8-20-52	P:	2.67			
		X:	219.53	K:	109.92			
		Y:	10.67	A:	407.55			
		Chord:	219.79	Course:	S 20-30-03 W			
		Ts:	663.25					
			Circular Curve Data					
	SC	1631+55.51				40	4.00	4.50
	RP							
	SC	1638+87.98						
A1-O2		Delta:	55-35-09	Type:	RIGHT			
		Radius:	755.00	DOC:	07-35-20			
		Length:	732.47	Tangent:	397.95			
		Mid-Ord:	87.10	External:	98.46			
		Chord:	704.08	Course:	S 53-51-34 W			
		Es:	183.21					
			Spiral Curve Data					
	SC	1638+87.98						
	SPI							
	PC	1641+07.98						
		Length:	220.00	L Tan:	146.83			
		Radius:	755.00	S Tan:	73.48			
		Theta:	8-20-52	P:	2.67			
		X:	219.53	K:	109.92			
		Y:	10.67	A:	407.55			
		Chord:	219.79	Course:	S 87-13-05 W			
		Ts:	663.25					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Tangent Data					
		1641+07.98						
		1652+76.70						
		Length:	1168.72	Course:	S 90-00-00 W			
			Spiral Curve Data					
	TS	1652+76.70						
	SPI							
	SC	1654+96.70						
		Length:	220.00	L Tan:	146.83			
		Radius:	755.00	S Tan:	73.48			
		Theta:	8-20-52	P:	2.67			
		X:	219.53	K:	109.92			
		Y:	10.67	A:	407.55			
		Chord:	219.79	Course:	N 87-13-05 W			
		Ts:	1808.25					
			Circular Curve Data					
	SC	1654+96.70				40	4.00	4.50
	RP							
	SC	1670+14.96						
A1-O3		Delta:	115-13-08	Type:	RIGHT			
		Radius:	755.00	DOC:	07-35-20			
		Length:	1518.27	Tangent:	1190.12			
		Mid-Ord:	350.56	External:	654.40			
		Chord:	1275.07	Course:	N 24-02-34 W			
		Es:	1104.68					
			Spiral Curve Data					
	SC	1670+14.96						
	SPI							
	PC	1672+34.96						
		Length:	220.00	L Tan:	146.83			
		Radius:	755.00	S Tan:	73.48			
		Theta:	8-20-52	P:	2.67			
		X:	219.53	K:	109.92			
		Y:	10.67	A:	407.55			
		Chord:	219.79	Course:	N 39-07-56 E			
		Ts:	1808.25					
			Tangent Data					
		1672+34.96						
		1673+27.80						
		Length:	92.83	Course:	N 41-54-51 E			
	TS	1673+27.80						
	SPI							
	SC	1675+47.80						
		Length:	220.00	L Tan:	146.82			
		Radius:	770.00	S Tan:	73.48			
		Theta:	8-11-06	P:	2.62			
		X:	219.55	K:	109.93			
		Y:	10.46	A:	411.59			
		Chord:	219.80	Course:	N 39-11-11 E			
		Ts:	405.85					
			Circular Curve Data					
	SC	1675+47.80				40	4.00	4.33
	RP							
	SC	1678+91.10						
A1-O4		Delta:	25-32-40	Type:	LEFT			
		Radius:	770.00	DOC:	07-26-27			
		Length:	343.30	Tangent:	174.55			
		Mid-Ord:	19.05	External:	19.54			
		Chord:	340.47	Course:	N 20-57-26 E			
		Es:	57.35					
			Spiral Curve Data					
	SC	1678+91.10						
	SPI							
	PC	1681+11.10						
		Length:	220.00	L Tan:	146.82			
		Radius:	770.00	S Tan:	73.48			
		Theta:	8-11-06	P:	2.62			
		X:	219.55	K:	109.93			
		Y:	10.46	A:	411.59			
		Chord:	219.80	Course:	N 02-43-40 E			
		Ts:	405.85					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Tangent Data					
		1681+11.10						
		1707+96.01						
		Length:	2684.91	Course:	N 00-00-00 W			
			Spiral Curve Data					
	TS	1706+96.01						
	SPI							
	SC	1709+08.51						
		Length:	112.50	L Tan:	75.00			
		Radius:	7700.00	S Tan:	37.50			
		Theta:	0-25-07	P:	0.07			
		X:	112.50	K:	56.25			
		Y:	0.27	A:	930.73			
		Chord:	112.50	Course:	N 00-08-22 E			
		Ts:	164.03					
			Circular Curve Data					
	SC	1709+08.51				75	2.25	0.68
	RP							
	SC	1710+11.56						
A1-O5		Delta:	00-46-00	Type:	RIGHT			
		Radius:	7700.00	DOC:	00-44-39			
		Length:	103.04	Tangent:	51.52			
		Mid-Ord:	0.17	External:	0.17			
		Chord:	103.04	Course:	N 00-48-07-E			
		Es:	0.82					
			Spiral Curve Data					
	SC	1710+11.56						
	SPI							
	PC	1711+24.06						
		Length:	112.50	L Tan:	75.00			
		Radius:	7700.00	S Tan:	37.50			
		Theta:	0-25-07	P:	0.07			
		X:	112.50	K:	56.25			
		Y:	0.27	A:	930.73			
		Chord:	112.50	Course:	N 01-27-52 E			
		Ts:	164.03					
			Tangent Data					
		1711+24.06						
		1712+96.19						
		Length:	172.14	Course:	N 01-36-14 E			
	TS	1712+96.19						
	SPI							
	SC	1714+08.69						
		Length:	112.50	L Tan:	75.00			
		Radius:	7700.00	S Tan:	37.50			
		Theta:	0-25-07	P:	0.07			
		X:	112.50	K:	56.25			
		Y:	0.27	A:	930.73			
		Chord:	112.50	Course:	N 01-27-52 E			
		Ts:	164.03					
			Circular Curve Data					
	SC	1714+08.69				75	2.25	0.68
	RP							
	SC	1715+11.74						
A1-O6		Delta:	00-46-00	Type:	LEFT			
		Radius:	7700.00	DOC:	00-44-39			
		Length:	103.04	Tangent:	51.52			
		Mid-Ord:	0.17	External:	0.17			
		Chord:	103.04	Course:	N 00-48-07 E			
		Es:	0.82					
			Spiral Curve Data					
	SC	1715+11.74						
	SPI							
	PC	1716+24.24						
		Length:	112.50	L Tan:	75.00			
		Radius:	7700.00	S Tan:	37.50			
		Theta:	0-25-07	P:	0.07			
		X:	112.50	K:	56.25			
		Y:	0.27	A:	930.73			
		Chord:	112.50	Course:	N 00-08-22 E			
		Ts:	164.03					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Tangent Data					
		1716+24.24						
		1728+35.96						
		Length:	1211.72	Course:	N 00-00-00 W			
			Spiral Curve Data					
	TS	1728+35.96						
	SPI							
	SC	1732+60.96						
		Length:	425.00	L Tan:	283.50			
		Radius:	2000.00	S Tan:	141.82			
		Theta:	6-05-16	P:	3.76			
		X:	424.52	K:	212.42			
		Y:	15.34	A:	921.95			
		Chord:	424.79	Course:	N 02-01-45 W			
		Ts:	638.68					
			Circular Curve Data					
	SC	1732+60.96				70	6.00	3.83
	RP							
	SC	1736+74.37						
A1-O7		Delta:	11-30-37	Type:	LEFT			
		Radius:	2000.00	DOC:	02-51-53			
		Length:	413.42	Tangent:	207.45			
		Mid-Ord:	10.37	External:	10.73			
		Chord:	412.68	Course:	N 12-00-34 W			
		Es:	48.30					
			Spiral Curve Data					
	SC	1736+74.37						
	SPI							
	PC	1740+99.37						
		Length:	425.00	L Tan:	283.50			
		Radius:	2000.00	S Tan:	141.82			
		Theta:	6-05-16	P:	3.76			
		X:	424.52	K:	212.42			
		Y:	15.34	A:	921.95			
		Chord:	424.79	Course:	N 21-59-23 W			
		Ts:	638.68					
			Tangent Data					
		1740+99.37						
		1771+70.25						
		Length:	3070.88	Course:	N 24-01-08 W			

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH	09-28-01 DATE
DRAWN: D. MADSEN	09-28-01 DATE
CHECKED: R. KASHIF	03-11-02 DATE
APPROVED: P. ELMAN	01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

CURVE TABLE
OUTBOUND ALIGNMENT
A1 DATA
CURVE A1-01 TO A1-07

SCALE: NO SCALE

DRAWING NO.: GPN-PP-203

132

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Curve_Data\OUTBOUNDOB-CurveTable_A1.dwg, GPN-PP-203, 11/22/04 04:33:13 PM, Kolenam

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Tangent Data					
		1040+00						
		1043+97.40						
		Length:	397.40	Course:	S 71-02-09.714W			
D1-O1			**Spiral Curve Data**					
	TS	1043+97.40						
	SPI							
	SC	1045+62.40						
		Length:	165.00	L Tan:	110.00			
		Radius:	3900.00	S Tan	55.00			
		Theta:	1-12-43.294	P:	0.29			
		X:	164.99	K:	82.50			
		Y:	1.16	A:	802.18			
		Chord:	165.00	Course:	S 71-26-24.140W			
		Ts:	1444.05					
			Circular Curve Data					
	SC	1045+62.40				70	3.25	1.79
	RP							
	PT	1071+00.47						
		Delta:	37-17-14.467	Type:	RIGHT			
		Radius:	3900.00	DOC:	01-28-08.841			
		Length:	2538.07	Tangent:	1315.81			
		Mid-Ord:	204.65	External:	215.99			
		Chord:	2493.52	Course:	N 89-06-29.758W			
		Es:	231.11					
			Compound Spiral Curve Data					
	TS	1071+00.47						
	SPI							
	SC	1072+00.48						
		Length:	100.01	L Tan:	51.11			
		Radius:	3416.00	S Tan	48.91			
		Theta:	1-34-24.092	P:	0.05			
		X:	100.00	K:	6.21			
		Y:	1.34	A:	1659.17			
		Chord:	100.01	Course:	N 69-41-42.932W			
		Ts:	882.84					
			Circular Curve Data					
	SC	1072+00.48				70	3.75	2.00
	RP							
	SC	1087+26.98						
		Delta:	25-36-12.914	Type:	RIGHT			
		Radius:	3416.00	DOC:	01-40-38.197			
		Length:	1526.50	Tangent:	776.21			
		Mid-Ord:	84.91	External:	87.08			
		Chord:	1513.83	Course:	N 56-05-21.975W			
		Es:	110.74					
			Spiral Curve Data					
	SC	1087+26.98						
	SPI							
	PC	1089+15.83						
		Length:	188.86	L Tan:	125.91			
		Radius:	3416.00	S Tan	62.96			
		Theta:	1-35-01.800	P:	0.44			
		X:	188.84	K:	94.43			
		Y:	1.74	A:	803.20			
		Chord:	188.85	Course:	N 42-13-54.306W			
			Tangent Data					
		1089+15.83						
		1104+39.23						
		Length:	1523.39	Course:	N 41-42-13.718W			

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Spiral Curve Data					
	TS	1104+39.23						
	SPI							
	SC	1106+54.23						
		Length:	215.00	L Tan:	143.34			
		Radius:	2900.00	S Tan:	71.68			
		Theta:	2-07-26.023	P:	0.66			
		X:	214.97	K:	107.50			
		Y:	2.66	A:	789.62			
		Chord:	214.99	Course:	N 42-24-42.363W			
		Ts:	1293.12					
			Circular Curve Data					
D1-O2	SC	1106+54.23				70	4.25	2.53
	RP							
	SC	1126+89.75						
		Delta:	40-12-58.180	Type:	LEFT			
		Radius:	2900.00	DOC:	01-58-32.580			
		Length:	2035.52	Tangent:	1061.71			
		Mid-Ord:	176.77	External:	188.24			
		Chord:	1993.99	Course:	N 63-56-08.831W			
		Es:	233.62					
			Spiral Curve Data					
	SC	1126+89.75						
	SPI							
	PC	1129+04.75						
		Length:	215.00	L Tan:	143.34			
		Radius:	2900.00	S Tan:	71.68			
		Theta:	2-07-26.023	P:	0.66			
		X:	214.97	K:	107.50			
		Y:	2.66	A:	789.62			
		Chord:	214.99	Course:	N 85-27-35.299W			
		Ts:	1293.12					
			Tangent Data					
		1129+04.75						
		1137+61.93						
		Length:	857.18	Course:	N 86-10-03.944W			
			Spiral Curve Data					
	TS	1137+61.93						
	SPI							
	SC	1139+11.93						
		Length:	150.00	L Tan:	100.00			
		Radius:	6075.00	S Tan:	50.00			
		Theta:	0-42-26.479	P:	0.15			
		X:	150.00	K:	75.00			
		Y:	0.62	A:	954.59			
		Chord:	150.00	Course:	N 85-55-55.118W			
		Ts:	1423.45					
			Circular Curve Data					
	SC	1139+11.93				75	3.00	0.71
	RP							
D1-O3	SC	1164+15.74						
		Delta:	23-36-51.752	Type:	RIGHT			
		Radius:	6075.00	DOC:	00-56-35.305			
		Length:	2503.80	Tangent:	1269.93			
		Mid-Ord:	128.54	External:	131.31			
		Chord:	2486.12	Course:	N 73-39-11.589W			
		Es:	148.01					
			Spiral Curve Data					
	SC	1164+15.74						
	SPI							
	PC	1165+65.74						
		Length:	150.00	L Tan:	100.00			
		Radius:	6075.00	S Tan:	50.00			
		Theta:	0-42-26.479	P:	0.15			
		X:	150.00	K:	75.00			
		Y:	0.62	A:	954.59			
		Chord:	150.00	Course:	N 61-22-28.059W			
		Ts:	1423.45					
			Tangent Data					
		1165+65.74						
		1171+94.52						
		Length:	628.78	Course:	N 61-08-19.234W			

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Spiral Curve Data					
	TS	1171+94.52						
	SPI							
	SC	1173+09.52						
		Length:	115.00	L Tan:	76.67			
		Radius:	8020.00	S Tan:	38.33			
		Theta:	0-24-38.831	P:	0.07			
		X:	115.00	K:	57.50			
		Y:	0.27	A:	960.36			
		Chord:	115.00	Course:	N 61-16-32.177W			
		Ts:	1318.27					
			Circular Curve Data					
	SC	1173+09.52				75	2.25	0.56
	RP							
D1-O4	SC	1196+95.57						
		Delta:	17-02-46.449	Type:	LEFT			
		Radius:	8020.00	DOC:	00-42-51.880			
		Length:	2386.05	Tangent:	1201.91			
		Mid-Ord:	88.57	External:	89.56			
		Chord:	2377.26	Course:	N 70-04-21.289W			
		Es:	98.56					
			Spiral Curve Data					
	SC	1196+95.57						
	SPI							
	PC	1198+10.57						
		Length:	115.00	L Tan:	76.67			
		Radius:	8020.00	S Tan:	38.33			
		Theta:	0-24-38.831	P:	0.07			
		X:	115.00	K:	57.50			
		Y:	0.27	A:	960.36			
		Chord:	115.00	Course:	N 78-52-10.401W			
		Ts:	1318.27					
			Tangent Data					
		1198+10.57						
		1200+45.22						
		Length:	234.65	Course:	N 79-00-23.345			
			Spiral Curve Data					
	TS	1200+45.22						
	SPI							
	SC	1201+70.22						
		Length:	100.00	L Tan:	83.33			
		Radius:	8014.00	S Tan:	41.67			
		Theta:	0-31-35.816	P:	0.10			
		X:	125.00	K:	62.50			
		Y:	0.38	A:	921.95			
		Chord:	125.00	Course:	N 79-10-55.283W			
		Ts:	1024.11					
			Circular Curve Data					
	SC	1201+70.22				75	2.00	0.82
	RP							
D1-O5	SC	1219+55.74						
		Delta:	15-02-40.426	Type:	LEFT			
		Radius:	8014.00	DOC:	00-50-33.306			
		Length:	1785.52	Tangent:	897.93			
		Mid-Ord:	58.52	External:	59.03			
		Chord:	1780.40	Course:	N 87-03-19.374W			
		Es:	67.75					
			Spiral Curve Data					
	SC	1219+55.74						
	SPI							
	PC	1220+80.74						
		Length:	100.00	L Tan:	83.33			
		Radius:	8014.00	S Tan:	41.67			
		Theta:	0-31-35.816	P:	0.10			
		X:	125.00	K:	62.50			
		Y:	0.38	A:	921.95			
		Chord:	125.00	Course:	S 85-04-16.535W			
		Ts:	1024.11					
			Tangent Data					
		1220+80.74						
		1223+54.28						
		Length:	273.54	Course:	S 84-53-44.597W			

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Spiral Curve Data					
	TS	1223+54.28						
	SPI							
	SC	1225+69.28						
		Length:	215.00	L Tan:	143.34			
		Radius:	4014.00	S Tan:	71.67			
		Theta:	1-32-04.033	P:	0.48			
		X:	214.98	K:	107.50			
		Y:	1.92	A:	928.98			
		Chord:	214.99	Course:	S 84-23-03.264W			
D1-O6		Ts:	730.18					
			Circular Curve Data					
	SC	1225+69.28				75	4.25	1.37
	RP							
	SC	1235+89.65						
		Delta:	14-33-53.011	Type:	LEFT			
		Radius:	4014.00	DOC:	01-25-38.635			
		Length:	1020.37	Tangent:	512.95			
		Mid-Ord:	32.38	External:	32.64			
		Chord:	1017.62	Course:	S 76-04-44.059W			
		Es:	48.48					
			Spiral Curve Data					
	SC	1235+89.65						
	SPI							
D1-O6 CON'T	PC	1238+04.65						
		Length:	215.00	L Tan:	143.34			
		Radius:	4014.00	S Tan:	71.67			
		Theta:	1-32-04.033	P:	0.48			
		X:	214.98	K:	107.50			
		Y:	1.92	A:	928.98			
		Chord:	214.99	Course:	S 67-46-24.854W			
		Ts:	730.18					
			Tangent Data					
		1238+04.65						
		1251+34.11						
		Length:	1329.46	Course:	S 67-15-43.521			
			Spiral Curve Data					
	TS	1251+34.11						
	SPI							
	SC	1253+34.11						
		Length:	200.00	L Tan:	133.34			
		Radius:	5700.00	S Tan:	66.67			
		Theta:	1-00-18.681	P:	0.29			
		X:	199.99	K:	100.00			
		Y:	1.17	A:	1067.71			
		Chord:	200.00	Course:	S 67-35-49.745W			
		Ts:	2454.20					
			Circular Curve Data					
	SC	1253+34.11				75	3.75	0.21
	RP							
D1-O7	SC	1295+99.04						
		Delta:	42-52-14.131	Type:	RIGHT			
		Radius:	5700.00	DOC:	01-00-18.681			
		Length:	4264.93	Tangent:	2237.86			
		Mid-Ord:	394.26	External:	423.56			
		Chord:	4166.13	Course:	S 89-42-09.267W			
		Es:	467.30					
			Spiral Curve Data					
	SC	1295+99.04						
	SPI							
	PC	1297+99.04						
		Length:	200.00	L Tan:	133.34			
		Radius:	5700.00	S Tan:	66.67			
		Theta:	1-00-18.681	P:	0.29			
		X:	199.99	K:	100.00			
		Y:	1.17	A:	1067.71			
		Chord:	200.00	Course:	N 68-11-31.210			
		Ts:	2454.20					

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH	09-28-01 DATE
DRAWN: D. MADSEN	09-28-01 DATE
CHECKED: T. TWYMAN	03-11-02 DATE
APPROVED: P. ELMAN	01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

Diana C. Mendes

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

CURVE TABLE
OUTBOUND ALIGNMENT
D1 DATA
CURVE D1-O1 TO D1-O7

SCALE: NO SCALE

DRAWING NO.: GPN-PP-204

133

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Curve_Data\OUTBOUND\OB-CurveTable_D1.dwg, GPN-PP-204, 11/30/04 06:26:04 PM, Kolenam

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Tangent Data					
		1297+99.04						
		1307+05.88						
		Length:	906.84	Course:	N 67-51-24.987			
	D1-O8		Spiral Curve Data					
		TS 1307+05.88						
		SPI						
		SC 1308+20.88						
		Length:	115.00	L Tan:	76.67			
		Radius:	4700.00	S Tan:	38.33			
		Theta:	0-42-03.452	P:	0.12			
		X:	115.00	K:	57.50			
		Y:	0.47	A:	735.19			
		Chord:	115.00	Course:	N 67-37-23.837			
		Ts:	128.97					
			Circular Curve Data					
		SC 1308+20.88				65	2.25	1.36
		RP						
		SC 1308+48.80						
		Delta:	00-20-25.310	Type:	RIGHT			
		Radius:	4700.00	DOC:	01-13-08.613			
		Length:	27.92	Tangent:	13.96			
		Mid-Ord:	0.02	External:	0.02			
		Chord:	27.92	Course:	N 66-59-08.879			
		Es:	0.66					
			Spiral Curve Data					
		SC 1308+48.80						
		SPI						
		PC 1309+63.80						
		Length:	115.00	L Tan:	76.67			
		Radius:	4700.00	S Tan:	38.33			
		Theta:	0-42-03.452	P:	0.12			
		X:	115.00	K:	57.50			
		Y:	0.47	A:	735.19			
		Chord:	115.00	Course:	N 66-20-53.922			
		Ts:	128.97					
			Tangent Data					
		1309+63.80						
		1310+39.18						
		Length:	75.38	Course:	N 66-06-52.772			
	D1-O9		Spiral Curve Data					
		TS 1310+39.18						
		SPI						
		SC 1311+54.18						
		Length:	115.00	L Tan:	76.67			
		Radius:	4600.00	S Tan:	38.33			
		Theta:	0-42-58.310	P:	0.12			
		X:	115.00	K:	57.50			
		Y:	0.48	A:	727.32			
		Chord:	115.00	Course:	N 66-21-12.207			
		Ts:	133.02					
			Circular Curve Data					
		SC 1311+54.18				65	2.25	1.43
		RP						
		SC 1311+90.20						
		Delta:	00-26-55.318	Type:	LEFT			
		Radius:	4600.00	DOC:	01-14-44.018			
		Length:	36.02	Tangent:	18.01			
		Mid-Ord:	0.04	External:	0.04			
		Chord:	36.02	Course:	N 67-03-18.741			
		Es:	0.74					
			Spiral Curve Data					
		SC 1311+90.20						
		SPI						
		PC 1313+05.20						
		Length:	115.00	L Tan:	76.67			
		Radius:	4600.00	S Tan:	38.33			
		Theta:	0-42-58.310	P:	0.12			
		X:	115.00	K:	57.50			
		Y:	0.48	A:	727.32			
		Chord:	115.00	Course:	N 67-45-25.274			
		Ts:	133.02					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Tangent Data					
		1313+05.20						
		1333+87.08						
		Length:	2081.88	Course:	N 67-59-44.710			
	D1-O10		Spiral Curve Data					
		TS 1333+87.08						
		SPI						
		SC 1334+87.08						
		Length:	100.00	L Tan:	66.67			
		Radius:	4280.00	S Tan:	33.33			
		Theta:	0-40-09.636	P:	0.10			
		X:	100.00	K:	50.00			
		Y:	0.39	A:	654.22			
		Chord:	100.00	Course:	N 68-13-07.921			
		Ts:	151.99					
			Circular Curve Data					
		SC 1334+87.08				60	2.00	1.37
		RP						
		SC 1335+91.01						
		Delta:	01-23-28.729	Type:	LEFT			
		Radius:	4280.00	DOC:	01-20-19.271			
		Length:	103.93	Tangent:	51.97			
		Mid-Ord:	0.32	External:	0.32			
		Chord:	103.93	Course:	N 69-21-38.710			
		Es:	1.31					
			Spiral Curve Data					
		SC 1335+91.01						
		SPI						
		PC 1336+91.01						
		Length:	100.00	L Tan:	66.67			
		Radius:	4280.00	S Tan:	33.33			
		Theta:	0-40-09.636	P:	0.10			
		X:	100.00	K:	50.00			
		Y:	0.39	A:	654.22			
		Chord:	100.00	Course:	N 70-30-09.499			
		Ts:	151.99					
			Tangent Data					
		1336+91.01						
		1341+54.96						
		Length:	463.95	Course:	N 70-43-32.710			
	D1-O11		Spiral Curve Data					
		TS 1341+54.96						
		SPI						
		SC 1342+54.35						
		Length:	99.39	L Tan:	66.26			
		Radius:	15700.00	S Tan:	33.13			
		Theta:	0-10-52.871	P:	0.03			
		X:	99.39	K:	49.69			
		Y:	0.10	A:	1249.15			
		Chord:	99.39	Course:	N 70-47-10.333			
		Ts:	1101.73					
			Circular Curve Data					
		SC 1342+54.35				75	1.25	0.19
		RP						
		SC 1362+55.59						
		Delta:	07-18-12.056	Type:	LEFT			
		Radius:	15700.00	DOC:	00-21-53.789			
		Length:	2001.24	Tangent:	1001.98			
		Mid-Ord:	31.88	External:	31.94			
		Chord:	1999.88	Course:	N 74-33-31.609			
		Es:	35.23					
			Spiral Curve Data					
		SC 1362+55.59						
		SPI						
		PC 1363+55.59						
		Length:	100.00	L Tan:	66.67			
		Radius:	15700.00	S Tan:	33.33			
		Theta:	0-10-56.894	P:	0.03			
		X:	100.00	K:	50.00			
		Y:	0.11	A:	1253.00			
		Chord:	100.00	Course:	N 78-19-55.567			
		Ts:	1102.04					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Tangent Data					
		1363+55.59						
		1368+31.29						
		Length:	475.70	Course:	N 78-23-34.531			
	D1-O12		Spiral Curve Data					
		TS 1368+31.29						
		SPI						
		SC 1369+31.29						
		Length:	100.00	L Tan:	66.67			
		Radius:	4070.00	S Tan:	33.33			
		Theta:	0-42-13.966	P:	0.10			
		X:	100.00	K:	50.00			
		Y:	0.41	A:	637.97			
		Chord:	100.00	Course:	N 78-37-39.186			
		Ts:	174.53					
			Circular Curve Data					
		SC 1369+31.29				55	2.00	0.98
		RP						
		SC 1370+80.27						
		Delta:	02-05-50.042	Type:	LEFT			
		Radius:	4070.00	DOC:	01-24-27.931			
		Length:	148.98	Tangent:	74.50			
		Mid-Ord:	0.68	External:	0.68			
		Chord:	148.97	Course:	N 80-08-43.518			
		Es:	2.01					
			Spiral Curve Data					
		SC 1370+80.27						
		SPI						
		PC 1371+80.27						
		Length:	100.00	L Tan:	66.67			
		Radius:	4070.00	S Tan:	33.33			
		Theta:	0-42-13.966	P:	0.10			
		X:	100.00	K:	50.00			
		Y:	0.41	A:	637.97			
		Chord:	100.00	Course:	N 81-39-47.851			
		Ts:	174.53					
			Tangent Data					
		1371+80.27						
		1379+14.95						
		Length:	734.68	Course:	N 81-53-52.505			
	D1-O13		Spiral Curve Data					
		TS 1379+14.95						
		SPI						
		SC 1380+14.95						
		Length:	100.00	L Tan:	66.67			
		Radius:	3300.00	S Tan:	33.33			
		Theta:	0-52-05.224	P:	0.13			
		X:	100.00	K:	50.00			
		Y:	0.51	A:	574.46			
		Chord:	100.00	Course:	N 82-11-14.245			
		Ts:	171.76					
			Circular Curve Data					
		SC 1380+14.95				50	2.00	1.04
		RP						
		SC 1381+58.34						
		Delta:	02-29-22.748	Type:	LEFT			
		Radius:	3300.00	DOC:	01-44-10.449			
		Length:	143.39	Tangent:	71.71			
		Mid-Ord:	0.78	External:	0.78			
		Chord:	143.38	Course:	N 84-00-39.103			
		Es:	2.37					
			Spiral Curve Data					
		SC 1381+58.34						
		SPI						
		PC 1382+58.34						
		Length:	100.00	L Tan:	66.67			
		Radius:	3300.00	S Tan:	33.33			
		Theta:	0-52-05.224	P:	0.13			
		X:	100.00	K:	50.00			
		Y:	0.51	A:	574.46			
		Chord:	100.00	Course:	N 85-50-03.962			
		Ts:	171.76					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Tangent Data					
		1382+58.34						
		1387+26.53						
		Length:	468.19	Course:	N 86-07-25.			
	D1-O14		Spiral Curve Data					
		TS 1387+26.53						
		SPI						
		SC 1388+91.53						
		Length:	165.00	L Tan:	110.00			
		Radius:	6200.00	S Tan:	55.00			
		Theta:	0-45-44.653	P:	0.18			
		X:	165.00	K:	82.50			
		Y:	0.73	A:	1011.43			
		Chord:	165.00	Course:	N 86-22-40.584			
		Ts:	201.93					
			Circular Curve Data					
		SC 1388+91.53				75	3.25	0.39
		RP						
		SC 1389+65.36						
		Delta:	00-40-56.250	Type:	LEFT			
		Radius:	6200.00	DOC:	00-55-26.852			
		Length:	73.83	Tangent:	36.92			
		Mid-Ord:	0.11	External:	0.11			
		Chord:	73.83	Course:	N 87-13-38.479			
		Es:	1.33					
			Spiral Curve Data					
		SC 1389+65.36						
		SPI						
		PC 1391+30.36						
		Length:	165.00	L Tan:	110.00			
		Radius:	6200.00	S Tan:	55.00			
		Theta:	0-45-44.653	P:	0.18			
		X:	165.00	K:	82.50			
		Y:	0.73	A:	1011.43			
		Chord:	165.00	Course:	N 88-04-36.374			
		Ts:	201.93					

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Curve_Data\OUTBOUND\OB-CurveTable_D1.dwg, GPN-PP-205, 08/04/04 09:39:36 AM, Kolenam

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH 09-28-01 DATE

DRAWN: D. MADSEN 09-28-01 DATE

CHECKED: T. TWYMAN 03-11-02 DATE

APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

CURVE TABLE
OUTBOUND ALIGNMENT
D1 DATA
CURVE D1-O8 TO D1-O14

SCALE: NO SCALE

DRAWING NO.: GPN-PP-205

134

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Tangent Data					
		1391+30.36						
		1395+35.78						
		Length:	405.42	Course:	N 88-19-51.257			
			Spiral Curve Data					
	TS	1395+35.78						
	SPI							
	SC	1396+35.78						
		Length:	100.00	L Tan:	66.67			
		Radius:	15000.00	S Tan:	33.33			
		Theta:	0-11-27.549	P:	0.03			
		X:	100.00	K:	50.00			
		Y:	0.11	A:	1224.74			
		Chord:	100.00	Course:	N 88-23-40.440			
		Ts:	932.36					
			Circular Curve Data					
D1-O15	SC	1396+35.78				75	1.50	0.00
	RP							
	SC	1412+98.46						
		Delta:	06-21-03.492	Type:	LEFT			
		Radius:	15000.00	DOC:	00-22-55.099			
		Length:	1662.68	Tangent:	832.19			
		Mid-Ord:	23.03	External:	23.07			
		Chord:	1661.83	Course:	S 88-18-09.448			
		Es:	25.96					
			Spiral Curve Data					
	SC	1412+98.46						
	SPI							
	PC	1413+98.46						
		Length:	100.00	L Tan:	66.67			
		Radius:	15000.00	S Tan:	33.33			
		Theta:	0-11-27.549	P:	0.03			
		X:	100.00	K:	50.00			
		Y:	0.11	A:	1224.74			
		Chord:	100.00	Course:	S 84-59-59.335			
		Ts:	932.36					
			Tangent Data					
		1413+98.46						
		1416+20.44						
		Length:	221.99	Course:	S 84-56-10.152			
			Spiral Curve Data					
	TS	1416+20.44						
	SPI							
	SC	1417+20.44						
		Length:	100.00	L Tan:	66.67			
		Radius:	6075.00	S Tan:	33.33			
		Theta:	0-28-17.653	P:	0.07			
		X:	100.00	K:	50.00			
		Y:	0.27	A:	779.42			
		Chord:	100.00	Course:	S 84-46-44.268			
		Ts:	153.39					
D1-O16			**Circular Curve Data**					
	SC	1417+20.44				70	2.00	1.24
	RP							
	SC	1418+27.20						
		Delta:	01-00-24.695	Type:	LEFT			
		Radius:	6075.00	DOC:	00-56-35.305			
		Length:	106.76	Tangent:	53.38			
		Mid-Ord:	0.23	External:	0.23			
		Chord:	106.75	Course:	S 83-57-40.152			
		Es:	0.95					
			Spiral Curve Data					
	SC	1418+27.20						
	SPI							
	PC	1419+27.20						
D1-O16 CON'T		Length:	100.00	L Tan:	66.67			
		Radius:	6075.00	S Tan:	33.33			
		Theta:	0-28-17.653	P:	0.07			
		X:	100.00	K:	50.00			
		Y:	0.27	A:	779.42			
		Chord:	100.00	Course:	S 83-08-36.036			
		Ts:	153.39					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Tangent Data					
		1419+27.20						
		1420+02.47						
		Length:	75.27	Course:	S 82-59-10.152			
			Spiral Curve Data					
	TS	1420+02.47						
	SPI							
	SC	1421+02.47						
		Length:	100.00	L Tan:	66.67			
		Radius:	6075.00	S Tan:	33.33			
		Theta:	0-28-17.653	P:	0.07			
		X:	100.00	K:	50.00			
		Y:	0.27	A:	779.42			
		Chord:	100.00	Course:	S 83-08-36.036			
		Ts:	153.39					
			Circular Curve Data					
D1-O17	SC	1421+02.47				70	2.00	1.24
	RP							
	SC	1422+09.22						
		Delta:	01-00-24.695	Type:	RIGHT			
		Radius:	6075.00	DOC:	00-56-35.305			
		Length:	106.76	Tangent:	53.38			
		Mid-Ord:	0.23	External:	0.23			
		Chord:	106.75	Course:	S 83-57-40.152			
		Es:	0.95					
			Spiral Curve Data					
	SC	1422+09.22						
	SPI							
	PC	1423+09.22						
		Length:	100.00	L Tan:	66.67			
		Radius:	6075.00	S Tan:	33.33			
		Theta:	0-28-17.653	P:	0.07			
		X:	100.00	K:	50.00			
		Y:	0.27	A:	779.42			
		Chord:	100.00	Course:	S 84-46-44.268			
		Ts:	153.39					
			Tangent Data					
		1423+09.22						
		1437+48.84						
		Length:	1439.62	Course:	S 84-56-10.152			
			Spiral Curve Data					
	TS	1437+48.84						
	SPI							
	SC	1438+48.84						
		Length:	100.00	L Tan:	66.67			
		Radius:	1585.00	S Tan:	33.34			
		Theta:	1-48-26.776	P:	0.26			
		X:	99.99	K:	50.00			
		Y:	1.05	A:	398.12			
		Chord:	100.00	Course:	S 85-32-19.059			
		Ts:	201.82					
D1-O18			**Circular Curve Data**					
	SC	1438+48.84				40	2.00	2.05
	RP							
	SC	1440+51.51						
		Delta:	07-19-35.155	Type:	RIGHT			
		Radius:	1585.00	DOC:	03-36-53.552			
		Length:	202.67	Tangent:	101.48			
		Mid-Ord:	3.24	External:	3.25			
		Chord:	202.54	Course:	N 89-35-35.494			
		Es:	7.52					
			Spiral Curve Data					
	SC	1440+51.51						
	SPI							
	PC	1441+51.51						
		Length:	100.00	L Tan:	66.67			
		Radius:	1585.00	S Tan:	33.34			
		Theta:	1-48-26.776	P:	0.26			
		X:	99.99	K:	50.00			
		Y:	1.05	A:	398.12			
		Chord:	100.00	Course:	N 84-43-30.047			
		Ts:	201.82					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Tangent Data					
		1441+51.51						
		1450+61.62						
		Length:	910.11	Course:	N 84-07-21.140			
			Spiral Curve Data					
	TS	1450+61.62						
	SPI							
	SC	1451+61.62						
		Length:	100.00	L Tan:	66.67			
		Radius:	2950.00	S Tan:	33.33			
		Theta:	0-58-16.014	P:	0.14			
		X:	100.00	K:	50.00			
		Y:	0.56	A:	543.14			
		Chord:	100.00	Course:	N 83-47-55.805			
		Ts:	170.98					
			Circular Curve Data					
D1-O19	SC	1451+61.62				50	2.00	1.40
	RP							
	SC	1453+03.44						
		Delta:	02-45-16.199	Type:	RIGHT			
		Radius:	2950.00	DOC:	01-56-32.027			
		Length:	141.82	Tangent:	70.92			
		Mid-Ord:	0.85	External:	0.85			
		Chord:	141.81	Course:	N 81-46-27.027			
		Es:	2.62					
			Spiral Curve Data					
	SC	1453+03.44						
	SPI							
	PC	1454+03.44						
		Length:	100.00	L Tan:	66.67			
		Radius:	2950.00	S Tan:	33.33			
		Theta:	0-58-16.014	P:	0.14			
		X:	100.00	K:	50.00			
		Y:	0.56	A:	543.14			
		Chord:	100.00	Course:	N 79-44-58.248			
		Ts:	170.98					
			Tangent Data					
		1454+03.44						
		1457+99.05						
		Length:	395.61	Course:	N 79-25-32.913			
			Spiral Curve Data					
	TS	1457+99.05						
	SPI							
	SC	1458+99.05						
		Length:	100.00	L Tan:	66.67			
		Radius:	14745.00	S Tan:	33.33			
		Theta:	0-11-39.440	P:	0.03			
		X:	100.00	K:	50.00			
		Y:	0.11	A:	1214.29			
		Chord:	100.00	Course:	N 79-29-26.060			
		Ts:	100.01					
D1-O20			**Circular Curve Data**					
	SC	1458+99.05				75	1.50	0.03
	RP							
	SC	1458+99.08						
		Delta:	00-00-00.403	Type:	LEFT			
		Radius:	14745.00	DOC:	00-23-18.880			
		Length:	0.03	Tangent:	0.01			
		Mid-Ord:	0.00	External:	0.00			
		Chord:	0.03	Course:	N 79-37-12.556			
		Es:	0.11					
			Spiral Curve Data					
	SC	1458+99.08						
	SPI							
	PC	1459+99.08						
		Length:	100.00	L Tan:	66.67			
		Radius:	14745.00	S Tan:	33.33			
		Theta:	0-11-39.440	P:	0.03			
		X:	100.00	K:	50.00			
		Y:	0.11	A:	1214.29			
		Chord:	100.00	Course:	N 79-44-59.049			
		Ts:	100.01					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Tangent Data					
		1459+99.08						
		1461+99.24						
		Length:	200.16	Course:	N 79-48-52.196			
			Spiral Curve Data					
	TS	1461+99.24						
	SPI							
	SC	1462+99.24						
		Length:	100.00	L Tan:	66.67			
		Radius:	14195.00	S Tan:	33.33			
		Theta:	0-12-06.540	P:	0.03			
		X:	100.00	K:	50.00			
		Y:	0.12	A:	1191.43			
		Chord:	100.00	Course:	N 79-44-50.016			
		Ts:	100.02					
			Circular Curve Data					
D1-O21	SC	1462+99.24				75	1.50	0.09
	RP							
	SC	1462+99.28						
		Delta:	00-00-00.574	Type:	RIGHT			
		Radius:	14195.00	DOC:	00-24-13.081			
		Length:	0.04	Tangent:	0.02			
		Mid-Ord:	0.00	External:	0.00			
		Chord:	0.04	Course:	N 79-36-45.366			
		Es:	0.12					
			Spiral Curve Data					
	SC	1462+99.28						
	SPI							
	PC	1463+99.28						
		Length:	100.00	L Tan:	66.67			
		Radius:	14195.00	S Tan:	33.33			
		Theta:	0-12-06.540	P:	0.03			
		X:	100.00	K:	50.00			
		Y:	0.12	A:	1191.43			
		Chord:	100.00	Course:	N 79-28-40.721			
		Ts:	100.02					
			Tangent Data					
		1463+99.28						
		1475+55.49						
		Length:	1156.21	Course:	N 79-24-38.541			
			Spiral Curve Data					
	TS	1475+55.49						
	SPI							
	SC	1477+55.49						
		Length:	200.00	L Tan:	133.33			
		Radius:	7500.00	S Tan:	66.67			
		Theta:	0-45-50.197	P:	0.22			
		X:	200.00	K:	100.00			
		Y:	0.89	A:	1224.74			
		Chord:	200.00	Course:	N 79-09-21.810			
		Ts:	961.86					
			Circular Curve Data					
D1-O22	SC	1477+55.49				75	3.00	0.01
	RP							
	SC	1492+71.63						
		Delta:	11-34-56.917	Type:	RIGHT			
		Radius:	7500.00	DOC:	00-45-50.197			
		Length:	1516.14	Tangent:	760.66			
		Mid-Ord:	38.28	External:	38.48			
		Chord:	1513.56	Course:	N 72-51-19.885			
		Es:	49.58					
			Spiral Curve Data					
	SC	1492+71.63						
	SPI							
	PC	1494+71.63						
		Length:	200.00	L Tan:	133.33			
		Radius:	7500.00	S Tan:	66.67			
		Theta:	0-45-50.197	P:	0.22			
		X:	200.00	K:	100.00			
		Y:	0.89	A:	1224.74			
		Chord:	200.00	Course:	N 66-33-17.960			
		Ts:	961.86					

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH 09-28-01 DATE

DRAWN: D. MADSEN 09-28-01 DATE

CHECKED: T. TWYMAN 03-11-02 DATE

APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

CURVE TABLE
OUTBOUND ALIGNMENT
D1 DATA
CURVE D1-O15 TO D1-O22

SCALE: NO SCALE

DRAWING NO.: GPN-PP-206

135

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Curve_Data\OUTBOUND\OB-CurveTable_D1.dwg, GPN-PP-206, 08/04/04 09:41:03 AM, Kolenam

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Tangent Data					
		1494+71.63						
		1517+69.76						
		Length:	2298.14	Course:	N 66-18-01.229			
D1-O23			**Spiral Curve Data**					
	TS	1517+69.76						
	SPI							
	SC	1518+94.76						
		Length:	125.00	L Tan:	83.33			
		Radius:	9100.00	S Tan:	41.67			
		Theta:	0-23-36.654	P:	0.07			
		X:	125.00	K:	62.50			
		Y:	0.29	A:	1066.54			
		Chord:	125.00	Course:	N 66-10-09.011			
		Ts:	179.98					
			Circular Curve Data					
	SC	1518+94.76				75	2.25	0.23
	RP							
	SC	1520+04.71						
		Delta:	00-41-32.136	Type:	RIGHT			
		Radius:	9100.00	DOC:	00-37-46.646			
		Length:	109.95	Tangent:	54.97			
		Mid-Ord:	0.17	External:	0.17			
		Chord:	109.95	Course:	N 65-33-38.507			
		Es:	0.83					
			Spiral Curve Data					
	SC	1520+04.71						
	SPI							
	PC	152´+29.71						
		Length:	125.00	L Tan:	83.33			
		Radius:	9100.00	S Tan:	41.67			
		Theta:	0-23-36.654	P:	0.07			
		X:	125.00	K:	62.50			
		Y:	0.29	A:	1066.54			
		Chord:	125.00	Course:	N 64-57-08.003			
		Ts:	179.98					
			Tangent Data					
		1521+29.71						
		1522+83.01						
		Length:	153.29	Course:	N 64-49-15.785			
D1-O24			**Spiral Curve Data**					
	TS	1522+83.01						
	SPI							
	SC	1524+08.01						
		Length:	125.00	L Tan:	83.33			
		Radius:	9100.00	S Tan:	41.67			
		Theta:	0-23-36.654	P:	0.07			
		X:	125.00	K:	62.50			
		Y:	0.29	A:	1066.54			
		Chord:	125.00	Course:	N 64-57-08.003			
		Ts:	179.98					
			Circular Curve Data					
	SC	1524+08.01				75	2.25	0.23
	RP							
	SC	1525+17.95						
		Delta:	00-41-32.136	Type:	LEFT			
		Radius:	9100.00	DOC:	00-37-46.646			
		Length:	109.95	Tangent:	54.97			
		Mid-Ord:	0.17	External:	0.17			
		Chord:	109.95	Course:	N 65-33-38.507			
		Es:	0.83					
			Spiral Curve Data					
	SC	1525+17.95						
	SPI							
	PC	1526+42.95						
		Length:	125.00	L Tan:	83.33			
		Radius:	9100.00	S Tan:	41.67			
		Theta:	0-23-36.654	P:	0.07			
		X:	125.00	K:	62.50			
		Y:	0.29	A:	1066.54			
		Chord:	125.00	Course:	N 66-10-09.011			
		Ts:	179.98					
			Tangent Data					
		1526+42.95						
		1539+72.54						
		Length:	1329.58	Course:	N 66-18-01.229			

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
D1-O25			**Spiral Curve Data**					
	TS	1539+72.54						
	SPI							
	SC	1540+71.93						
		Length:	99.39	L Tan:	66.26			
		Radius:	6175.00	S Tan:	33.13			
		Theta:	0-27-39.943	P:	0.07			
		X:	99.39	K:	49.69			
		Y:	0.27	A:	783.40			
		Chord:	99.39	Course:	N 66-27-14.543			
		Ts:	644.77					
			Circular Curve Data					
	SC	1540+71.93				70	2.00	1.18
	RP							
	PT	1552+09.39						
		Delta:	10-33-14.995	Type:	LEFT			
		Radius:	6175.00	DOC:	00-55-40.321			
		Length:	1137.47	Tangent:	570.35			
		Mid-Ord:	26.17	External:	26.28			
		Chord:	1135.86	Course:	N 72-02-18.670			
		Es:	28.67					
			Compound Spiral Curve Data					
	TS	1552+09.39						
	SPI							
	SC	1553+09.39						
		Length:	100.00	L Tan:	50.67			
		Radius:	5700.00	S Tan:	49.33			
		Theta:	0-57-59.496	P:	0.02			
		X:	100.00	K:	3.85			
		Y:	0.83	A:	2722.13			
		Chord:	100.00	Course:	N 77-47-32.719			
		Ts:						
			Circular Curve Data					
	SC	1553+09.39				70	2.25	1.20
	RP							
	SC	1565+46.31						
		Delta:	12-26-00.200	Type:	LEFT			
		Radius:	5700.00	DOC:	01-00-18.681			
		Length:	1236.92	Tangent:	620.90			
		Mid-Ord:	33.52	External:	33.72			
		Chord:	1234.49	Course:	N 84-29-55.763			
		Es:	42.71					
			Spiral Curve Data					
	SC	1565+46.31						
	SPI							
	PC	1566+60.61						
		Length:	114.30	L Tan:	76.20			
		Radius:	5700.00	S Tan:	38.10			
		Theta:	0-34-28.022	P:	0.10			
		X:	114.30	K:	57.15			
		Y:	0.38	A:	807.15			
		Chord:	114.30	Course:	S 88-54-05.455			
		Ts:	755.43					
			Tangent Data					
		1566+60.61						
		1571+98.38						

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH 09-28-01 DATE	REFERENCE DRAWINGS		REVISIONS		
DRAWN: D. MADSEN 09-28-01 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
CHECKED: T. TWYMAN 03-11-02 DATE					
APPROVED: P. ELMAN 01-2004 DATE					

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

CURVE TABLE
OUTBOUND ALIGNMENT
D1 DATA
CURVE D1-023 TO D1-025

SCALE: NO SCALE

DRAWING NO.: GPN-PP-207

136

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Curve_Data\OUTBOUND\OB-CurveTable_D1.dwg, GPN-PP-207, 08/04/04 09:42:44 AM, Kolenam

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inch.)	Eu (Inch.)
		848+46						
		Length:	2986.52	Course:	N 27-54-57 W			
		Spiral Curve Data						
	TS	848+29.40						
	SPI							
	SC	849+41.90						
		Length:	112.5	L Tan:	75			
		Radius:	2800	S Tan:	37.5			
		Theta:	1-09-04	P:	0.19			
		X:	112.5	K:	56.25			
		Y:	0.75	A:	561.25			
		Chord:	112.5	Course:	N 28-17-58 W			
		Ts:	593.13					
		Circular Curve Data						
	SC	849+41.90				50	2.25	1.33
	RP							
	SC	858+90.21						
New T6-O1		Delta:	19-24-18	Type:	LEFT			
		Radius:	2800	DOC:	2/2/47			
		Length:	948.31	Tangent:	478.74			
		Mid-Ord:	40.05	External:	40.63			
		Chord:	943.79	Course:	N 38-46-10 W			
		Es:	51.19					
		Spiral Curve Data						
	SC	858+90.21						
	SPI							
	PC	860+02.71						
		Length:	112.5	L Tan:	75			
		Radius:	2800	S Tan:	37.5			
		Theta:	1-09-04	P:	0.19			
		X:	112.5	K:	56.25			
		Y:	0.75	A:	561.25			
		Chord:	112.5	Course:	N 49-14-22 W			
		Ts:	593.13					
		Tangent Data						
		860+02.71						
		Spiral Curve Data						
	TS	861+34.18						
	SPI							
	SC	863+34.18						
		Length:	200	L Tan:	133.39			
		Radius:	1100	S Tan:	66.72			
		Theta:	5-12-31	P:	1.51			
		X:	199.83	K:	99.97			
		Y:	6.06	A:	469.04			
		Chord:	199.93	Course:	N 51-21-33 W			
		Ts:	1193.76					
		Circular Curve Data						
	SC	863+34.18				45	4.00	3.38
	RP							
	SC	878+54.31						
T6-O2, was T1-O1		Delta:	79-10-46	Type:	LEFT			
		Radius:	1100	DOC:	5/12/31			
		Length:	1520.14	Tangent:	909.67			
		Mid-Ord:	252.31	External:	327.41			
		Chord:	1402.03	Course:	S 85-34-43 W			
		Es:	452.33					
		Spiral Curve Data						
	SC	878+54.31						
	SPI							
	PC	880+54.31						
		Length:	200	L Tan:	133.39			
		Radius:	1100	S Tan:	66.72			
		Theta:	5-12-31	P:	1.51			
		X:	199.83	K:	99.97			
		Y:	6.06	A:	469.04			
		Chord:	199.93	Course:	S 42-30-58 W			
		Ts:	1193.76					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inch.)	Eu (Inch.)
		885+02.84						
		Length:	448.52	Course:	S 40-46-48 W			
		Spiral Curve Data						
	TS	885+02.84						
	SPI							
	SC	887+02.84						
		Length:	200	L Tan:	133.4			
		Radius:	1024	S Tan:	66.73			
		Theta:	5-35-43	P:	1.63			
		X:	199.81	K:	99.97			
		Y:	6.51	A:	452.55			
		Chord:	199.92	Course:	S 42-38-42 W			
		Ts:	271.9					
		Circular Curve Data						
	SC	887+02.84				45	4.00	3.93
	RP							
	SC	888+42.99						
T6-O3, was T1-O2		Delta:	07-50-32	Type:	RIGHT			
		Radius:	1024	DOC:	05-35-43			
		Length:	140.16	Tangent:	70.19			
		Mid-Ord:	2.40	External:	2.40			
		Chord:	140.05	Course:	S 50-17-47 W			
		Es:	15.94					
		Spiral Curve Data						
	SC	888+42.99						
	SPI							
	PC	890+42.99						
		Length:	200	L Tan:	133.4			
		Radius:	1024	S Tan:	66.73			
		Theta:	5-35-43	P:	1.63			
		X:	199.81	K:	99.97			
		Y:	6.51	A:	452.55			
		Chord:	199.92	Course:	S 57-56-53 W			
		Ts:	271.9					
		Tangent Data						
		890+64.12						
		Spiral Curve Data						
	TS	903+72.51						
	SPI							
	SC	905+72.51						
		Length:	200	L Tan:	133.34			
		Radius:	5300	S Tan:	66.67			
		Theta:	1-04-52	P:	0.31			
		X:	199.99	K:	100			
		Y:	1.26	A:	1029.56			
		Chord:	200	Course:	S 60-10-24 W			
		Ts:	250.36					
		Circular Curve Data						
	SC	905+72.51				75	4.00	0.26
	RP							
	SC	906+73.12						
T6-O4, was T6-O1		Delta:	1-05-16	Type:	RIGHT			
		Radius:	5300	DOC:	1/4/52			
		Length:	100.62	Tangent:	50.31			
		Mid-Ord:	0.24	External:	0.24			
		Chord:	100.61	Course:	S 61-26-16 W			
		Es:	2.45					
		Spiral Curve Data						
	SC	906+73.12						
	SPI							
	PC	908+73.12						
		Length:	200	L Tan:	133.34			
		Radius:	5300	S Tan:	66.67			
		Theta:	1-04-52	P:	0.31			
		X:	199.99	K:	100			
		Y:	1.26	A:	1029.56			
		Chord:	200	Course:	S 62-42-08 W			
		Ts:	250.36					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inch.)	Eu (Inch.)
		923+74.14						
		Length:	1501.02	Course:	S 63-03-45 W			
		Spiral Curve Data						
	TS	923+74.14						
	SPI							
	SC	925+74.14						
		Length:	200	L Tan:	133.44			
		Radius:	800	S Tan:	66.77			
		Theta:	7-09-43	P:	2.08			
		X:	199.69	K:	99.95			
		Y:	8.32	A:	400			
		Chord:	199.86	Course:	S 65-26-59 W			
		Ts:	259.88					
		Circular Curve Data						
	SC	925+74.14				40	4.00	4.02
	RP							
	SC	926+89.04						
T6-O5, was T6-O2		Delta:	8-13-44	Type:	RIGHT			
		Radius:	800	DOC:	7/9/43			
		Length:	114.9	Tangent:	57.55			
		Mid-Ord:	2.06	External:	2.07			
		Chord:	114.8	Course:	S 74-20-21 W			
		Es:	17.87					
		Spiral Curve Data						
	SC	926+89.04						
	SPI							
	PC	928+89.04						
		Length:	200	L Tan:	133.44			
		Radius:	800	S Tan:	66.77			
		Theta:	7-09-43	P:	2.08			
		X:	199.69	K:	99.95			
		Y:	8.32	A:	400			
		Chord:	199.86	Course:	S 83-13-43 W			
		Ts:	259.88					
		Tangent Data						
		928+89.04						
		Spiral Curve Data						
	TS	936+86.77						
	SPI							
	SC	938+36.77						
		Length:	150	L Tan:	100.01			
		Radius:	1925	S Tan:	50.01			
		Theta:	2-13-56	P:	0.49			
		X:	149.98	K:	75			
		Y:	1.95	A:	537.35			
		Chord:	149.99	Course:	S 84-52-17 W			
		Ts:	200.62					
		Circular Curve Data						
	SC	938+36.77				50	3.00	2.21
	RP							
	SC	939+37.59						
T6-O6, was T6-O3		Delta:	03-00-03	Type:	LEFT			
		Radius:	1925	DOC:	02-58-35			
		Length:	100.82	Tangent:	50.42			
		Mid-Ord:	0.66	External:	0.66			
		Chord:	100.81	Course:	S 81-52-58 W			
		Es:	4.58					
		Spiral Curve Data						
	SC	939+37.59						
	SPI							
	PC	940+87.59						
		Length:	150	L Tan:	100.01			
		Radius:	1925	S Tan:	50.01			
		Theta:	2-13-56	P:	0.49			
		X:	149.98	K:	75			
		Y:	1.95	A:	537.35			
		Chord:	149.99	Course:	S 78-53-39 W			
		Ts:	200.62					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inch.)	Eu (Inch.)
		Tangent Data						
		940+87.59						
		955+22.15						
		Length:	1434.56	Course:	S 78-09-00 W			
		Spiral Curve Data						
	TS	955+22.15						
	SPI							
	SC	957+22.15						
		Length:	200	L Tan:	133.39			
		Radius:	1100	S Tan:	66.72			
		Theta:	5-12-31	P:	1.51			
		X:	199.83	K:	99.97			
		Y:	6.06	A:	469.04			
		Chord:	199.93	Course:	S 79-53-10 W			
		Ts:	784.15					
		Circular Curve Data						
	SC	957+22.15				45	4.00	3.38
	RP							
	SC	967+44.92						
T6-O7, was T6-O4		Delta:	53-16-23	Type:	RIGHT			
		Radius:	1100	DOC:	5/12/31			
		Length:	1022.77	Tangent:	551.72			
		Mid-Ord:	116.74	External:	130.61			
		Chord:	986.32	Course:	N 70-00-17 W			
		Es:	196.7					
		Spiral Curve Data						
	SC	967+44.92						
	SPI							
	PC	969+44.92						
		Length:	200	L Tan:	133.39			
		Radius:	1100	S Tan:	66.72			
		Theta:	5-12-31	P:	1.51			
		X:	199.83	K:	99.97			
		Y:	6.06	A:	469.04			
		Chord:	199.93	Course:	N 39-53-44 W			
		Ts:	784.15					

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. KASHIF 09-05-03 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: D. NANA 09-05-03 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: P. ELMAN 09-08-03 DATE		
APPROVED: P. ELMAN 01-2004 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

CURVE TABLE
OUTBOUND ALIGNMENT
T6 DATA
CURVE T6-01 TO T6-07

SCALE: NO SCALE

DRAWING NO.: GPN-PP-208

137

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inch.)	Eu (Inch.)
		982+43.62						
		Length:	1298.7	Course:	N 38-09-34 W			
T6-O8, was T6-O5		Spiral Curve Data						
	TS	982+43.62						
	SPI							
	SC	983+56.12						
		Length:	112.5	L Tan:	75			
		Radius:	6800	S Tan:	37.5			
		Theta:	0-28-26	P:	0.08			
		X:	112.5	K:	56.25			
		Y:	0.31	A:	874.64			
		Chord:	112.5	Course:	N 38-19-03 W			
		Ts:	162.35					
		Circular Curve Data						
	SC	983+56.12				75	2.25	1.07
	RP							
	SC	984+55.80						
		Delta:	00-50-24	Type:	LEFT			
		Radius:	6800	DOC:	00-50-33			
		Length:	99.68	Tangent:	49.84			
		Mid-Ord:	0.18	External:	0.18			
		Chord:	99.68	Course:	N 39-03-12 W			
		Es:	0.91					
		Spiral Curve Data						
	SC	984+55.80						
	SPI							
	PC	985+68.30						
		Length:	112.5	L Tan:	75			
		Radius:	6800	S Tan:	37.5			
		Theta:	0-28-26	P:	0.08			
		X:	112.5	K:	56.25			
		Y:	0.31	A:	874.64			
		Chord:	112.5	Course:	N 39-47-22 W			
		Ts:	162.35					
		Tangent Data						
		985+68.30						
T6-O9, was T6-O6		Spiral Curve Data						
	TS	986+68.31						
	SPI							
	SC	987+80.81						
		Length:	112.5	L Tan:	75			
		Radius:	6800	S Tan:	37.5			
		Theta:	0-28-26	P:	0.08			
		X:	112.5	K:	56.25			
		Y:	0.31	A:	874.64			
		Chord:	112.5	Course:	N 39-47-22 W			
		Ts:	162.35					
		Circular Curve Data						
	SC	987+80.81				75	2.25	1.07
	RP							
	SC	988+80.49						
		Delta:	00-50-24	Type:	RIGHT			
		Radius:	6800	DOC:	00-50-33			
		Length:	99.68	Tangent:	49.84			
		Mid-Ord:	0.18	External:	0.18			
		Chord:	99.68	Course:	N 39-03-12 W			
		Es:	0.91					
		Spiral Curve Data						
	SC	988+80.49						
	SPI							
	PC	989+92.99						
		Length:	112.5	L Tan:	75			
		Radius:	6800	S Tan:	37.5			
		Theta:	0-28-26	P:	0.08			
		X:	112.5	K:	56.25			
		Y:	0.31	A:	874.64			
		Chord:	112.5	Course:	N 38-19-03 W			
		Ts:	162.35					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inch.)	Eu (Inch.)
		Tangent Data						
		989+92.99						
		994+45.99						
		Length:	453	Course:	N 38-09-34 W			
T6-O10, was T6-O7		Spiral Curve Data						
	TS	994+45.99						
	SPI							
	SC	995+93.99						
		Length:	148	L Tan:	98.67			
		Radius:	6700	S Tan:	49.33			
		Theta:	0-37-58	P:	0.14			
		X:	148	K:	74			
		Y:	0.54	A:	995.79			
		Chord:	148	Course:	N 37-56-55 W			
		Ts:	199.46					
		Circular Curve Data						
	SC	995+93.99				75	2.75	0.62
	RP							
	SC	996+96.87						
		Delta:	00-52-47	Type:	RIGHT			
		Radius:	6700	DOC:	00-51-19			
		Length:	102.89	Tangent:	51.44			
		Mid-Ord:	0.2	External:	0.2			
		Chord:	102.88	Course:	N 37-05-12 W			
		Es:	1.31					
		Spiral Curve Data						
	SC	996+96.87						
	SPI							
	PC	998+44.87						
		Length:	148	L Tan:	98.67			
		Radius:	6700	S Tan:	49.33			
		Theta:	0-37-58	P:	0.14			
		X:	148	K:	74			
		Y:	0.54	A:	995.79			
		Chord:	148	Course:	N 36-13-30 W			
		Ts:	199.46					
T6-O11, was T6-O8		Spiral Curve Data						
	TS	999+46.30						
	SPI							
	SC	1000+94.30						
		Length:	148	L Tan:	98.67			
		Radius:	6700	S Tan:	49.33			
		Theta:	0-37-58	P:	0.14			
		X:	148	K:	74			
		Y:	0.54	A:	995.79			
		Chord:	148	Course:	N 36-13-30 W			
		Ts:	199.46					
		Circular Curve Data						
	SC	1000+94.30				75	2.75	0.62
	RP							
	SC	1001+97.19						
		Delta:	00-52-48	Type:	LEFT			
		Radius:	6700	DOC:	00-51-19			
		Length:	102.89	Tangent:	51.45			
		Mid-Ord:	0.2	External:	0.2			
		Chord:	102.89	Course:	N 37-05-12 W			
		Es:	1.31					
		Spiral Curve Data						
	SC	1001+97.19						
	SPI							
	PC	1003+45.19						
		Length:	148	L Tan:	98.67			
		Radius:	6700	S Tan:	49.33			
		Theta:	0-37-58	P:	0.14			
		X:	148	K:	74			
		Y:	0.54	A:	995.79			
		Chord:	148	Course:	N 37-56-55 W			
		Ts:	199.46					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inch.)	Eu (Inch.)
		1003+45.19						
		1023+51.53						
		Length:	2006.34	Course:	N 38-09-34 W			
T6-O12, was T1-O9		Spiral Curve Data						
	TS	1023+51.53						
	SPI							
	SC	1025+76.53						
		Length:	225	L Tan:	150.17			
		Radius:	755	S Tan:	75.16			
		Theta:	8-32-15	P:	2.79			
		X:	224.5	K:	112.42			
		Y:	11.16	A:	412.16			
		Chord:	224.78	Course:	N 41-00-17 W			
		Ts:	651					
		Circular Curve Data						
	SC	1025+76.53				40	4.50	4.00
	RP							
	SC	1032+84.54						
		Delta:	53-43-46	Type:	LEFT			
		Radius:	755	DOC:	07-35-20			
		Length:	708.01	Tangent:	382.45			
		Mid-Ord:	81.48	External:	91.34			
		Chord:	682.35	Course:	N 73-33-42 W			
		Es:	174.69					
		Spiral Curve Data						
	SC	1032+84.54						
	SPI							
	PC	1035+09.54						
		Length:	225	L Tan:	150.17			
		Radius:	755	S Tan:	75.16			
		Theta:	8-32-15	P:	2.79			
		X:	224.5	K:	112.42			
		Y:	11.16	A:	412.16			
		Chord:	224.78	Course:	S 73-52-53 W			
		Ts:	651					
		Tangent Data						

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. KASHIF	09-05-03 DATE		
DRAWN: D. NANA	09-05-03 DATE		
CHECKED: P. ELMAN	09-08-03 DATE		
APPROVED: P. ELMAN	01-2004 DATE		

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

CURVE TABLE
OUTBOUND ALIGNMENT
T6 DATA
CURVE T6-08 TO T6-012

SCALE: NO SCALE

DRAWING NO.: GPN-PP-209

138

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
O1-O1		**Tangent Data**						
		727+00						
		728+03.93						
		Length:	103.93	Course:	N 62-42-29 W			
		Spiral Curve Data						
	TS	728+03.93						
	SPI							
	SC	729+78.93						
		Length:	175	L Tan:	116.67			
		Radius:	4000	S Tan:	58.34			
		Theta:	1-15-12	P:	0.32			
		X:	174.99	K:	87.5			
		Y:	1.28	A:	836.66			
		Chord:	175	Course:	N 63-07-33 W			
		Ts:	222.38					
		Circular Curve Data						
	SC	729+78.93				70	3.50	1.41
	CC							
	SC	730+73.58						
		Delta:	01-21-21	Type:	LEFT			
		Radius:	4000	DOC:	01-25-57			
		Length:	94.65	Tangent:	47.33			
		Mid-Ord:	0.28	External:	0.28			
		Chord:	94.65	Course:	N 64-38-21 W			
		Es:	2.59					
		Spiral Curve Data						
	SC	730+73.58						
	SPI							
	PC	732+48.58						
		Length:	175	L Tan:	116.67			
		Radius:	4000	S Tan:	58.34			
		Theta:	1-15-12	P:	0.32			
		X:	174.99	K:	87.5			
		Y:	1.28	A:	836.66			
		Chord:	175	Course:	N 66-09-09 W			
		Ts:	222.38					
		Tangent Data						
		732+48.58						
		733+51.52						
		Length:	102.94	Course:	N 66-34-13 W			
O1-O2		**Spiral Curve Data**						
	TS	733+51.52						
	SPI							
	SC	735+51.52						
		Length:	200	L Tan:	133.34			
		Radius:	6000	S Tan:	66.67			
		Theta:	0-57-18	P:	0.28			
		X:	199.99	K:	100			
		Y:	1.11	A:	1095.45			
		Chord:	200	Course:	N 66-53-19 W			
		Ts:	227.06					
		Circular Curve Data						
	SC	735+51.52				75	3.75	0.01
	CC							
	SC	736+05.59						
		Delta:	00-30-59	Type:	LEFT			
		Radius:	6000	DOC:	00-57-18			
		Length:	54.07	Tangent:	27.03			
		Mid-Ord:	0.06	External:	0.06			
		Chord:	54.07	Course:	N 67-47-00 W			
		Es:	1.62					
		Spiral Curve Data						
	SC	736+05.59						
	SPI							
	PC	738+05.59						
		Length:	200	L Tan:	133.34			
		Radius:	6000	S Tan:	66.67			
		Theta:	0-57-18	P:	0.28			
		X:	199.99	K:	100			
		Y:	1.11	A:	1095.45			
		Chord:	200	Course:	N 68-40-42 W			
		Ts:	227.06					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
		Tangent Data						
		738+05.59						
		739+08.32						
		Length:	102.73	Course:	N 68-59-47 W			
O1-O3		**Spiral Curve Data**						
	TS	739+08.32						
	SPI							
	SC	741+08.32						
		Length:	200	L Tan:	133.33			
		Radius:	8000	S Tan:	66.67			
		Theta:	0-42-58	P:	0.21			
		X:	200	K:	100			
		Y:	0.83	A:	1264.91			
		Chord:	200	Course:	N 68-45-28 W			
		Ts:	220.71					
		Circular Curve Data						
	SC	741+08.32				75	2.75	0.07
	CC							
	SC	741+49.71						
		Delta:	00-17-47	Type:	RIGHT			
		Radius:	8000	DOC:	00-42-58			
		Length:	41.4	Tangent:	20.7			
		Mid-Ord:	0.03	External:	0.03			
		Chord:	41.4	Course:	N 68-07-56 W			
		Es:	1.12					
		Spiral Curve Data						
	SC	741+49.71						
	SPI							
	PC	743+49.71						
		Length:	200	L Tan:	133.33			
		Radius:	8000	S Tan:	66.67			
		Theta:	0-42-58	P:	0.21			
		X:	200	K:	100			
		Y:	0.83	A:	1264.91			
		Chord:	200	Course:	N 67-30-23 W			
		Ts:	220.71					
		Tangent Data						
		743+49.71						
		749+49.32						
		Length:	599.6	Course:	N 67-16-04 W			
O1-O4		**Spiral Curve Data**						
	TS	749+49.32						
	SPI							
	SC	752+49.32						
		Length:	300	L Tan:	200.24			
		Radius:	1000	S Tan:	100.21			
		Theta:	8-35-40	P:	3.75			
		X:	299.33	K:	149.89			
		Y:	14.98	A:	547.72			
		Chord:	299.7	Course:	N 64-24-12 W			
		Ts:	948.75					
		Circular Curve Data						
	SC	752+49.32				50	6.00	4.03
	CC							
	SC	762+93.77						
		Delta:	59-50-33	Type:	RIGHT			
		Radius:	1000	DOC:	05-43-46			
		Length:	1044.45	Tangent:	575.52			
		Mid-Ord:	133.29	External:	153.79			
		Chord:	997.62	Course:	N 28-45-07 W			
		Es:	282.84					
		Spiral Curve Data						
	SC	762+93.77						
	SPI							
	PC	765+93.77						
		Length:	300	L Tan:	200.24			
		Radius:	1000	S Tan:	100.21			
		Theta:	8-35-40	P:	3.75			
		X:	299.33	K:	149.89			
		Y:	14.98	A:	547.72			
		Chord:	299.7	Course:	N 06-53-58 E			
		Ts:	948.75					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
		Tangent Data						
		765+93.77						
		780+50.23						
		Length:	1	Course:	N 09-45-49 E			
O1-O5		**Spiral Curve Data**						
	TS	780+50.23						
	SPI							
	SC	783+50.23						
		Length:	300	L Tan:	200.06			
		Radius:	1914	S Tan:	100.06			
		Theta:	4-29-25	P:	1.96			
		X:	299.82	K:	149.97			
		Y:	7.83	A:	757.76			
		Chord:	299.92	Course:	N 08-16-01 E			
		Ts:	1005.43					
		Circular Curve Data						
	SC	783+50.23				65	6.00	2.85
	CC							
	SC	796+57.73						
		Delta:	39-08-25	Type:	LEFT			
		Radius:	1914	DOC:	02-59-37			
		Length:	1307.5	Tangent:	680.42			
		Mid-Ord:	110.57	External:	117.35			
		Chord:	1282.23	Course:	N 14-17-48 W			
		Es:	184.26					
		Spiral Curve Data						
	SC	796+57.73						
	SPI							
	PC	799+57.73						
		Length:	300	L Tan:	200.06			
		Radius:	1914	S Tan:	100.06			
		Theta:	4-29-25	P:	1.96			
		X:	299.82	K:	149.97			
		Y:	7.83	A:	757.76			
		Chord:	299.92	Course:	N 36-51-38 W			
		Ts:	1005.43					
		Tangent Data						
		799+57.73						
		809+96.18						
		Length:	1038.45	Course:	N 38-21-26 W			
O1-O6		**Spiral Curve Data**						
	TS	809+96.18						
	SPI							
	SC	812+96.18						
		Length:	300	L Tan:	200.03			
		Radius:	3000	S Tan:	100.02			
		Theta:	2-51-53	P:	1.25			
		X:	299.93	K:	149.99			
		Y:	5	A:	948.68			
		Chord:	299.97	Course:	N 37-24-08 W			
		Ts:	424.21					
		Circular Curve Data						
	SC	812+96.18				75	6.00	1.52
	CC							
	SC	815+42.89						
		Delta:	04-42-42	Type:	RIGHT			
		Radius:	3000	DOC:	01-54-35			
		Length:	246.7	Tangent:	123.42			
		Mid-Ord:	2.54	External:	2.54			
		Chord:	246.64	Course:	N 33-08-12 W			
		Es:	13.75					
		Spiral Curve Data						
	SC	815+42.89						
	SPI							
	PC	818+42.89						
		Length:	300	L Tan:	200.03			
		Radius:	3000	S Tan:	100.02			
		Theta:	2-51-53	P:	1.25			
		X:	299.93	K:	149.99			
		Y:	5	A:	948.68			
		Chord:	299.97	Course:	N 28-52-15 W			
		Ts:	424.21					
		Tangent Data						
		818+42.89						
		848+21.48						
		Length:	2978.6	Course:	N 27-54-57 W			

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
		Tangent Data						
		556+71.77						
		557+01.77						
		Length:	30.00	Course:	N 57-58-46 E			
WFY-O1		**Tangent Data**						
		557+01.77						
		557+53.77						
		Length:	52.00	Course:	N 50-49-36 E			
		Circular Curve Data						
	PC	557+53.77				N/A	0.00	N/A
	RP							
	PT	560+18.74						
		Delta:	47-31-01	Type:	RIGHT			
		Radius:	319.50	DOC:	17-55-59			
		Length:	264.97	Tangent:	140.64			
		Mid-Ord:	27.08	External:	29.58			
		Chord:	257.44	Course:	N 74-35-06 E			
		Es:	29.58					
WFY-O2		**Tangent Data**						
		560+18.74						
		561+02.16						
		Length:	83.42	Course:	S 81-39-24 E			
		Circular Curve Data						
	PC	561+02.16				N/A	0.00	N/A
	RP							
	PT	565+65.93						
		Delta:	88-34-27	Type:	LEFT			
		Radius:	300.00	DOC:	19-05-55			
		Length:	463.77	Tangent:	292.63			
		Mid-Ord:	85.25	External:	119.08			
		Chord:	418.95	Course:	N 54-03-22 E			
		Es:	119.08					
		Tangent Data						
		565+65.93			7015338.95			
		577+45.42			7016501.34			
		Length:	1179.49	Course:	N 09-46-09 E			
		Tangent Data						
		577+45.42			7016501.34			
		578+96.17			7016646.62			
		Length:	150.75	Course:	N 15-28-44 E			

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH	09-28-01 DATE	
DRAWN: D. MADSEN	09-28-01 DATE	
CHECKED: D. MADLANSACAY	03-11-02 DATE	
APPROVED: P. ELMAN	01-2004 DATE	

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

CURVE TABLE
OUTBOUND ALIGNMENT
01 AND WFY YARD DATA
CURVE 01-01 TO 01-06, WFY-01 AND WFY-02

SCALE: NO SCALE

DRAWING NO.: GPN-PP-210

139

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Curve_Data\OUTBOUND\OB-CurveTable_01&WFC.dwg, GPN-PP-210, 08/04/04 09:58:12 AM, Kolenarn

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
		Tangent Data						
		1774+00						
		1791+08.65						
		Length:	1708.65	Course:	N 24-01-08 W			
		Spiral Curve Data						
	TS	1791+08.65						
	SPI							
	SC	1792+08.65						
		Length:	100.00	L Tan:	66.67			
		Radius:	3000.00	S Tan:	33.33			
		Theta:	0-57-18	P:	0.14			
		X:	100.00	K:	50.00			
		Y:	0.56	A:	547.72			
		Chord:	100.00	Course:	N 24-20-14 W			
		Ts:	457.49					
		Circular Curve Data						
	SC	1792+08.65				50	2.00	1.34
	RP							
	SC	1799+18.62						
L1-I1		Delta:	13-33-34	Type:	LEFT			
		Radius:	3000.00	DOC:	01-54-35			
		Length:	709.98	Tangent:	356.65			
		Mid-Ord:	20.98	External:	21.13			
		Chord:	708.32	Course:	N 31-45-13 W			
		Es:	27.69					
		Spiral Curve Data						
	SC	1799+18.62						
	SPI							
	PC	1800+18.62						
		Length:	100.00	L Tan:	66.67			
		Radius:	3000.00	S Tan:	33.33			
		Theta:	0-57-18	P:	0.14			
		X:	100.00	K:	50.00			
		Y:	0.56	A:	547.72			
		Chord:	100.00	Course:	N 39-10-12 W			
		Ts:	457.49					
		Tangent Data						
		1800+18.62						
		1800+99.19						
		Length:	80.57	Course:	N 39-29-18 W			
		Spiral Curve Data						
	TS	1800+99.19						
	SPI							
	SC	1802+61.69						
		Length:	162.50	L Tan:	108.37			
		Radius:	966.41	S Tan:	54.20			
		Theta:	4-49-02	P:	1.14			
		X:	162.39	K:	81.23			
		Y:	4.55	A:	396.28			
		Chord:	162.45	Course:	N 41-05-38 W			
		Ts:	162.77					
L1-I2		**Spiral Curve Data**						
	SC	1802+61.69				40	3.25	3.39
	SPI							
	PC	1804+24.19						
		Length:	162.50	L Tan:	108.37			
		Radius:	966.41	S Tan:	54.20			
		Theta:	4-49-02	P:	1.14			
		X:	162.39	K:	81.23			
		Y:	4.55	A:	396.28			
		Chord:	162.45	Course:	N 47-31-01 W			
		Ts:	162.77					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
		Tangent Data						
		1804+24.19						
		1812+91.99						
		Length:	867.80	Course:	N 49-07-21 W			
		Spiral Curve Data						
	TS	1812+91.99						
	SPI							
	SC	1815+04.49						
		Length:	212.50	L Tan:	141.81			
		Radius:	755.00	S Tan:	70.97			
		Theta:	8-03-47	P:	2.49			
		X:	212.08	K:	106.18			
		Y:	9.95	A:	400.55			
		Chord:	212.31	Course:	N 51-48-35 W			
		Ts:	352.99					
		Circular Curve Data						
	SC	1815+04.49				40	4.25	4.25
	RP							
	SC	1817+67.61						
L1-I3		Delta:	19-58-02	Type:	LEFT			
		Radius:	755.00	DOC:	07-35-20			
		Length:	263.11	Tangent:	132.90			
		Mid-Ord:	11.43	External:	11.61			
		Chord:	261.78	Course:	N 67-10-09 W			
		Es:	41.66					
		Spiral Curve Data						
	SC	1817+67.61						
	SPI							
	PC	1819+80.11						
		Length:	212.50	L Tan:	141.81			
		Radius:	755.00	S Tan:	70.97			
		Theta:	8-03-47	P:	2.49			
		X:	212.08	K:	106.18			
		Y:	9.95	A:	400.55			
		Chord:	212.31	Course:	N 82-31-44 W			
		Ts:	352.99					
		Tangent Data						
		1819+80.11						
		1825+66.01						
		Length:	585.91	Course:	N 85-12-58 W			
		Spiral Curve Data						
	TS	1825+66.01						
	SPI							
	SC	1826+66.01						
		Length:	100.00	L Tan:	66.67			
		Radius:	2800.00	S Tan:	33.33			
		Theta:	1-01-23	P:	0.15			
		X:	100.00	K:	50.00			
		Y:	0.60	A:	529.15			
		Chord:	100.00	Course:	N 85-33-26 W			
		Ts:	166.97					
		Circular Curve Data						
	SC	1826+66.01				50	2.00	1.58
	RP							
	SC	1827+99.80						
L1-I4		Delta:	02-44-16	Type:	LEFT			
		Radius:	2800.00	DOC:	02-02-47			
		Length:	133.79	Tangent:	66.91			
		Mid-Ord:	0.80	External:	0.80			
		Chord:	133.77	Course:	N 87-36-29 W			
		Es:	2.59					
		Spiral Curve Data						
	SC	1827+99.80						
	SPI							
	PC	1828+99.80						
		Length:	100.00	L Tan:	66.67			
		Radius:	2800.00	S Tan:	33.33			
		Theta:	1-01-23	P:	0.15			
		X:	100.00	K:	50.00			
		Y:	0.60	A:	529.15			
		Chord:	100.00	Course:	N 89-39-32 W			
		Ts:	166.97					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
		Tangent Data						
		1828+99.80						
		1835+37.25						
		Length:	637.45	Course:	N 90-00-00 W			
		Spiral Curve Data						
	TS	1835+37.25						
	SPI							
	SC	1836+87.25						
		Length:	350.00	L Tan:	100.01			
		Radius:	2301.00	S Tan:	50.01			
		Theta:	2-12-54	P:	0.48			
		X:	149.98	K:	75.00			
		Y:	1.93	A:	539.44			
		Chord:	149.99	Course:	N 89-15-42 W			
		Ts:	723.15					
		Circular Curve Data						
	SC	1836+87.25				75	6.00	3.81
	RP							
	SC	1847+88.02						
L1-I5		Delta:	32-30-37	Type:	RIGHT			
		Radius:	2301.00	DOC:	02-57-12			
		Length:	1100.77	Tangent:	565.65			
		Mid-Ord:	77.55	External:	80.78			
		Chord:	1086.07	Course:	N 71-31-48 W			
		Es:	105.87					
		Spiral Curve Data						
	SC	1847+88.02						
	SPI							
	PC	1849+38.02						
		Length:	350.00	L Tan:	100.01			
		Radius:	2301.00	S Tan:	50.01			
		Theta:	2-12-54	P:	0.48			
		X:	149.98	K:	75.00			
		Y:	1.93	A:	539.44			
		Chord:	149.99	Course:	N 54-47-53 W			
		Ts:	723.15					
		Tangent Data						
		1849+38.02						
		1861+75.73						
		Length:	1237.71	Course:	N 53-03-35 W			
		Spiral Curve Data						
	TS	1861+75.73						
	SPI							
	SC	1862+90.73						
		Length:	115.00	L Tan:	76.67			
		Radius:	10100.00	S Tan:	38.33			
		Theta:	0-19-34	P:	0.05			
		X:	115.00	K:	57.50			
		Y:	0.22	A:	1077.73			
		Chord:	115.00	Course:	N 53-10-07 W			
		Ts:	135.42					
		Circular Curve Data						
	SC	1862+90.73				75	2.00	0.23
	RP							
	SC	1863+31.57						
L1-I6		Delta:	00-13-54	Type:	LEFT			
		Radius:	10100.00	DOC:	00-34-02			
		Length:	40.83	Tangent:	20.42			
		Mid-Ord:	0.02	External:	0.02			
		Chord:	40.83	Course:	N 53-30-06 W			
		Es:	0.36					
		Spiral Curve Data						
	SC	1863+31.57						
	SPI							
	PC	1864+46.87						
		Length:	115.00	L Tan:	76.67			
		Radius:	10100.00	S Tan:	38.33			
		Theta:	0-19-34	P:	0.05			
		X:	115.00	K:	57.50			
		Y:	0.22	A:	1077.73			
		Chord:	115.00	Course:	N 53-50-06 W			
		Ts:	135.42					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
		Tangent Data						
		1864+36.95						
		1865+39.25						
		Length:	92.69	Course:	N 53-56-38 W			
		Spiral Curve Data						
	TS	1865+39.25						
	SPI							
	SC	1866+39.25						
		Length:	100.00	L Tan:	66.67			
		Radius:	19000.00	S Tan:	33.33			
		Theta:	0-09-03	P:	0.02			
		X:	100.00	K:	50.00			
		Y:	0.09	A:	1378.40			
		Chord:	100.00	Course:	N 53-53-37 W			
		Ts:	343.19					
		Circular Curve Data						
	SC	1866+39.25				75	1.00	0.19
	RP							
	SC	1871+25.58						
L1-I7		Delta:	01-28-00	Type:	RIGHT			
		Radius:	19000.00	DOC:	00-18-06			
		Length:	486.32	Tangent:	243.17			
		Mid-Ord:	1.56	External:	1.56			
		Chord:	486.31	Course:	N 53-03-35 W			
		Es:	2.28					
		Spiral Curve Data						
	SC	1871+25.58						
	SPI							
	PC	1872+25.58						
		Length:	100.00	L Tan:	66.67			
		Radius:	19000.00	S Tan:	33.33			
		Theta:	0-09-03	P:	0.02			
		X:	100.00	K:	50.00			
		Y:	0.09	A:	1378.40			
		Chord:	100.00	Course:	N 52-13-33 W			
		Ts:	343.19					
		Tangent Data						
		1872+25.58						
		1873+18.50						
		Length:	92.92	Course:	N 52-10-32 W			
		Spiral Curve Data						
	TS	1873+18.50						
	SPI							
	SC	1874+33.50						
		Length:	115.00	L Tan:	76.67			
		Radius:	10100.00	S Tan:	38.33			
		Theta:	0-19-34	P:	0.05			
		X:	115.00	K:	57.50			
		Y:	0.22	A:	1077.73			
		Chord:	115.00	Course:	N 52-17-04 W			
		Ts:	135.42					
		Circular Curve Data						
	SC	1874+33.50				75	2.00	0.23
	RP							
	SC	1874+74.34						
L1-I8		Delta:	00-13-54	Type:	LEFT			
		Radius:	10100.00	DOC:	00-34-02			
		Length:	40.84	Tangent:	20.42			
		Mid-Ord:	0.02	External:	0.02			
		Chord:	40.84	Course:	N 52-37-04 W			
		Es:	0.36					
		Spiral Curve Data						
	SC	1874+74.34						
	SPI							
	PC	1875+89.34						
		Length:	115.00	L Tan:	76.67			
		Radius:	10100.00	S Tan:	38.33			
		Theta:	0-19-34	P:	0.05			
		X:	115.00	K:	57.50			
		Y:	0.22	A:	1077.73			
		Chord:	115.00	Course:	N 52-57-04 W			
		Ts:	135.42					

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH 09-05-03 DATE
DRAWN: D. MADSEN 09-28-01 DATE
CHECKED: R. KASHIF 03-11-02 DATE
APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS
SUBMITTED Diana C Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

CURVE TABLE
INBOUND ALIGNMENT
L1 DATA
CURVE L1-I 1 TO L1-I 8

SCALE: NO SCALE

DRAWING NO.: GPN-PP-211

140

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Curve_Data\INBOUND\IB-CurveTable_L1.dwg, GPN-PP-211, 08/04/04 10:06:04 AM, Kolenam

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
	Tangent Data							
		1875+89.34						
		1880+86.10						
		Length:	496.76	Course:	N 53-03-35 W			
	Spiral Curve Data							
	TS	1880+86.10						
	SPI							
	SC	1883+86.10						
		Length:	300.00	L Tan:	200.04			
		Radius:	2500.00	S Tan:	100.03			
		Theta:	3-26-16	P:	1.50			
		X:	299.89	K:	149.98			
		Y:	6.00	A:	866.03			
		Chord:	299.95	Course:	N 54-12-20 W			
		Ts:	452.92					
	Circular Curve Data							
	SC	1883+86.10				75	6.00	3.02
	RP							
	SC	1886+88.69						
L1-I9		Delta:	06-56-05	Type:	LEFT			
		Radius:	2500.00	DOC:	02-17-31			
		Length:	302.59	Tangent:	151.48			
		Mid-Ord:	4.58	External:	4.58			
		Chord:	302.40	Course:	N 59-57-53 W			
		Es:	19.78					
	Spiral Curve Data							
	SC	1886+88.69						
	SPI							
	PC	1889+88.69						
		Length:	300.00	L Tan:	200.04			
		Radius:	2500.00	S Tan:	100.03			
		Theta:	3-26-16	P:	1.50			
		X:	299.89	K:	149.98			
		Y:	6.00	A:	866.03			
		Chord:	299.95	Course:	N 65-43-27 W			
		Ts:	452.92					
	Tangent Data							
		1889+88.69						
		1897+95.06						
		Length:	806.37	Course:	N 66-52-12 W			
	Spiral Curve Data							
	TS	1897+95.06						
	SPI							
	SC	1900+15.06						
		Length:	220.00	L Tan:	146.83			
		Radius:	755.00	S Tan:	73.48			
		Theta:	8-20-52	P:	2.67			
		X:	219.53	K:	109.92			
		Y:	10.67	A:	407.55			
		Chord:	219.79	Course:	N 64-05-16 W			
		Ts:	296.11					
	Circular Curve Data							
	SC	1900+15.06				40	4.25	4.25
	RP							
	SC	1901+58.92						
L1-I10		Delta:	10-55-03	Type:	RIGHT			
		Radius:	755.00	DOC:	07-35-20			
		Length:	143.86	Tangent:	72.15			
		Mid-Ord:	3.42	External:	3.44			
		Chord:	143.65	Course:	N 53-03-48 W			
		Es:	25.21					
	Spiral Curve Data							
	SC	1901+58.92						
	SPI							
	FC	1903+78.92						
		Length:	220.00	L Tan:	146.83			
		Radius:	755.00	S Tan:	73.48			
		Theta:	8-20-52	P:	2.67			
		X:	219.53	K:	109.92			
		Y:	10.67	A:	407.55			
		Chord:	219.79	Course:	N 42-02-20 W			
		Ts:	296.11					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
	Tangent Data							
		1903+78.92						
		1915+40.77						
		Length:	1161.85	Course:	N 39-15-25 W			
	Spiral Curve Data							
	TS	1915+40.77						
	SPI							
	SC	1916+40.70						
		Length:	100.00	L Tan:	66.67			
		Radius:	3100.00	S Tan:	33.33			
		Theta:	0-55-27	P:	0.13			
		X:	100.00	K:	50.00			
		Y:	0.54	A:	556.78			
		Chord:	100.00	Course:	N 38-56-56 W			
		Ts:	255.56					
	Circular Curve Data							
	SC	1916+40.77				50	2.00	1.23
	RP							
	SC	1919+51.27						
L1-I11		Delta:	05-44-20	Type:	RIGHT			
		Radius:	3100.00	DOC:	01-50-54			
		Length:	310.50	Tangent:	155.38			
		Mid-Ord:	3.89	External:	3.89			
		Chord:	310.37	Course:	N 35-27-48 W			
		Es:	6.94					
	Spiral Curve Data							
	SC	1919+51.27						
	SPI							
	PC	1920+51.27						
		Length:	100.00	L Tan:	66.67			
		Radius:	3100.00	S Tan:	33.33			
		Theta:	0-55-27	P:	0.13			
		X:	100.00	K:	50.00			
		Y:	0.54	A:	556.78			
		Chord:	100.00	Course:	N 31-58-40 W			
		Ts:	255.56					
	Tangent Data							
		1920+51.27						
		1929+55.07						
		Length:	903.79	Course:	N 31-40-11 W			
	Spiral Curve Data							
	TS	1929+55.07						
	SPI							
	SC	1930+80.07						
		Length:	125.00	L Tan:	83.34			
		Radius:	2620.00	S Tan:	41.67			
		Theta:	1-22-00	P:	0.25			
		X:	124.99	K:	62.50			
		Y:	0.99	A:	572.28			
		Chord:	125.00	Course:	N 32-07-31 W			
		Ts:	895.10					
	Circular Curve Data							
	SC	1930+80.07				50	2.50	1.33
	RP							
	SC	1945+67.23						
L1-I12		Delta:	32-31-20	Type:	LEFT			
		Radius:	2620.00	DOC:	02-11-13			
		Length:	1487.17	Tangent:	764.21			
		Mid-Ord:	104.81	External:	109.18			
		Chord:	1467.28	Course:	N 49-17-52 W			
		Es:	129.35					
	Spiral Curve Data							
	SC	1945+67.23						
	SPI							
	PC	1946+92.23						
		Length:	125.00	L Tan:	83.34			
		Radius:	2620.00	S Tan:	41.67			
		Theta:	1-22-00	P:	0.25			
		X:	124.99	K:	62.50			
		Y:	0.99	A:	572.28			
		Chord:	125.00	Course:	N 66-28-12 W			
		Ts:	895.10					

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH 09-05-03 DATE
DRAWN: D. MADSEN 09-28-01 DATE
CHECKED: R. KASHIF 03-11-02 DATE
APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

CURVE TABLE
INBOUND ALIGNMENT
L1 DATA
CURVE L1-I 9 TO L1-I 12

SCALE: NO SCALE

DRAWING NO.: GPN-PP-212

141

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E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
	Tangent Data							
		15715+96.02						
		15717+69.49						
		Length:	173.47	Course:	S 55-10-09 W			
Y15-I1	Circular Curve Data							
	PC	15717+69.49				N/A	0.00	N/A
	RP							
	PT	15725+43.71						
		Delta:	140-49-24	Type:	LEFT			
		Radius:	315.00	DOC:	18-11-21			
		Length:	774.22	Tangent:	885.19			
		Mid-Ord:	209.39	External:	624.57			
		Chord:	593.54	Course:	S 15-14-32 E			
		Es:	624.57					
	Tangent Data							
		15725+43.71						
		15764+60.19						
		Length:	3916.49	Course:	S 85-39-14 E			
Y15-I2	Circular Curve Data							
	PC	15764+60.19				N/A	0.00	N/A
	RP							
	PT	15776+99.71						
		Delta:	118-21-54	Type:	LEFT			
		Radius:	600.00	DOC:	09-32-57			
		Length:	1239.51	Tangent:	1005.81			
		Mid-Ord:	292.62	External:	571.17			
		Chord:	1030.56	Course:	N 35-09-49 E			
		Es:	571.17					
	Tangent Data							
		15776+99.71						
		15781+74.30						
		Length:	474.60	Course:	N 24-08-08 E			
Y15-I3	Circular Curve Data							
	PC	15781+74.30				N/A	0.00	N/A
	RP							
	PT	15782+77.14						
		Delta:	05-53-32	Type:	LEFT			
		Radius:	1000.00	DOC:	05-43-46			
		Length:	102.84	Tangent:	51.47			
		Mid-Ord:	1.32	External:	1.32			
		Chord:	102.80	Course:	N 21-04-22 E			
		Es:	1.32					
	Tangent Data							
		15782+77.14						
		15783+81.53						
		Length:	104.39	Course:	N 18-07-35 W			

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
	Tangent Data							
		1544+89.26						
		1545+93.65						
		Length:	104.39	Course:	N 18-07-35 W			
Y15-I7	Circular Curve Data							
	PC	1545+93.65				N/A	0.00	N/A
	RP							
	PT	1546+96.49						
		Deta:	05-53-32	Type:	LEFT			
		Radius:	1000.00	DOC:	05-43-46			
		Length:	102.84	Tangent:	51.47			
		Mid-Ord:	1.32	External:	1.32			
		Chord:	102.80	Course:	N 21-04-22 W			
		Es	1.32					
	Tangent Data							
		1546+96.49						
		1551+00.05						
		Length:	403.56	Course:	N 24-01-08 W			
Y15-I6	Circular Curve Data							
	PC	1551+00.05				N/A	0.00	N/A
	RP							
	PT	1552+19						
		Deta:	08-53-21	Type:	LEFT			
		Radius:	1000.00	DOC:	05-43-46			
		Length:	155.15	Tangent:	77.73			
		Mid-Ord:	3.01	External:	3.02			
		Chord:	154.99	Course:	N 28-27-48 W			
		Es	3.02					
	Tangent Data							
		1552+55.19						
		1561+97.17						
		Length:	941.98	Course:	N 32-54-29 W			
Y15-I5	Circular Curve Data							
	PC	1561+97.17				N/A	0.00	N/A
	RP							
	PT	1569+33.64						
		Delta:	52-44-45	Type:	LEFT			
		Radius:	800.00	DOC:	07-09-43			
		Length:	736.47	Tangent:	396.65			
		Mid-Ord:	83.26	External:	92.94			
		Chord:	710.74	Course:	N 59-16-52 W			
		Es:	92.94					
	Tangent Data							
		1569+33.64						
		1577+96.89						
		Length:	863.25	Course:	N 85-39-14 W			
Y15-I4	Circular Curve Data							
	PC	1577+96.89				N/A	0.00	N/A
	RP							
	PT	1578+99.72						
		Delta:	05-53-30	Type:	LEFT			
		Radius:	1000.00	DOC:	05-43-46			
		Length:	102.83	Tangent:	51.46			
		Mid-Ord:	1.32	External:	1.32			
		Chord:	102.79	Course:	N 88-35-59 W			
		Es:	1.32					
	Tangent Data							
		1578+99.72						
		1580+04.13						
		Length:	104.41	Course:	S 88-27-15 W			

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH 09-05-03 DATE
DRAWN: D. MADSEN 09-28-01 DATE
CHECKED: R. KASHIF 03-11-02 DATE
APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

CURVE TABLE
INBOUND ALIGNMENT
Y15 DATA
CURVE Y15-I 1 TO Y15-I 7

SCALE: NO SCALE

DRAWING NO.: GPN-PP-213

142

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E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
A1-I1	Tangent Data							
		1572+47.37						
		1596+89.74						
		Length:	2442.37	Course:	S 88-42-36 W			
	Spiral Curve Data							
	TS	1596+89.74						
	SPI							
	SC	1599+19.74						
		Length:	230.00	L Tan:	153.44			
		Radius:	1000.00	S Tan:	76.76			
		Theta:	6-35-20	P:	2.20			
		X:	229.70	K:	114.95			
		Y:	8.81	A:	479.58			
		Chord:	229.86	Course:	S 86-30-50 W			
		Ts:	829.70					
	Circular Curve Data							
	SC	1599+19.74				45	4.00	4.12
	RP							
	SC	1609+28.77						
		Delta:	57-48-48	Type:	LEFT			
		Radius:	1000.00	DOC:	05-43-46			
		Length:	1009.03	Tangent:	552.18			
		Mid-Ord:	124.59	External:	142.32			
		Chord:	966.77	Course:	S 53-12-52 W			
		Es:	230.97					
	Spiral Curve Data							
	SC	1609+28.77						
	SPI							
	PC	1611+58.77						
		Length:	230.00	L Tan:	153.44			
		Radius:	1000.00	S Tan:	76.76			
		Theta:	6-35-20	P:	2.20			
		X:	229.70	K:	114.95			
		Y:	8.81	A:	479.58			
		Chord:	229.86	Course:	S 19-54-53 W			
		Ts:	829.70					
	Tangent Data							
		1611+58.77						
		1629+60.52						
		Length:	1801.75	Course:	S 17-43-07 W			
A1-I2	Spiral Curve Data							
	TS	1629+60.52						
	SPI							
	SC	1631+80.52						
		Length:	220.00	L Tan:	146.83			
		Radius:	755.00	S Tan:	73.48			
		Theta:	8-20-52	P:	2.67			
		X:	219.53	K:	109.92			
		Y:	10.67	A:	407.55			
		Chord:	219.79	Course:	S 20-30-03 W			
		Ts:	663.25					
	Circular Curve Data							
	SC	1631+80.52				40	4.00	4.50
	RP							
	SC	1639+12.99						
		Delta:	55-35-09	Type:	RIGHT			
		Radius:	755.00	DOC:	07-35-20			
		Length:	732.47	Tangent:	397.95			
		Mid-Ord:	87.10	External:	98.46			
		Chord:	704.08	Course:	S 53-51-34 W			
		Es:	183.21					
	Spiral Curve Data							
	SC	1639+12.99						
	SPI							
	PC	1641+32.99						
		Length:	220.00	L Tan:	146.83			
		Radius:	755.00	S Tan:	73.48			
		Theta:	8-20-52	P:	2.67			
		X:	219.53	K:	109.92			
		Y:	10.67	A:	407.55			
		Chord:	219.79	Course:	S 87-13-05 W			
		Ts:	663.25					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
A1-I3	Tangent Data							
		1641+32.99						
		1653+33.14						
		Length:	1200.15	Course:	S 90-00-00 W			
	Spiral Curve Data							
	TS	1653+33.14						
	SPI							
	SC	1655+53.14						
		Length:	220.00	L Tan:	146.82			
		Radius:	769.00	S Tan:	73.48			
		Theta:	8-11-45	P:	2.62			
		X:	219.55	K:	109.93			
		Y:	10.47	A:	411.31			
		Chord:	219.80	Course:	N 87-16-07 W			
		Ts:	1839.53					
	Circular Curve Data							
	SC	1655+53.14				40	4.00	4.35
	RP							
	SC	1671+03.64						
		Delta:	115-31-22	Type:	RIGHT			
		Radius:	769.00	DOC:	07-27-02			
		Length:	1550.50	Tangent:	1219.33			
		Mid-Ord:	358.78	External:	372.57			
		Chord:	1300.89	Course:	N 24-02-34 W			
		Es:	1124.92					
	Spiral Curve Data							
	SC	1671+03.64						
	SPI							
	PC	1673+23.64						
		Length:	220.00	L Tan:	146.82			
		Radius:	769.00	S Tan:	73.48			
		Theta:	8-11-45	P:	2.62			
		X:	219.55	K:	109.93			
		Y:	10.47	A:	411.31			
		Chord:	219.80	Course:	N 39-10-58 E			
		Ts:	1839.53					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
A1-I4	Tangent Data							
		1673+23.64						
		1674+66.00						
		Length:	142.36	Course:	N 41-54-51 E			
	Spiral Curve Data							
	TS	1674+66.00						
	SPI							
	SC	1676+86.00						
		Length:	220.00	L Tan:	146.83			
		Radius:	755.00	S Tan:	73.48			
		Theta:	8-20-52	P:	2.67			
		X:	219.52	K:	109.92			
		Y:	10.67	A:	407.55			
		Chord:	219.79	Course:	N 39-07-56 E			
		Ts:	400.11					
	Circular Curve Data							
	SC	1676+86.00				40	4.00	4.50
	RP							
	SC	1680+18.31						
		Delta:	25-13-08	Type:	LEFT			
		Radius:	755.00	DOC:	07-35-20			
		Length:	332.31	Tangent:	168.89			
		Mid-Ord:	18.21	External:	18.66			
		Chord:	329.64	Course:	N 20-57-26 E			
		Es:	56.34					
	Spiral Curve Data							
	SC	1680+18.31						
	SPI							
	PC	1682+38.31						
		Length:	220.00	L Tan:	146.83			
		Radius:	755.00	S Tan:	73.48			
		Theta:	8-20-52	P:	2.67			
		X:	219.53	K:	109.92			
		Y:	10.67	A:	407.55			
		Chord:	219.79	Course:	N 02-46-55 E			
		Ts:	400.11					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
A1-I5		1682+38.31						
		1729+91.82						
		Length:	4753.51	Course:	N 00-00-00 W			
	Spiral Curve Data							
	TS	1729+91.82						
	SPI							
	SC	1734+16.82						
		Length:	425.00	L Tan:	283.50			
		Radius:	2000.00	S Tan:	141.82			
		Theta:	6-05-16	P:	3.76			
		X:	424.52	K:	212.42			
		Y:	15.04	A:	921.95			
		Chord:	424.79	Course:	N 02-01-45 W			
		Ts:	638.68					
	Circular Curve Data							
	SC	1734+16.82				70	6.00	3.83
	RP							
	SC	1738+30.24						
		Delta:	11-50-37	Type:	LEFT			
		Radius:	2000.00	DOC:	02-51-53			
		Length:	413.42	Tangent:	207.45			
		Mid-Ord:	10.67	External:	10.73			
		Chord:	412.68	Course:	N 12-00-34 W			
		Es:	48.60					
	Spiral Curve Data							
	SC	1738+30.24						
	SPI							
	PC	1742+55.24						
		Length:	425.00	L Tan:	283.50			
		Radius:	2000.00	S Tan:	141.82			
		Theta:	6-05-16	P:	3.76			
		X:	424.52	K:	212.42			
		Y:	15.04	A:	921.95			
		Chord:	424.79	Course:	N 21-59-23 W			
		Ts:	638.68					
	Tangent Data							
		1742+55.24						
		1772+88.74						
		Length:	3033.50	Course:	N 24-01-08 W			

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH 09-28-01 DATE	REFERENCE DRAWINGS		REVISIONS		
DRAWN: D. MADSEN 09-28-01 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
CHECKED: R. KASHIF 03-11-02 DATE					
APPROVED: P. ELMAN 01-2004 DATE					

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

CURVE TABLE
INBOUND ALIGNMENT
A1 DATA
CURVE A1-I 1 TO A1-I 5

SCALE: NO SCALE

DRAWING NO.: GPN-PP-214

143

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Curve_Data\INBOUND\IB-CurveTable_A1.dwg, GPN-PP-214, 11/23/04 10:43:57 AM, Kolenam

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
D1-I1	Tangent Data							
		1040+00						
		1043+97.53						
		Length:	397.53	Course:	S 71-02-58.589 W			
	Spiral Curve Data							
	TS	1043+97.53						
	SPI							
	SC	1045+62.53						
		Length:	165.00	L Tan:	110.00			
		Radius:	3914.00	S Tan:	55.00			
		Theta:	1-12-27.687	P:	0.29			
		X:	164.99	K:	82.50			
		Y:	1.16	A:	803.62			
		Chord:	165.00	Course:	S 71-27-07.812 W			
		Ts:	1500.46					
	Circular Curve Data							
	SC	1045+62.53				70	3.25	1.77
	RP							
	PT	1072+01.43						
		Delta:	38-37-48.147	Type:	RIGHT			
		Radius:	3914.00	DOC:	01-27-49.924			
		Length:	2638.90	Tangent:	1371.82			
		Mid-Ord:	220.30	External:	233.44			
		Chord:	2589.20	Course:	N 88-25-39.651 W			
		Es:	249.20					
	Spiral Curve Data							
	TS	1072+01.43						
	SPI							
	SC	1073+01.42						
		Length:	99.98	L Tan:	51.08			
		Radius:	3435.00	S Tan:	48.91			
		Theta:	1-33-56.460	P:	0.05			
		X:	99.97	K:	6.12			
		Y:	1.34	A:	1675.22			
		Chord:	99.98	Course:	N 68-20-48.578 W			
		Ts:	844.60					
	Circular Curve Data							
	SC	1073+01.42				70	3.75	1.97
	RP							
	SC	1087+56.34						
		Delta:	24-16-05.162	Type:	RIGHT			
		Radius:	3435.00	DOC:	01-40-04.798			
		Length:	1454.92	Tangent:	738.54			
		Mid-Ord:	76.74	External:	78.50			
		Chord:	1444.07	Course:	N 55-24-46.536 W			
		Es:	100.91					
	Spiral Curve Data							
	SC	1087+56.34						
	SPI							
	PC	1089+45.20						
		Length:	188.86	L Tan:	125.91			
		Radius:	3435.00	S Tan:	62.96			
		Theta:	1-34-30.237	P:	0.43			
		X:	188.84	K:	94.43			

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
D1-I2	Tangent Data							
		1089+45.20						
		1104+62.22						
		Length:	1517.02	Course:	N 41-42-13.718 W			
	Spiral Curve Data							
	TS	1104+62.22						
	SPI							
	SC	1106+77.22						
		Length:	215.00	L Tan:	143.34			
		Radius:	2886.00	S Tan:	71.68			
		Theta:	2-08-03.114	P:	0.67			
		X:	214.97	K:	107.50			
		Y:	2.67	A:	787.71			
		Chord:	214.99	Course:	N 42-24-54.726 W			
		Ts:	1287.75					
	Circular Curve Data							
	SC	1106+77.22				70	4.25	2.56
	RP							
	SC	1127+02.48						
		Delta:	40-12-26.710	Type:	LEFT			
		Radius:	2886.00	DOC:	01-59-07.083			
		Length:	2025.26	Tangent:	1056.34			
		Mid-Ord:	175.84	External:	187.25			
		Chord:	1983.95	Course:	N 63-56-30.187 W			
		Es:	232.63					
	Spiral Curve Data							
	SC	1127+02.48						
	SPI							
	PC	1129+17.48						
		Length:	215.00	L Tan:	143.34			
		Radius:	2886.00	S Tan:	71.68			
		Theta:	2-08-03.114	P:	0.67			
		X:	214.97	K:	107.50			
		Y:	2.67	A:	787.71			
		Chord:	214.99	Course:	N 85-28-05.648 W			
		Ts:	1287.75					
	Tangent Data							
		1129+17.48						
		1138+37.41						
		Length:	919.94	Course:	N 86-10-46.656 W			
D1-I3	Spiral Curve Data							
	TS	1138+37.41						
	SPI							
	SC	1139+87.41						
		Length:	150.00	L Tan:	100.00			
		Radius:	5765.00	S Tan:	50.00			
		Theta:	0-44-43.410	P:	0.16			
		X:	150.00	K:	75.00			
		Y:	0.65	A:	929.92			
		Chord:	150.00	Course:	N 85-55-52.187 W			
		Ts:	1355.27					
	Circular Curve Data							
	SC	1139+87.41				75	3.00	0.91
	RP							
	SC	1163+56.99						
		Delta:	23-33-00.601	Type:	RIGHT			
		Radius:	5765.00	DOC:	00-59-37.880			
		Length:	2369.58	Tangent:	1201.76			
		Mid-Ord:	121.32	External:	123.93			
		Chord:	2352.93	Course:	N 73-39-32.945 W			
		Es:	140.61					
	Spiral Curve Data							
	SC	1163+56.99						
	SPI							
	PC	1165+06.99						
		Length:	150.00	L Tan:	100.00			
		Radius:	5765.00	S Tan:	50.00			
		Theta:	0-44-43.410	P:	0.16			
		X:	150.00	K:	75.00			
		Y:	0.65	A:	929.92			
		Chord:	150.00	Course:	N 61-23-13. W			
		Ts:	1355.27					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
D1-I4	Tangent Data							
		1165+06.99						
		1172+07.67						
		Length:	700.68	Course:	N 61-08-19.234 W			
	Spiral Curve Data							
	TS	1172+07.67						
	SPI							
	SC	1173+22.67						
		Length:	115.00	L Tan:	76.67			
		Radius:	8006.00	S Tan:	38.33			
		Theta:	0-24-41.417	P:	0.07			
		X:	115.00	K:	57.50			
		Y:	0.28	A:	959.53			
		Chord:	115.00	Course:	N 61-16-33.039 W			
		Ts:	1316.07					
	Circular Curve Data							
	SC	1173+22.67				75	2.25	0.57
	RP							
	SC	1197+04.36						
		Delta:	17-02-41.276	Type:	LEFT			
		Radius:	8006.00	DOC:	00-42-56.378			
		Length:	2381.69	Tangent:	1199.70			
		Mid-Ord:	88.40	External:	89.39			
		Chord:	2372.92	Course:	N 70-04-21.289 W			
		Es:	98.39					
	Spiral Curve Data							
	SC	1197+04.36						
	SPI							
	PC	1198+19.36						
		Length:	115.00	L Tan:	76.67			
		Radius:	8006.00	S Tan:	38.33			
		Theta:	0-24-41.417	P:	0.07			
		X:	115.00	K:	57.50			
		Y:	0.28	A:	959.53			
		Chord:	115.00	Course:	N 78-52-09.539 W			
		Ts:	1316.07					
	Tangent Data							
		1198+19.36						
		1200+54.01						
		Length:	234.65	Course:	N 79-00-23.345 W			
D1-I5	Spiral Curve Data							
	TS	1200+54.01						
	SPI							
	SC	1201+79.01						
		Length:	100.00	L Tan:	83.33			
		Radius:	8000.00	S Tan:	41.67			
		Theta:	0-31-39.727	P:	0.10			
		X:	125.00	K:	62.50			
		Y:	0.38	A:	921.00			
		Chord:	125.00	Course:	N 79-10-56.587 W			
		Ts:	1022.13					
	Circular Curve Data							
	SC	1201+79.01				75	2.00	0.82
	RP							
	SC	1219+60.60						
		Delta:	15-02-32.604	Type:	LEFT			
		Radius:	8000.00	DOC:	00-50-39.564			
		Length:	1781.59	Tangent:	895.95			
		Mid-Ord:	58.38	External:	58.89			
		Chord:	1776.48	Course:	N 87-03-19.374 W			
		Es:	67.61					
	Spiral Curve Data							
	SC	1219+60.60						
	SPI							
	PC	1220+85.60						
		Length:	100.00	L Tan:	83.33			
		Radius:	8000.00	S Tan:	41.67			
		Theta:	0-31-39.727	P:	0.10			
		X:	125.00	K:	62.50			
		Y:	0.38	A:	921.00			
		Chord:	125.00	Course:	S 85-04-17.839 W			
		Ts:	1022.13					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
D1-I6	Tangent Data							
		1220+85.60						
		1223+59.14						
		Length:	273.54	Course:	S 84-53-44.597 W			
	Spiral Curve Data							
	TS	1223+59.14						
	SPI							
	SC	1225+74.14						
		Length:	215.00	L Tan:	143.34			
		Radius:	4000.00	S Tan:	71.67			
		Theta:	1-32-23.367	P:	0.48			
		X:	214.98	K:	107.50			
		Y:	1.93	A:	927.36			
		Chord:	214.99	Course:	S 84-22-56.819 W			
		Ts:	728.01					
	Circular Curve Data							
	SC	1225+74.14				75	4.25	1.39
	RP							
	SC	1235+90.20						
		Delta:	14-33-14.343	Type:	LEFT			
		Radius:	4000.00	DOC:	01-25-56.620			
		Length:	1016.06	Tangent:	510.78			
		Mid-Ord:	32.22	External:	32.48			
		Chord:	1013.33	Course:	S 76-04-44.059			
		Es:	48.32					
	Spiral Curve Data							
	SC	1235+90.20						
	SPI							
	PC	1238+05.20						
		Length:	215.00	L Tan:	143.34			
		Radius:	4000.00	S Tan:	71.67			
		Theta:	1-32-23.367	P:	0.48			
		X:	214.98	K:	107.50			
		Y:	1.93	A:	927.36			
		Chord:	214.99	Course:	S 67-46-31.298 W			
		Ts:	728.01					
	Tangent Data							
		1238+05.20						
		1251+40.42						
		Length:	1335.23	Course:	S 67-15-43.521 W			
D1-I7	Spiral Curve Data							
	TS	1251+40.42						
	SPI							
	SC	1253+40.42						
		Length:	200.00	L Tan:	133.34			
		Radius:	5700.00	S Tan:	66.67			
		Theta:	1-00-18.681	P:	0.29			
		X:	199.99	K:	100.00			
		Y:	1.17	A:	1067.71			
		Chord:	200.00	Course:	S 67-35-49.745 W			
		Ts:	2438.19					
	Circular Curve Data							
	SC	1253+40.42				75	3.75	0.21
	RP							
	SC	1295+77.97						
		Delta:	42-35-43.207	Type:	RIGHT			
		Radius:	5700.00	DOC:	01-00-18.681			
		Length:	4237.54	Tangent:	2222.07			
		Mid-Ord:	389.28	External:	417.81			
		Chord:	4140.63	Course:	S 89-33-53.805 W			
		Es:	461.21					
	Spiral Curve Data							
	SC	1295+77.97						
	SPI							
	PC	1297+77.97						
		Length:	200.00	L Tan:	133.34			
		Radius:	5700.00	S Tan:	66.67			
		Theta:	1-00-18.681	P:	0.29			
		X:	199.99	K:	100.00			
		Y:	1.17	A:	1067.71			
		Chord:	200.00	Course:	N 68-28-02.134 W			
		Ts:	2438.19					

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH 09-05-03 DATE

DRAWN: D. MADSEN 09-28-01 DATE

CHECKED: T. TWYMAN 03-11-02 DATE

APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

SUBMITTED

CAPITAL TRANSIT CONSULTANTS

Diana C. Mendes

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

CURVE TABLE
INBOUND ALIGNMENT
D1 DATA
CURVE D1-I 1 TO D1-I 7

SCALE: NO SCALE

DRAWING NO.: GPN-PP-215

144

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Curve_Data\INBOUNDIB-CurveTable_D1.dwg, GPN-PP-215, 08/04/04 10:14:33 AM, Kolenam

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Tangent Data					
		1297+77.97						
		1306+08.55						
		Length:	830.58	Course:	N 68-07-55.910 W			
			Spiral Curve Data					
	TS	1306+08.55						
	SPI							
	SC	1307+33.55						
		Length:	125.00	L Tan:	83.33			
		Radius:	6800.00	S Tan:	41.67			
		Theta:	0-31-35.816	P:	0.10			
		X:	125.00	K:	62.50			
		Y:	0.38	A:	921.95			
		Chord:	125.00	Course:	N 68-18-27.848 W			
		Ts:	132.69					
			Circular Curve Data					
	SC	1307+33.55				75	2.50	0.82
	RP							
	SC	1307+48.93						
DI-I8		Delta:	00-07-46.459	Type:	LEFT			
		Radius:	6800.00	DOC:	00-50-33.306			
		Length:	15.38	Tangent:	7.69			
		Mid-Ord:	0.00	External:	0.00			
		Chord:	15.38	Course:	N 68-43-24.956 W			
		Es:	0.46					
			Spiral Curve Data					
	SC	1307+48.93						
	SPI							
	PC	1308+73.93						
		Length:	125.00	L Tan:	83.33			
		Radius:	6800.00	S Tan:	41.67			
		Theta:	0-31-35.816	P:	0.10			
		X:	125.00	K:	62.50			
		Y:	0.38	A:	921.95			
		Chord:	125.00	Course:	N 69-08-22.063 W			
		Ts:	132.69					
			Tangent Data					
		1308+73.93						
		1310+47.13						
		Length:	173.20	Course:	N 69-18-54.002 W			
			Spiral Curve Data					
	TS	1310+47.13						
	SPI							
	SC	1311+59.63						
		Length:	112.50	L Tan:	75.00			
		Radius:	6800.00	S Tan:	37.50			
		Theta:	0-28-26.235	P:	0.08			
		X:	112.50	K:	56.25			
		Y:	0.31	A:	874.64			
		Chord:	112.50	Course:	N 69-09-25.257 W			
		Ts:	134.54					
			Circular Curve Data					
	SC	1311+59.63				75	2.25	1.07
	RP							
	SC	1312+03.70						
D1-I9		Delta:	00-22-16.823	Type:	RIGHT			
		Radius:	6800.00	DOC:	00-50-33.306			
		Length:	44.07	Tangent:	22.04			
		Mid-Ord:	0.04	External:	0.04			
		Chord:	44.07	Course:	N 68-39-19.356 W			
		Es:	0.53					
			Spiral Curve Data					
	SC	1312+03.70						
	SPI							
	PC	1313+16.20						
		Length:	112.50	L Tan:	75.00			
		Radius:	6800.00	S Tan:	37.50			
		Theta:	0-28-26.235	P:	0.08			
		X:	112.50	K:	56.25			
		Y:	0.31	A:	874.64			
		Chord:	112.50	Course:	N 68-09-13.454 W			
		Ts:	134.54					
			Tangent Data					
		1313+16.20						
		1321+81.96						
		Length:	865.78	Course:	N 67-59-44.710 W			

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
		1313+04.17						
		1336+96.74						
		Length:	2392.57	Course:	N 67-59-44.710 W			
			Spiral Curve Data					
	TS	1336+96.74						
	SPI							
	SC	1337+96.74						
		Length:	100	L Tan:	66.67			
		Radius:	10000	S Tan:	33.33			
		Theta:	0-17-11.324	P:	0.04			
		X:	100	K:	50			
		Y:	0.17	A:	1000			
		Chord:	100	Course:	N 68-05-28.484 W			
		Ts:	463.64					
			Circular Curve Data					
	SC	1337+96.74				75	2.00	0.26
	CC							
	SC	1345+23.53						
D1-I10, REVISED		Delta:	04-09-51.237	Type:	LEFT			
		Radius:	10000	DOC:	00-34-22.648			
		Length:	726.8	Tangent:	363.56			
		Mid-Ord:	6.6	External:	6.61			
		Chord:	726.64	Course:	N 70-21-51.652 W			
		Es:	8.59					
			Spiral Curve Data					
	SC	1345+23.53						
	SPI							
	PC	1346+23.53						
		Length:	100	L Tan:	66.67			
		Radius:	10000	S Tan:	33.33			
		Theta:	0-17-11.324	P:	0.04			
		X:	100	K:	50			
		Y:	0.17	A:	1000			
		Chord:	100	Course:	N 72-38-14.820 W			
		Ts:	463.64					
			Tangent Data					
		1346+23.53						
		1350+30.37						
		Length:	406.83	Course:	N 72-43-58.595 W			
			Spiral Curve Data					
	TS	1350+30.37						
	SPI							
	SC	1351+55.37						
		Length:	125	L Tan:	83.33			
		Radius:	5000	S Tan:	41.67			
		Theta:	0-42-58.310	P:	0.13			
		X:	125	K:	62.5			
		Y:	0.52	A:	790.57			
		Chord:	125	Course:	N 72-58-18.031 W			
		Ts:	221.89					
			Circular Curve Data					
	SC	1351+55.37				70	2.50	1.43
	CC							
	SC	1353+49.03						
D1-I11, REVISED		Delta:	02-13-09.408	Type:	LEFT			
		Radius:	5000	DOC:	01-08-45.296			
		Length:	193.67	Tangent:	96.85			
		Mid-Ord:	0.94	External:	0.94			
		Chord:	193.66	Course:	N 74-33-31.609 W			
		Es:	2.67					
			Spiral Curve Data					
	SC	1353+49.03						
	SPI							
	PC	1354+74.03						
		Length:	125	L Tan:	83.33			
		Radius:	5000	S Tan:	41.67			
		Theta:	0-42-58.310	P:	0.13			
		X:	125	K:	62.5			
		Y:	0.52	A:	790.57			
		Chord:	125	Course:	N 76-08-45.188 W			
		Ts:	221.89					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
		1354+74.03						
		1359+22.64						
		Length:	448.61	Course:	N 76-23-04.623 W			
			Spiral Curve Data					
	TS	1359+22.64						
	SPI							
	SC	1360+22.64						
		Length:	100	L Tan:	66.67			
		Radius:	10000	S Tan:	33.33			
		Theta:	0-17-11.324	P:	0.04			
		X:	100	K:	50			
		Y:	0.17	A:	1000			
		Chord:	100	Course:	N 76-28-48.398 W			
		Ts:	531.5					
			Circular Curve Data					
	SC	1360+22.64				75	2.00	0.26
	CC							
	SC	1368+84.89						
D1-I12, REVISED (D1-I13, DELETED)		Delta:	04-56-25.234	Type:	LEFT			
		Radius:	10000	DOC:	00-34-22.648			
		Length:	862.25	Tangent:	431.39			
		Mid-Ord:	9.29	External:	9.3			
		Chord:	861.99	Course:	N 79-08-28.564 W			
		Es:	11.63					
			Spiral Curve Data					
	SC	1368+84.89						
	SPI							
	PC	1369+84.89						
		Length:	100	L Tan:	66.67			
		Radius:	10000	S Tan:	33.33			
		Theta:	0-17-11.324	P:	0.04			
		X:	100	K:	50			
		Y:	0.17	A:	1000			
		Chord:	100	Course:	N 81-48-08.730 W			
		Ts:	531.5					
			Tangent Data					
		1369+84.89						
		1380+30.50						
		Length:	1045.6	Course:	N 81-53-52.505 W			

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Tangent Data					
		1369+77.62						
		1380+42.96						
		Length:	1065.34	Course:	N 81-53-52.505 W			
			Spiral Curve Data					
	TS	1380+42.96						
	SPI							
	SC	1381+67.96						
		Length:	125.00	L Tan:	83.33			
		Radius:	9100.00	S Tan:	41.67			
		Theta:	0-23-36.654	P:	0.07			
		X:	125.00	K:	62.50			
		Y:	0.29	A:	1066.54			
		Chord:	125.00	Course:	N 82-01-44.723 W			
		Ts:	573.90					
			Circular Curve Data					
	SC	1381+67.96				75	2.25	0.23
	RP							
	SC	1390+64.67						
D1-I14		Delta:	05-38-45.444	Type:	LEFT			
		Radius:	9100.00	DOC:	00-37-46.646			
		Length:	896.72	Tangent:	448.72			
		Mid-Ord:	11.04	External:	11.06			
		Chord:	896.36	Course:	N 85-06-51.881 W			
		Es:	14.43					
			Spiral Curve Data					
	SC	1390+64.67						
	SPI							
	PC	1391+89.67						
		Length:	125.00	L Tan:	83.33			
		Radius:	9100.00	S Tan:	41.67			
		Theta:	0-23-36.654	P:	0.07			
		X:	125.00	K:	62.50			
		Y:	0.29	A:	1066.54			
		Chord:	125.00	Course:	N 88-11-59.039 W			
		Ts:	573.90					
			Tangent Data					
		1391+89.67						
		1394+96.05						
		Length:	306.37	Course:	N 88-19-51.257 W			
			Spiral Curve Data					
	TS	1394+96.05						
	SPI							
	SC	1395+96.05						
		Length:	100.00	L Tan:	66.67			
		Radius:	15000.00	S Tan:	33.33			
		Theta:	0-11-27.549	P:	0.03			
		X:	100.00	K:	50.00			
		Y:	0.11	A:	1224.74			
		Chord:	100.00	Course:	N 88-23-40.440 W			
		Ts:	932.36					
			Circular Curve Data					
	SC	1395+96.05				75	1.50	0.00
	RP							
	SC	1412+58.73						
D1-I15		Delta:	06-21-03.492	Type:	LEFT			
		Radius:	15000.00	DOC:	00-22-55.099			
		Length:	1662.68	Tangent:	832.19			
		Mid-Ord:	23.03	External:	23.07			
		Chord:	1661.83	Course:	S 88-18-09.448 W			
		Es:	25.96					
			Spiral Curve Data					
	SC	1412+58.73						
	SPI							
	PC	1413+58.73						
		Length:	100.00	L Tan:	66.67			
		Radius:	15000.00	S Tan:	33.33			
		Theta:	0-11-27.549	P:	0.03			
		X:	100.00	K:	50.00			
		Y:	0.11	A:	1224.74			
		Chord:	100.00	Course:	S 84-59-59.335 W			
		Ts:	932.36					

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH 09-05-03 DATE
DRAWN: D. MADSEN 09-28-01 DATE
CHECKED: T. TWYMAN 03-11-02 DATE
APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS
SUBMITTED Diana C Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

CURVE TABLE
INBOUND ALIGNMENT
D1 DATA
CURVE D1-I 8 TO D1-I 15

SCALE: NO SCALE

DRAWING NO.: GPN-PP-216

145

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Curve_Data\INBOUNDIB-CurveTable_D1.dwg, GPN-PP-216, 08/04/04 10:16:14 AM, Kolenam

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Tangent Data					
		1413+58.73						
		1416+22.26						
		Length:	263.53	Course:	S 84-56-10.152 W			
			Spiral Curve Data					
D1-I16	TS	1416+22.26						
	SPI							
	SC	1417+22.26						
		Length:	100.00	L Tan:	66.67			
		Radius:	5315.00	S Tan:	33.33			
		Theta:	0-32-20.403	P:	0.08			
		X:	100.00	K:	50.00			
		Y:	0.31	A:	729.04			
		Chord:	100.00	Course:	S 84-45-23.352 W			
		Ts:	117.48					
			Circular Curve Data					
	SC	1417+22.26				65	2.00	1.19
	RP							
	SC	1417+57.22						
		Delta:	00-26-36.540	Type:	LEFT			
		Radius:	5315.00	DOC:	01-04-40.805			
		Length:	34.96	Tangent:	17.48			
		Mid-Ord:	0.03	External:	0.03			
		Chord:	34.96	Course:	S 84-12-31.479 W			
		Es:	0.51					
			Spiral Curve Data					
	SC	1417+57.22						
	SPI							
	PC	1418+57.22						
		Length:	100.00	L Tan:	66.67			
		Radius:	5315.00	S Tan:	33.33			
		Theta:	0-32-20.403	P:	0.08			
		X:	100.00	K:	50.00			
		Y:	0.31	A:	729.04			
		Chord:	100.00	Course:	S 83-39-39.607 W			
		Ts:	117.48					
			Tangent Data					
		1418+57.22						
		1419+37.35						
		Length:	80.14	Course:	S 83-28-52.807 W			
			Spiral Curve Data					
D1-I17	TS	1419+37.35						
	SPI							
	SC	1420+37.35						
		Length:	100.00	L Tan:	66.67			
		Radius:	5315.00	S Tan:	33.33			
		Theta:	0-32-20.403	P:	0.08			
		X:	100.00	K:	50.00			
		Y:	0.31	A:	729.04			
		Chord:	100	Course:	S 83-39-39.607 W			
		Ts:	117.48					
			Circular Curve Data					
	SC	1420+37.35				65	2.00	1.19
	RP							
	SC	1420+72.31						
		Delta:	00-22-36.540	Type:	RIGHT			
		Radius:	5315.00	DOC:	01-04-40.805			
		Length:	34.96	Tangent:	17.48			
		Mid-Ord:	0.03	External:	0.03			
		Chord:	34.96	Course:	S 84-12-31.479 W			
		Es:	0.51					
			Spiral Curve Data					
	SC	1420+72.31						
	SPI							
	PC	1421+72.31						
		Length:	100.00	L Tan:	66.67			
		Radius:	5315.00	S Tan:	33.33			
		Theta:	0-32-20.403	P:	0.08			
		X:	100.00	K:	50.00			
		Y:	0.31	A:	729.04			
		Chord:	100.00	Course:	S 84-45-23.352 W			
		Ts:	117.48					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Tangent Data					
		1421+72.31						
		1438+91.50						
		Length:	1719.20	Course:	S 84-56-10.152 W			
			Spiral Curve Data					
D1-I18	TS	1438+91.50						
	SPI							
	SC	1439+91.50						
		Length:	100.00	L Tan:	66.67			
		Radius:	1585.00	S Tan:	33.34			
		Theta:	1-48-26.776	P:	0.26			
		X:	99.9	K:	50.00			
		Y:	1.05	A:	398.12			
		Chord:	100.00	Course:	S 85-32-19.059 W			
		Ts:	201.82					
			Circular Curve Data					
	SC	1439+91.50				40	2.00	2.05
	RP							
	SC	1441+94.18						
		Delta:	07-19-35.155	Type:	RIGHT			
		Radius:	1585.00	DOC:	03-36-53.552			
		Length:	202.67	Tangent:	101.48			
		Mid-Ord:	3.24	External:	3.25			
		Chord:	202.54	Course:	N 89-35-35.494 W			
		Es:	7.52					
			Spiral Curve Data					
	SC	1441+94.18						
	SPI							
	PC	1442+94.18						
		Length:	100.00	L Tan:	66.67			
		Radius:	1585.00	S Tan:	33.34			
		Theta:	1-48-26.776	P:	0.26			
		X:	99.99	K:	50.00			
		Y:	1.05	A:	398.12			
		Chord:	100.00	Course:	N 84-43-30.047 W			
		Ts:	201.82					
			Tangent Data					
		1442+94.18						
		1450+67.91						
		Length:	773.73	Course:	N 84-07-21.140 W			
			Spiral Curve Data					
D1-I19	TS	1450+67.91						
	SPI							
	SC	1451+67.91						
		Length:	100.00	L Tan:	66.67			
		Radius:	1585.00	S Tan:	33.34			
		Theta:	1-48-26.776	P:	0.26			
		X:	99.99	K:	50.00			
		Y:	1.05	A:	398.12			
		Chord:	100.00	Course:	N 83-31-12.233 W			
		Ts:	136.63					
			Circular Curve Data					
	SC	1451+67.91				40	2.00	2.05
	RP							
	SC	1452+40.97						
		Delta:	02-38-28.703	Type:	RIGHT			
		Radius:	1585.00	DOC:	03-36-53.552			
		Length:	73.07	Tangent:	36.54			
		Mid-Ord:	0.42	External:	0.42			
		Chord:	73.06	Course:	N 80-59-40.012 W			
		Es:	2.63					
			Spiral Curve Data					
	SC	1452+40.97						
	SPI							
	PC	1453+40.97						
		Length:	100.00	L Tan:	66.67			
		Radius:	1585.00	S Tan:	33.34			
		Theta:	1-48-26.776	P:	0.26			
		X:	99.99	K:	50.00			
		Y:	1.05	A:	398.12			
		Chord:	100.00	Course:	N 78-28-07.791			
		Ts:	136.63					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Tangent Data					
		1453+40.97						
		1457+22.13						
		Length:	381.15	Course:	N 77-51-58.884 W			
			Spiral Curve Data					
D1-I20	TS	1457+22.13						
	SPI							
	SC	1458+22.13						
		Length:	100.00	L Tan:	66.67			
		Radius:	14745.00	S Tan:	33.33			
		Theta:	0-11-39.440	P:	0.03			
		X:	100.00	K:	50.00			
		Y:	0.11	A:	1214.29			
		Chord:	100.00	Course:	N 77-55-52.031 W			
		Ts:	250.67					
			Circular Curve Data					
	SC	1458+22.13				75	1.50	0.03
	RP							
	SC	1461+23.45						
		Delta:	01-10-15.149	Type:	LEFT			
		Radius:	14745.00	DOC:	00-23-18.880			
		Length:	301.32	Tangent:	150.67			
		Mid-Ord:	0.77	External:	0.77			
		Chord:	301.32	Course:	N 78-38-45.899 W			
		Es:	1.39					
			Spiral Curve Data					
	SC	1461+23.45						
	SPI							
	PC	1462+23.45						
		Length:	100.00	L Tan:	66.67			
		Radius:	14745.00	S Tan:	33.33			
		Theta:	0-11-39.440	P:	0.03			
		X:	100.00	K:	50.00			
		Y:	0.11	A:	1214.29			
		Chord:	100.00	Course:	N 79-21-39.767 W			
		Ts:	250.67					
			Tangent Data					
		1462+23.45						
		1475+64.46						
		Length:	1341.01	Course:	N 79-25-32.913			
			Spiral Curve Data					
D1-I21	TS	1475+64.46						
	SPI							
	SC	1477+64.46						
		Length:	200.00	L Tan:	133.33			
		Radius:	7500.00	S Tan:	66.67			
		Theta:	0-45-50.197	P:	0.22			
		X:	200.00	K:	100.00			
		Y:	0.89	A:	1224.74			
		Chord:	200.00	Course:	N 79-10-16.182 W			
		Ts:	962.86					
			Circular Curve Data					
	SC	1477+64.46				75	3.00	0.01
	RP							
	SC	1492+82.58						
		Delta:	11-35-51.289	Type:	RIGHT			
		Radius:	7500.00	DOC:	00-45-50.197			
		Length:	1518.12	Tangent:	761.66			
		Mid-Ord:	38.38	External:	38.58			
		Chord:	1515.53	Course:	N 72-51-47.071 W			
		Es:	49.69					
			Spiral Curve Data					
	SC	1492+82.58						
	SPI							
	PC	1494+82.58						
		Length:	200.00	L Tan:	133.33			
		Radius:	7500.00	S Tan:	66.67			
		Theta:	0-45-50.197	P:	0.22			
		X:	200.00	K:	100.00			
		Y:	0.89	A:	1224.74			
		Chord:	200.00	Course:	N 66-33-17.960 W			
		Ts:	962.86					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inches)	Eu (Inches)
			Tangent Data					
		1494+82.58						
		1517+80.70						
		Length:	2298.11	Course:	N 66-18-01.229 W			
			Spiral Curve Data					
D1-I22	TS	1517+80.70						
	SPI							
	SC	1519+05.70						
		Length:	125.00	L Tan:	83.33			
		Radius:	9100.00	S Tan:	41.67			
		Theta:	0-23-36.654	P:	0.07			
		X:	125.00	K:	62.50			
		Y:	0.29	A:	1066.54			
		Chord:	125.00	Course:	N 66-25-53.447 W			
		Ts:	178.89					
			Circular Curve Data					
	SC	1519+05.70				75	2.25	0.23
	RP							
	SC	1520+13.46						
		Delta:	00-40-42.543	Type:	LEFT			
		Radius:	9100.00	DOC:	00-37-46.646			
		Length:	107.76	Tangent:	53.88			
		Mid-Ord:	0.16	External:	0.16			
		Chord:	107.76	Course:	N 67-01-59.154 W			
		Es:	0.82					
			Spiral Curve Data					
	SC	1520+13.46						
	SPI							
	PC	1521+38.46						
		Length:	125.00	L Tan:	83.33			
		Radius:	9100.00	S Tan:	41.67			
		Theta:	0-23-36.654	P:	0.07			
		X:	125.00	K:	62.50			
		Y:	0.29	A:	1066.54			
		Chord:	125.00	Course:	N 67-38-04.862 W			
		Ts:	178.89					
			Tangent Data					
		1521+38.46						
		1522+98.76						
		Length:	160.30	Course:	N 67-45-57.080 W			
			Spiral Curve Data					
D1-I23	TS	1522+98.76						
	SPI							
	SC	1524+23.76						
		Length:	125.00	L Tan:	83.33			
		Radius:	9100.00	S Tan:	41.67			
		Theta:	0-23-36.654	P:	0.07			
		X:	125.00	K:	62.50			
		Y:	0.29	A:	1066.54			
		Chord:	125.00	Course:	N 67-38-04.862 W			
		Ts:	178.89					
			Circular Curve Data					
	SC	1524+23.76				75	2.25	0.23
	RP							
	SC	1525+31.52						
		Delta:	00-40-42.543	Type:	RIGHT			
		Radius:	9100.00	DOC:	00-37-46.646			
		Length:	107.76	Tangent:	53.88			
		Mid-Ord:	0.16	External:	0.16			
		Chord:	107.76	Course:	N 67-01-59.154 W			
		Es:	0.82					
			Spiral Curve Data					
	SC	1525+31.52						
	SPI							
	PC	1526+56.52						
		Length:	125.00	L Tan:	83.33			
		Radius:	9100.00	S Tan:	41.67			
		Theta:	0-23-36.654	P:	0.07			
		X:	125.00	K:	62.50			
		Y:	0.29	A:	1066.54			
		Chord:	125.00	Course:	N 66-25-53.447 W			
		Ts:	178.89					

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH 09-05-03 DATE
DRAWN: D. MADSEN 09-28-01 DATE
CHECKED: T. TWYMAN 03-11-02 DATE
APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

CURVE TABLE
INBOUND ALIGNMENT
D1 DATA
CURVE D1-I 16 TO D1-I 23

SCALE: NO SCALE

DRAWING NO.: GPN-PP-217

146

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Curve_Data\INBOUNDLIB-CurveTable_D1.dwg, GPN-PP-217, 11/23/04 11:48:28 AM, Kolenam

E	Desc.	Station	Spiral/Curve Data			V (m.p.h)	Ea (Inches)	Eu (Inches)
		Tangent Data						
		1526+56.52						
		1541+60.32						
		Length:	1503.80	Course:	N 66-18-01.229 W			
D1-I24		**Spiral Curve Data**						
	TS	1541+60.32						
	SPI							
	SC	1542+85.32						
		Length:	125.00	L Tan:	83.33			
		Radius:	5200.00	S Tan:	41.67			
		Theta:	0-41-19.144	P:	0.13			
		X	125.00	K:	62.50			
		Y:	0.50	A:	806.23			
		Chord:	125.00	Course:	N 66-31-47.610 W			
		Ts:	648.59					
		Circular Curve Data						
	SC	1542+85.32				70	2.50	1.28
	RP							
	SC	1552+96.78						
		Delta:	11-08-40.763	Type:	LEFT			
		Radius:	5200.00	DOC:	01-06-06.631			
		Length:	1011.46	Tangent:	507.33			
		Mid-Ord:	24.57	External:	24.69			
		Chord:	1009.86	Course:	N 72-33-40.755 W			
		Es:	33.05					
		Spiral Curve Data						
	CS	1552+96.78						
	SPI							
	ST	1553+96.78						
		Length:	100.00	L Tan:	51.05			
		Radius:	5200.00	S Tan:	48.95			
		Theta:	1-02-11.331	P:	0.03			
		X	99.99	K:	5.93			
		Y:	0.89	A:	2093.53			
		Chord:	100.00	Course:	N 78-39-46.021 W			
		Ts:	592.82					
		Circular Curve Data						
	PC	1553+96.78				70	2.25	1.08
	RP							
	SC	1565+87.67						
		Delta:	11-33-53.500	Type:	LEFT			
		Radius:	5900.00	DOC:	00-58-16.014			
		Length:	1190.88	Tangent:	597.47			
		Mid-Ord:	30.02	External:	30.17			
		Chord:	1188.86	Course:	N 84-57-09.218 W			
		Es:	33.20					
		Spiral Curve Data						
	SC	1565+87.67						
	SPI							
	PC	1567+01.96						
		Length:	114.30	L Tan:	76.20			
		Radius:	5900.00	S Tan:	38.10			
		Theta:	0-33-17.918	P:	0.09			
		X	114.30	K:	57.15			
		Y:	0.37	A:	821.19			
		Chord:	114.30	Course:	S 88-53-42.087 W			

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH 09-05-03 DATE
DRAWN: D. MADSEN 09-28-01 DATE
CHECKED: T. TWYMAN 03-11-02 DATE
APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

CURVE TABLE
INBOUND ALIGNMENT
D1 DATA
CURVE D1-I 24

SCALE: NO SCALE

DRAWING NO.: GPN-PP-218

147

T6-I1, NEW

Tangent Data				
818+42.88				
848+29.40				
Length:	2986.52	Course:	N 27-54-57 W	

Spiral Curve Data				
TS	848+29.40			
SPI				
SC	849+41.90			
Length:	112.5	L Tan:	75	
Radius:	2786	S Tan:	37.5	
Theta:	45666	P:	0.19	
X:	112.5	K:	56.25	
Y:	0.76	A:	559.84	
Chord:	112.5	Course:	N 28-18-05 W	
Ts:	590.44			

Circular Curve Data						
SC	849+41.90				50	2.25	1.35
RP							
SC	858+84.91						
Delta:	19-23-37	Type:	LEFT			
Radius:	2786	DOC:	45325			
Length:	943.01	Tangent:	476.06			
Mid-Ord:	39.8	External:	40.38			
Chord:	938.51	Course:	N 38-46-10 W			
Es:	50.94					

Spiral Curve Data				
SC	858+84.91			
SPI				
PC	859+97.41			
Length:	112.5	L Tan:	75	
Radius:	2786	S Tan:	37.5	
Theta:	45666	P:	0.19	
X:	112.5	K:	56.25	
Y:	0.76	A:	559.84	
Chord:	112.5	Course:	N 49-14-15 W	
Ts:	590.44			

T6-I2, was T1-I1

Spiral Curve Data				
TS	861+29.85			
SPI				
SC	863+29.85			
Length:	200	L Tan:	133.39	
Radius:	1085	S Tan:	66.72	
Theta:	18764	P:	1.54	
X:	199.83	K:	99.97	
Y:	6.14	A:	465.83	
Chord:	199.92	Course:	N 51-22-59 W	
Ts:	1178.89			

Circular Curve Data						
SC	863+29.85				45	4.00	3.49
RP							
SC	878+26.53						
Delta:	79-02-08	Type:	LEFT			
Radius:	1085	DOC:	18764			
Length:	1496.68	Tangent:	894.97			
Mid-Ord:	248	External:	321.48			
Chord:	1380.81	Course:	S 85-34-43 W			
Es:	446.22					

Spiral Curve Data				
SC	878+26.53			
SPI				
PC	880+26.53			
Length:	200	L Tan:	133.39	
Radius:	1085	S Tan:	66.72	
Theta:	18764	P:	1.54	
X:	199.83	K:	99.97	
Y:	6.14	A:	465.83	
Chord:	199.92	Course:	S 42-32-25 W	
Ts:	1178.89			

Tangent Data				
880+26.53				
885+59.63				
Length:	533.1	Course:	S 40-46-48 W	

T6-I3, was T1-I2

Spiral Curve Data				
TS	885+59.63			
SPI				
SC	887+59.63			
Length:	200	L Tan:	133.4	
Radius:	1024	S Tan:	66.73	
Theta:	5-35-43	P:	1.63	
X:	199.81	K:	99.97	
Y:	6.51	A:	452.55	
Chord:	199.92	Course:	S 42-38-42 W	
Ts:	271.9			

Circular Curve Data						
SC	887+59.63				45	4.00	3.93
RP							
SC	888+99.79						
Delta:	07-50-32	Type:	RIGHT			
Radius:	1024	DOC:	05-35-43			
Length:	140.16	Tangent:	70.19			
Mid-Ord:	2.4	External:	2.4			
Chord:	140.05	Course:	S 50-17-47 W			
Es:	15.94					

Spiral Curve Data				
SC	888+99.79			
SPI				
PC	890+99.79			
Length:	200	L Tan:	133.4	
Radius:	1024	S Tan:	66.73	
Theta:	5-35-43	P:	1.63	
X:	199.81	K:	99.97	
Y:	6.51	A:	452.55	
Chord:	199.92	Course:	S 57-56-53 W	
Ts:	271.9			

T6-I4, was T6-I1

Spiral Curve Data				
TS	898+87.53			
SPI				
SC	900+87.53			
Length:	200	L Tan:	133.34	
Radius:	5300	S Tan:	66.67	
Theta:	18997	P:	0.31	
X:	199.99	K:	100	
Y:	1.26	A:	1029.56	
Chord:	200	Course:	S 60-10-24 W	
Ts:	250.36			

Circular Curve Data						
SC	900+87.53				40	4.00	0.26
RP							
SC	901+88.15						
Delta:	42374	Type:	RIGHT			
Radius:	5300	DOC:	18997			
Length:	100.62	Tangent:	50.31			
Mid-Ord:	0.24	External:	0.24			
Chord:	100.61	Course:	S 61-26-16 W			
Es:	2.45					

Spiral Curve Data				
SC	901+88.15			
SPI				
PC	903+88.15			
Length:	200	L Tan:	133.34	
Radius:	5300	S Tan:	66.67	
Theta:	18997	P:	0.31	
X:	199.99	K:	100	
Y:	1.26	A:	1029.56	
Chord:	200	Course:	S 62-42-08 W	
Ts:	250.36			

Tangent Data				
903+88.15				
924+28.91				
Length:	2040.76	Course:	S 63-03-46 W	

T6-I5, was T6-I2

Spiral Curve Data				
TS	924+28.91			
SPI				
SC	926+28.91			
Length:	200			
Radius:	800	S Tan:	66.77	
Theta:	15896	P:	2.08	
X:	199.69	K:	99.95	
Y:	8.32	A:	400	
Chord:	199.86	Course:	S 65-26-59 W	
Ts:	259.88			

Circular Curve Data						
SC	926+28.91				40	4.00	4.02
RP							
SC	927+43.81						
Delta:	16297	Type:	RIGHT			
Radius:	800	DOC:	15896			
Length:	114.9	Tangent:	57.55			
Mid-Ord:	2.06	External:	2.07			
Chord:	114.8	Course:	S 74-20-21 W			
Es:	17.87					

Spiral Curve Data				
SC	927+43.81			
SPI				
PC	929+43.81			
Length:	200	L Tan:	133.44	
Radius:	800	S Tan:	66.77	
Theta:	15896	P:	2.08	
X:	199.69	K:	99.95	
Y:	8.32	A:	400	
Chord:	199.86	Course:	S 83-13-43 W	
Ts:	259.88			

T6-I6, was T6-I3

Spiral Curve Data				
TS	938+81.83			
SPI				
SC	940+31.83			
Length:	150	L Tan:	100.01	
Radius:	1925	S Tan:	50.01	
Theta:	20498	P:	0.49	
X:	149.98	K:	75	
Y:	1.95	A:	537.35	
Chord:	149.99	Course:	S 84-52-17 W	
Ts:	200.62			

Circular Curve Data						
SC	940+31.83				50	3.00	2.21
RP							
SC	941+32.65						
Delta:	03-00-03	Type:	LEFT			
Radius:	1925	DOC:	02-58-35			
Length:	100.82	Tangent:	50.42			
Mid-Ord:	0.66	External:	0.66			
Chord:	100.81	Course:	S 81-52-58 W			
Es:	4.58					

Spiral Curve Data				
SC	941+32.65			
SPI				
PC	942+82.65			
Length:	150	L Tan:	100.01	
Radius:	1925	S Tan:	50.01	
Theta:	20498	P:	0.49	
X:	149.98	K:	75	
Y:	1.95	A:	537.35	
Chord:	149.99	Course:	S 78-53-39 W	
Ts:	200.62			

Tangent Data				
942+82.65				
943+82.82				
Length:	100.16	Course:	S 78-09-00 W	

T6-I7, was T6-I4

Spiral Curve Data				
TS	943+82.82			
SPI				
SC	944+95.32			
Length:	112.5	L Tan:	75	
Radius:	3410	S Tan:	37.5	
Theta:	0-56-42	P:	0.15	
X:	112.5	K:	56.25	
Y:	0.62	A:	619.37	
Chord:	112.5	Course:	S 77-50-06 W	
Ts:	162.59			

Circular Curve Data						
SC	944+95.32				55	2.25	1.31
RP							
SC	945+95.41						
Delta:	01-40-55	Type:	LEFT			
Radius:	3410	DOC:	01-40-49			
Length:	100.1	Tangent:	50.05			
Mid-Ord:	0.37	External:	0.37			
Chord:	100.09	Course:	S 76-21-50 W			
Es:	1.81					

Spiral Curve Data				
SC	945+95.41			
SPI				
PC	947+07.91			
Length:	112.5	L Tan:	75	
Radius:	3410	S Tan:	37.5	
Theta:	0-56-42	P:	0.15	
X:	112.5	K:	56.25	
Y:	0.62	A:	619.37	
Chord:	112.5	Course:	S 74-53-35 W	
Ts:	162.59			

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. KASHIF 09-05-03 DATE	REFERENCE DRAWINGS		REVISIONS		
DRAWN: D. NANA 09-05-03 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
CHECKED: P. ELMAN 09-08-03 DATE					
APPROVED: P. ELMAN 01-2004 DATE					

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

CURVE TABLE
INBOUND ALIGNMENT
T6 DATA
CURVE T6-I 1 TO T6-I 7

SCALE: NO SCALE

DRAWING NO.: GPN-PP-219

148

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Curve_Data\INBOUNDIB-CurveTable_T6.dwg, GPN-PP-219, 11/24/04 10:22:50 AM, Kolenam

E	Desc.	Station	Spiral/Curve Data			V	Ea	Eu
			Tangent Data					
		947+07.91						
		948+08.07						
		Length:	100.15	Course:	S 74-34-40 W			
			Spiral Curve Data					
T6-I8, was T6-I5	TS	948+08.07						
	SPI							
	SC	949+20.57						
		Length:	112.5	L Tan:	75			
		Radius:	3410	S Tan:	37.5			
		Theta:	0-56-42	P:	0.15			
		X:	112.5	K:	56.25			
		Y:	0.62	A:	619.37			
		Chord:	112.5	Course:	S 74-53-35 W			
		Ts:	162.59					
			Circular Curve Data					
	SC	949+20.57				55	2.25	1.31
	RP							
	SC	950+20.66						
		Delta:	01-40-55	Type:	RIGHT			
		Radius:	3410	DOC:	01-40-49			
		Length:	100.1	Tangent:	50.05			
		Mid-Ord:	0.37	External:	0.37			
		Chord:	100.09	Course:	S 76-21-50 W			
		Es:	1.81					
			Spiral Curve Data					
	SC	950+20.66						
	SPI							
	PC	951+33.16						
		Length:	112.5	L Tan:	75			
		Radius:	3410	S Tan:	37.5			
		Theta:	0-56-42	P:	0.15			
		X:	112.5	K:	56.25			
		Y:	0.62	A:	619.37			
		Chord:	112.5	Course:	S 77-50-06 W			
		Ts:	162.59					
			Spiral Curve Data					
	TS	955+13.05						
	SPI							
	SC	957+13.05						
		Length:	200	L Tan:	133.39			
		Radius:	1140.5	S Tan:	66.72			
		Theta:	5-01-25	P:	1.46			
		X:	199.85	K:	99.97			
		Y:	5.84	A:	477.6			
		Chord:	199.93	Course:	S 79-49-28 W			
		Ts:	809.27					
			Circular Curve Data					
	SC	957+13.05				45	4.00	3.12
	RP							
	SC	967+80.84						
T6-I9, was T6-I6		Delta:	53-38-35	Type:	RIGHT			
		Radius:	1140.5	DOC:	5-01-25			
		Length:	1067.79	Tangent:	576.65			
		Mid-Ord:	122.7	External:	137.49			
		Chord:	1029.22	Course:	N 70-00-17 W			
		Es:	203.81					
			Spiral Curve Data					
	SC	967+80.84						
	SPI							
	PC	969+80.84						
		Length:	200	L Tan:	133.39			
		Radius:	1140.5	S Tan:	66.72			
		Theta:	5-01-25	P:	1.46			
		X:	199.85	K:	99.97			
		Y:	5.84	A:	477.6			
		Chord:	199.93	Course:	N 39-50-02 W			
		Ts:	809.27					

E	Desc.	Station	Spiral/Curve Data			V	Ea	Eu
			Tangent Data					
		969+80.84						
		982+79.56						
		Length:	1298.73	Course:	N 38-09-34 W			
			Spiral Curve Data					
T6-I10, was T6-I7	TS	982+79.56						
	SPI							
	SC	983+92.06						
		Length:	112.5	L Tan:	75			
		Radius:	6800	S Tan:	37.5			
		Theta:	0-28-26	P:	0.08			
		X:	112.5	K:	56.25			
		Y:	0.31	A:	874.64			
		Chord:	112.5	Course:	N 38-00-05 W			
		Ts:	162.35					
			Circular Curve Data					
	SC	983+92.06				75	2.25	1.07
	RP							
	SC	984+91.75						
		Delta:	00-50-24	Type:	RIGHT			
		Radius:	6800	DOC:	00-50-33			
		Length:	99.68	Tangent:	49.84			
		Mid-Ord:	0.18	External:	0.18			
		Chord:	99.68	Course:	N 37-15-56 W			
		Es:	0.91					
			Spiral Curve Data					
	SC	984+91.75						
	SPI							
	PC	986+04.25						
		Length:	112.5	L Tan:	75			
		Radius:	6800	S Tan:	37.5			
		Theta:	0-28-26	P:	0.08			
		X:	112.5	K:	56.25			
		Y:	0.31	A:	874.64			
		Chord:	112.5	Course:	N 36-31-47 W			
		Ts:	162.35					
			Spiral Curve Data					
	TS	987+04.25						
	SPI							
	SC	988+16.75						
		Length:	112.5	L Tan:	75			
		Radius:	6800	S Tan:	37.5			
		Theta:	0-28-26	P:	0.08			
		X:	112.5	K:	56.25			
		Y:	0.31	A:	874.64			
		Chord:	112.5	Course:	N 36-31-47 W			
		Ts:	162.35					
			Circular Curve Data					
	SC	988+16.75				75	2.25	1.07
	RP							
	SC	989+16.43						
T6-I11, was T6-I8		Delta:	00-50-24	Type:	LEFT			
		Radius:	6800	DOC:	00-50-33			
		Length:	99.68	Tangent:	49.84			
		Mid-Ord:	0.18	External:	0.18			
		Chord:	99.68	Course:	N 37-15-56 W			
		Es:	0.91					
			Spiral Curve Data					
	SC	989+16.43						
	SPI							
	PC	990+28.93						
		Length:	112.5	L Tan:	75			
		Radius:	6800	S Tan:	37.5			
		Theta:	0-28-26	P:	0.08			
		X:	112.5	K:	56.25			
		Y:	0.31	A:	874.64			
		Chord:	112.5	Course:	N 38-00-05 W			
		Ts:	162.35					

E	Desc.	Station	Spiral/Curve Data			V	Ea	Eu
			Tangent Data					
		990+28.93						
		996+11.38						
		Length:	582.45	Course:	N 38-09-34 W			
			Spiral Curve Data					
T6-I12, was T6-I9	TS	996+11.38						
	SPI							
	SC	997+21.38						
		Length:	110	L Tan:	73.33			
		Radius:	11356	S Tan:	36.67			
		Theta:	0-16-39	P:	0.04			
		X:	110	K:	55			
		Y:	0.18	A:	1117.66			
		Chord:	110	Course:	N 38-15-07 W			
		Ts:	160.01					
			Circular Curve Data					
	SC	997+21.38				75	1.75	0.24
	RP							
	SC	998+21.40						
		Delta:	00-30-17	Type:	LEFT			
		Radius:	11356	DOC:	00-30-16			
		Length:	100.02	Tangent:	50.01			
		Mid-Ord:	0.11	External:	0.11			
		Chord:	100.02	Course:	N 38-41-22 W			
		Es:	0.53					
			Spiral Curve Data					
	SC	998+21.40						
	SPI							
	PC	999+31.40						
		Length:	110	L Tan:	73.33			
		Radius:	11356	S Tan:	36.67			
		Theta:	0-16-39	P:	0.04			
		X:	110	K:	55			
		Y:	0.18	A:	1117.66			
		Chord:	110	Course:	N 39-07-36 W			
		Ts:	160.01					
			Spiral Curve Data					
	TS	1000+31.45						
	SPI							
	SC	1001+41.45						
		Length:	110	L Tan:	73.33			
		Radius:	11356	S Tan:	36.67			
		Theta:	0-16-39	P:	0.04			
		X:	110	K:	55			
		Y:	0.18	A:	1117.66			
		Chord:	110	Course:	N 39-07-36 W			
		Ts:	160.01					
			Circular Curve Data					
	SC	1001+41.45				75	1.75	0.24
	RP							
	SC	1002+41.46						
T6-I13, was T6-I10		Delta:	00-30-17	Type:	RIGHT			
		Radius:	11356	DOC:	00-30-16			
		Length:	100.01	Tangent:	50			
		Mid-Ord:	0.11	External:	0.11			
		Chord:	100.01	Course:	N 38-41-22 W			
		Es:	0.53					
			Spiral Curve Data					
	SC	1002+41.46						
	SPI							
	PC	1003+51.46						
		Length:	110	L Tan:	73.33			
		Radius:	11356	S Tan:	36.67			
		Theta:	0-16-39	P:	0.04			
		X:	110	K:	55			
		Y:	0.18	A:	1117.66			
		Chord:	110	Course:	N 38-15-07 W			
		Ts:	160.01					

E	Desc.	Station	Spiral/Curve Data			V	Ea	Eu
			Tangent Data					
		1003+51.46						
		1023+86.33						
		Length:	2034.87	Course:	N 38-09-34 W			
			Spiral Curve Data					
T6-I14, was T1-I11	TS	1023+86.33						
	SPI							
	SC	1026+11.33						
		Length:	225	L Tan:	150.17			
		Radius:	755	S Tan:	75.16			
		Theta:	8-32-15	P:	2.79			
		X:	224.5	K:	112.42			
		Y:	11.16	A:	412.16			
		Chord:	224.78	Course:	N 41-00-17 W			
		Ts:	650.86					
			Circular Curve Data					
	SC	1026+11.33				45	4.50	4.00
	RP							
	SC	1033+19.16						
		Delta:	53-42-57	Type:	LEFT			
		Radius:	755	DOC:	07-35-20			
		Length:	707.83	Tangent:	382.34			
		Mid-Ord:	81.44	External:	91.29			
		Chord:	682.19	Course:	N 73-33-18 W			
		Es:	174.61					
			Spiral Curve Data					
	SC	1033+19.16						
	SPI							
	PC	1035+44.16						
		Length:	225	L Tan:	150.17			
		Radius:	755	S Tan:	75.16			
		Theta:	8-32-15	P:	2.79			
		X:	224.5	K:	112.42			
		Y:	11.16	A:	412.16			
		Chord:	224.78	Course:	S 73-53-42 W			
		Ts:	650.86					

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. KASHIF	09-05-03		
DRAWN: D. NANA	09-05-03		
CHECKED: P. ELMAN	09-08-03		
APPROVED: P. ELMAN	01-2004		

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

Diana C. Mendes

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

CURVE TABLE
INBOUND ALIGNMENT
T6 DATA
CURVE T6-I 8 TO T6-I 14

SCALE: NO SCALE

DRAWING NO.: GPN-PP-220

149

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Curve_Data\INBOUNDLIB-CurveTable_T6.dwg, GPN-PP-220, 11/24/04 10:28:15 AM, Kolenam

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inch.)	Eu (Inch.)
			Tangent Data					
		727+00						
		728+43.08						
		Length:	143.08	Course:	N 70-27-01 W			
			Spiral Curve Data					
	TS	728+43.08						
	SPI							
	SC	729+43.08						
		Length:	100.00	L Tan:	66.67			
		Radius:	3000.00	S Tan:	33.33			
		Theta:	0-57-18	P:	0.14			
		X:	100.00	K:	50.00			
		Y:	0.56	A:	547.72			
		Chord:	100.00	Course:	N 70-07-55 W			
		Ts:	121.07					
			Circular Curve Data					
	SC	729+43.08				50	2.00	1.34
	CC							
	SC	729+85.20						
O1-I1		Delta:	00-48-16	Type:	RIGHT			
		Radius:	3000.00	DOC:	01-54-35			
		Length:	42.11	Tangent:	21.06			
		Mid-Ord:	0.07	External:	0.07			
		Chord:	42.11	Course:	N 69-05-36 W			
		Es:	0.98					
			Spiral Curve Data					
	SC	729+85.20						
	SPI							
	PC	730+85.20						
		Length:	100.00	L Tan:	66.67			
		Radius:	3000.00	S Tan:	33.33			
		Theta:	0-57-18	P:	0.14			
		X:	100.00	K:	50.00			
		Y:	0.56	A:	547.72			
		Chord:	100.00	Course:	N 68-03-16 W			
		Ts:	121.07					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inch.)	Eu (Inch.)
			Tangent Data					
		730+85.20						
		742+06.73						
		Length:	1121.53	Course:	N 67-44-10 W			
			Spiral Curve Data					
	TS	742+06.73						
	SPI							
	SC	743+56.73						
		Length:	150.00	L Tan:	100.01			
		Radius:	1880.00	S Tan:	50.01			
		Theta:	2-17-09	P:	0.50			
		X:	149.98	K:	75.00			
		Y:	1.99	A:	531.04			
		Chord:	149.99	Course:	N 68-29-53 W			
		Ts:	191.14					
			Circular Curve Data					
	SC	743+56.73				50	3.00	2.33
	CC							
	SC	744+38.66						
O1-I2		Delta:	02-29-49	Type:	LEFT			
		Radius:	1880.00	DOC:	03-02-52			
		Length:	81.93	Tangent:	40.97			
		Mid-Ord:	0.45	External:	0.45			
		Chord:	81.93	Course:	N 71-16-14 W			
		Es:	4.08					
			Spiral Curve Data					
	SC	744+38.66						
	SPI							
	PC	745+88.66						
		Length:	150.00	L Tan:	100.01			
		Radius:	1880.00	S Tan:	50.01			
		Theta:	2-17-09	P:	0.50			
		X:	149.98	K:	75.00			
		Y:	1.99	A:	531.04			
		Chord:	149.99	Course:	N 74-02-34 W			
		Ts:	191.14					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inch.)	Eu (Inch.)
			Tangent Data					
		745+88.66						
		748+19.91						
		Length:	231.25	Course:	N 74-48-17 W			
			Spiral Curve Data					
	TS	748+19.91						
	SPI							
	SC	751+19.91						
		Length:	300.00	L Tan:	200.24			
		Radius:	1000.00	S Tan:	100.21			
		Theta:	8-35-40	P:	3.75			
		X:	299.33	K:	149.89			
		Y:	14.98	A:	547.72			
		Chord:	299.70	Course:	N 71-56-26 W			
		Ts:	1062.72					
			Circular Curve Data					
	SC	751+19.91				50	6.00	4.03
	CC							
	SC	762+95.91						
O1-I3		Delta:	67-22-46	Type:	RIGHT			
		Radius:	1000.00	DOC:	05-43-46			
		Length:	1175.99	Tangent:	666.66			
		Mid-Ord:	167.95	External:	201.85			
		Chord:	1109.39	Course:	N 32-31-14 W			
		Es:	356.75					
			Spiral Curve Data					
	SC	762+95.91						
	SPI							
	PC	765+95.91						
		Length:	300.00	L Tan:	200.24			
		Radius:	1000.00	S Tan:	100.21			
		Theta:	8-35-40	P:	3.75			
		X:	299.33	K:	149.89			
		Y:	14.98	A:	547.72			
		Chord:	299.70	Course:	N 06-53-58 E			
		Ts:	1062.72					

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inch.)	Eu (Inch.)
			Tangent Data					
		765+95.91						
		780+64.57						
		Length:	1607.55	Course:	N 09-45-49 E			
			Spiral Curve Data					
	TS	780+64.57						
	SPI							
	SC	783+64.57						
		Length:	300.00	L Tan:	200.07			
		Radius:	1900.00	S Tan:	100.06			
		Theta:	4-31-24	P:	1.97			
		X:	299.81	K:	149.97			
		Y:	7.89	A:	754.98			
		Chord:	299.92	Course:	N 08-15-21 E			
		Ts:	999.19					
			Circular Curve Data					
	SC	783+64.57				65	6.00	2.92
	CC							
	SC	796+60.31						
O1-I4		Delta:	39-04-27	Type:	LEFT			
		Radius:	1900.00	DOC:	03-00-56			
		Length:	1295.75	Tangent:	674.21			
		Mid-Ord:	109.39	External:	116.07			
		Chord:	1270.78	Course:	N 14-17-48 W			
		Es:	182.95					
			Spiral Curve Data					
	SC	796+60.31						
	SPI							
	PC	799+60.31						
		Length:	300.00	L Tan:	200.07			
		Radius:	1900.00	S Tan:	100.06			
		Theta:	4-31-24	P:	1.97			
		X:	299.81	K:	149.97			
		Y:	7.89	A:	754.98			
		Chord:	299.92	Course:	N 36-50-58 W			
		Ts:	999.19					

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH 09-28-01 DATE
DRAWN: D. MADSEN 09-28-01 DATE
CHECKED: D. MADLANSACAY 03-11-02 DATE
APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS
SUBMITTED
Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

CURVE TABLE
INBOUND ALIGNMENT
01 DATA
CURVE 01-I 1 TO 01-I 4

SCALE: NO SCALE
DRAWING NO.: GPN-PP-221
150

E	Desc.	Station	Spiral/Curve Data			V (mph)	Ea (Inch.)	Eu (Inch.)
	Tangent Data							
		799+60.31						
		809+77.27						
		Length:	1016.95	Course:	N 38-21-26 W			
	Spiral Curve Data							
	TS	809+77.27						
	SPI							
	SC	812+77.27						
		Length:	300.00	L Tan:	200.03			
		Radius:	3014.00	S Tan:	100.02			
		Theta:	2-51-05	P:	1.24			
		X:	299.93	K:	149.99			
		Y:	4.98	A:	950.89			
		Chord:	299.97	Course:	N 37-24-24 W			
		Ts:	425.49					
	Circular Curve Data							
	SC	812+77.27				75	6.00	1.49
	CC							
	SC	815+26.52						
O1-I5		Delta:	04-44-18	Type:	RIGHT			
		Radius:	3014.00	DOC:	01-54-04			
		Length:	249.26	Tangent:	124.70			
		Mid-Ord:	2.58	External:	2.58			
		Chord:	249.18	Course:	N 33-08-12 W			
		Es:	13.80					
	Spiral Curve Data							
	SC	815+26.52						
	SPI							
	PC	818+26.52						
		Length:	300.00	L Tan:	200.03			
		Radius:	3014.00	S Tan:	100.02			
		Theta:	2-51-05	P:	1.24			
		X:	299.93	K:	149.99			
		Y:	4.98	A:	950.89			
		Chord:	299.97	Course:	N 28-51-59 W			
		Ts:	425.49					

O:\002_dulles\FEIS GenPlans 06-04\Line_Systems\Curve_Data\INBOUND\IB-CurveTable_O1.dwg, GPN-PP-222, 08/04/04 11:40:57 AM, Kolenam

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: D. SMITH 09-28-01 DATE
DRAWN: D. MADSEN 09-28-01 DATE
CHECKED: D. MADLANSACAY 03-11-02 DATE
APPROVED: P. ELMAN 01-2004 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes
PROJECT MANAGER

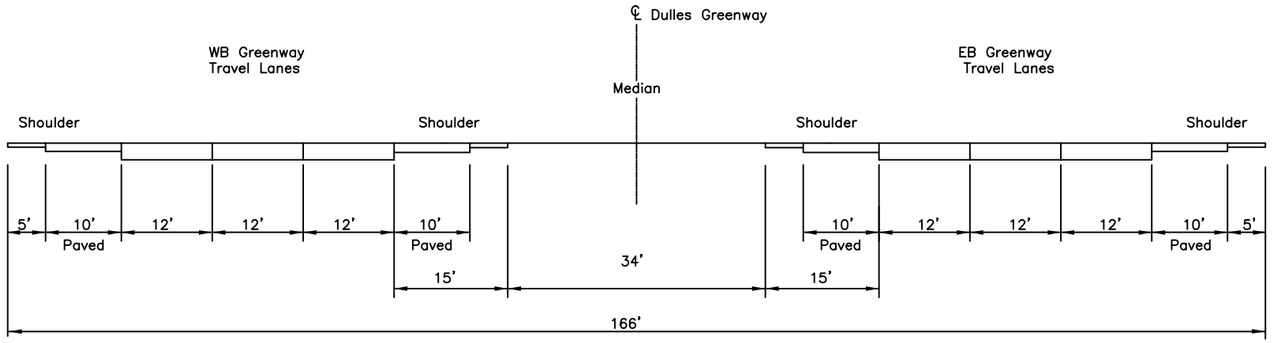
FINAL GENERAL PLANS
JULY 2004

CURVE TABLE
INBOUND ALIGNMENT
01 DATA
CURVE 01-I 5

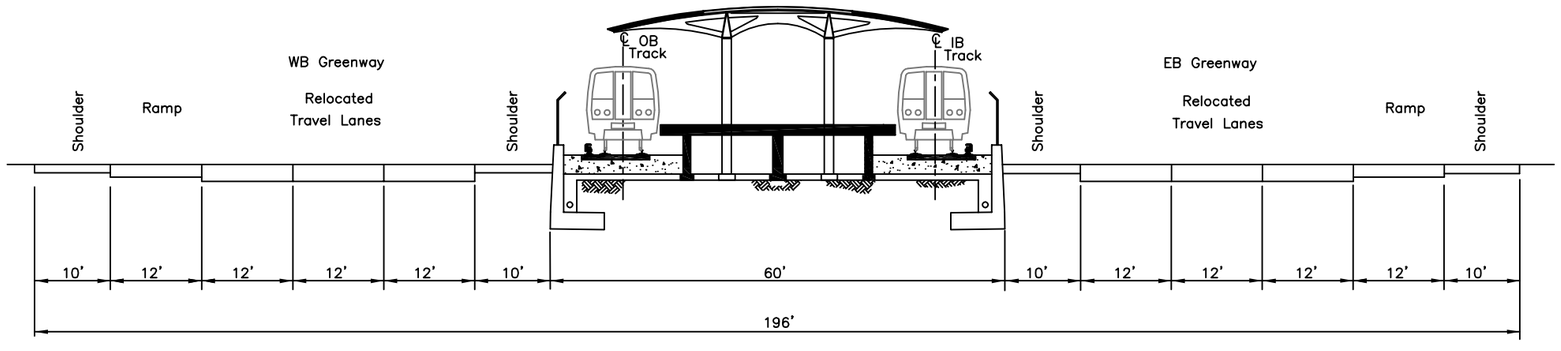
SCALE: NO SCALE

DRAWING NO.: GPN-PP-222

151



EXISTING CONDITIONS AT ROUTE 772 STATION



SECTION AT ROUTE 772 STATION

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. TWYMAN 11-12-01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: A. JOHNSON 11-15-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. KASHIF 3-11-02 DATE		
APPROVED: P. ELMAN 5-2002 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

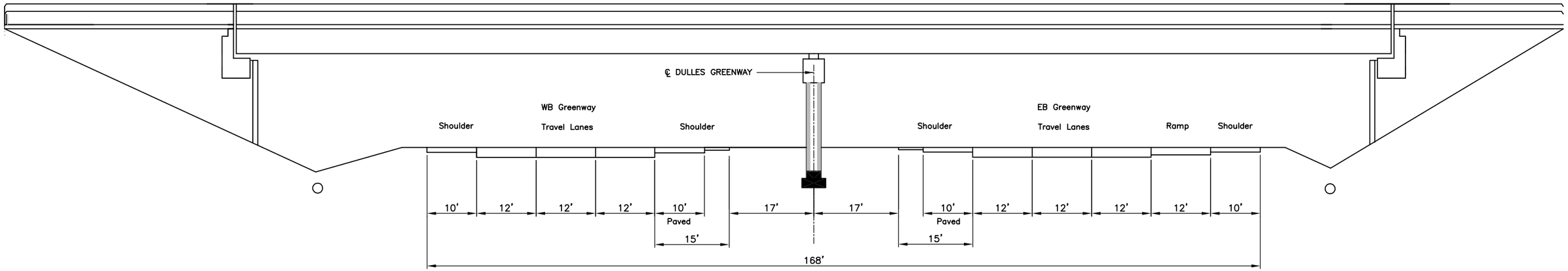
TYPICAL SECTIONS
RAIL
DULLES GREENWAY
ROUTE 772 STATION

SCALE: 1"=10' (5 0 5 10)

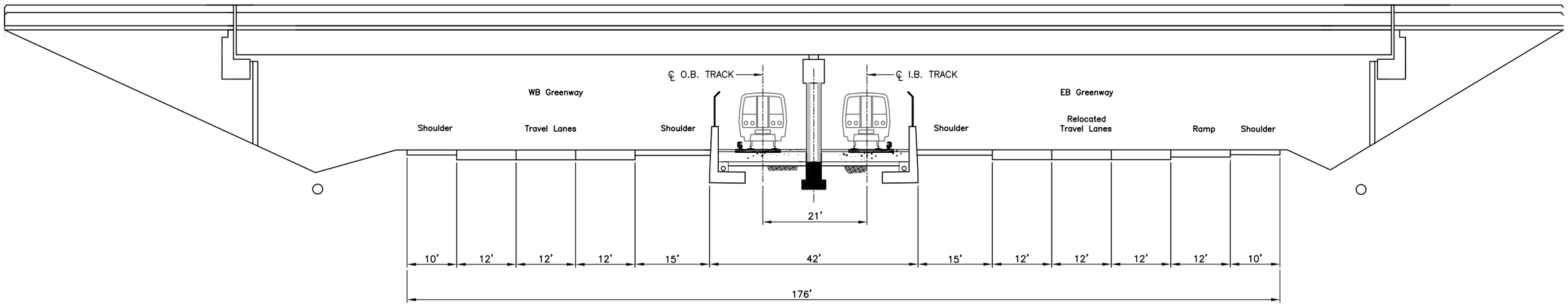
DRAWING NO.: GPN-C-059

152

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EXISTING CONDITIONS AT ROUTE 607



SECTION AT ROUTE 607

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. TWYMAN 10-12-01	REFERENCE DRAWINGS	REVISIONS
DRAWN: A. JOHNSON 10-15-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. KASHIF 3-11-02		
APPROVED: P. ELMAN 5-2002		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

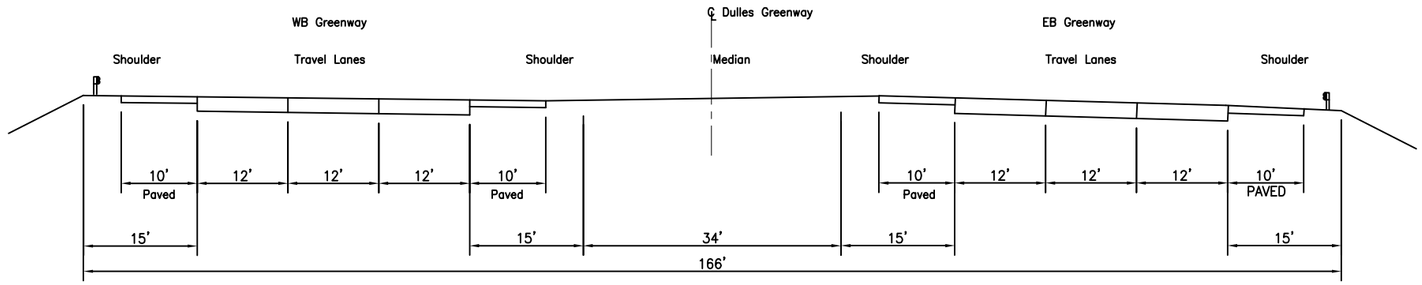
TYPICAL SECTIONS
RAIL
DULLES GREENWAY
ROUTE 607 BRIDGE

SCALE: 1"=10' (5 0 5 10)

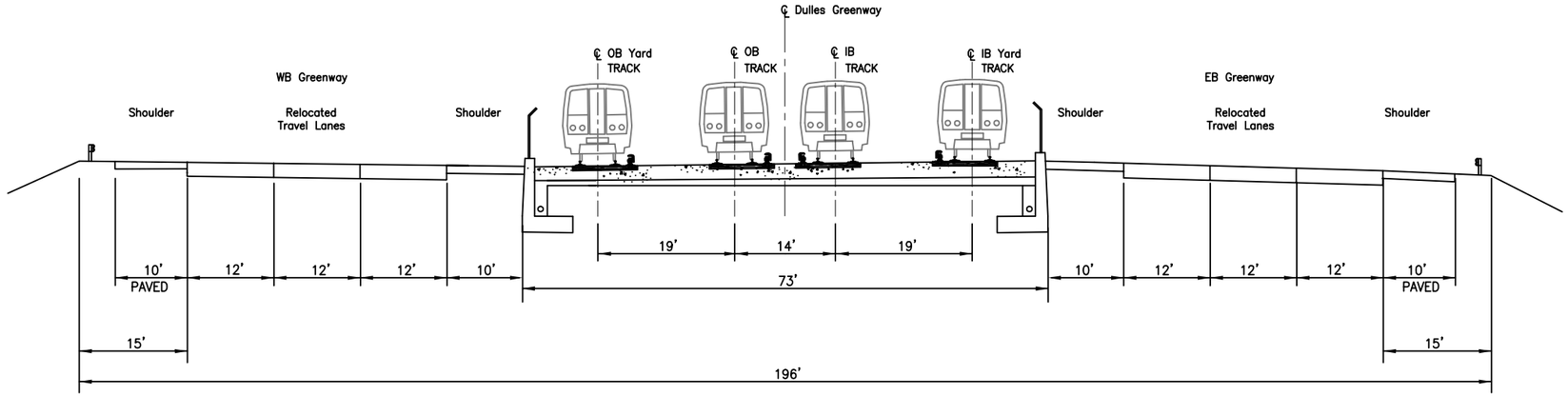
DRAWING NO.: GPN-C-250

153

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EXISTING CONDITIONS AT STATION 1858+00



SECTION AT STATION 1858+00

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. TWYMAN 10-12-01 DATE	REFERENCE DRAWINGS: NUMBER / DESCRIPTION	REVISIONS: DATE / BY / DESCRIPTION
DRAWN: A. JOHNSON 10-15-01 DATE		
CHECKED: R. KASHIF 3-11-02 DATE		
APPROVED: P. ELMAN 5-2002 DATE		

SUBMITTED

CAPITAL TRANSIT CONSULTANTS

Diana C. Mendes

PROJECT MANAGER

DULLES CORRIDOR RAPID TRANSIT PROJECT

FINAL GENERAL PLANS
JULY 2004

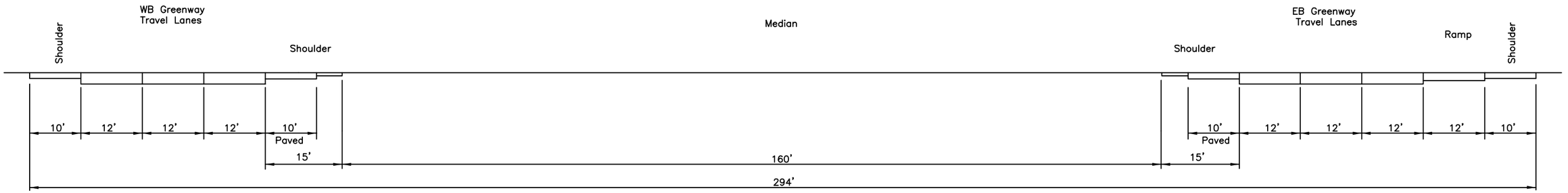
TYPICAL SECTIONS
RAIL
DULLES GREENWAY
STATION 1858+00

SCALE: 1"=10' (5 0 5 10)

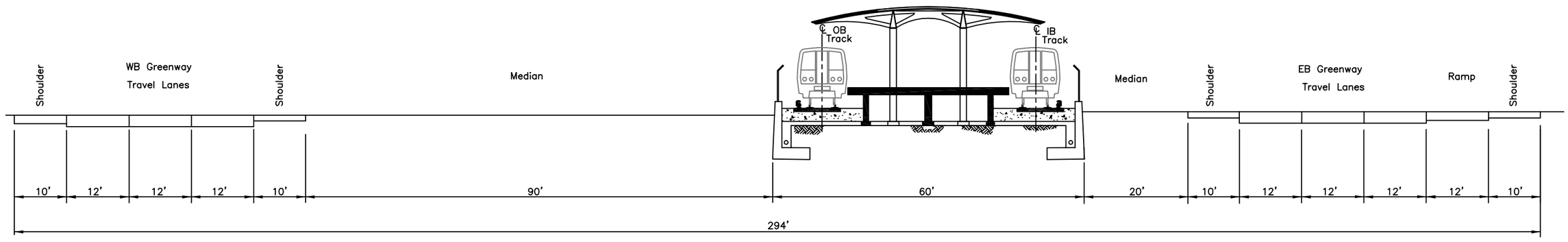
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154

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EXISTING CONDITIONS AT ROUTE 606 STATION



SECTION AT ROUTE 606 STATION

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. TWYMAN 11-12-01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: A. JOHNSON 11-15-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. KASHIF 3-11-02 DATE		
APPROVED: P. ELMAN 5-2002 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

SUBMITTED — CAPITAL TRANSIT CONSULTANTS
Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

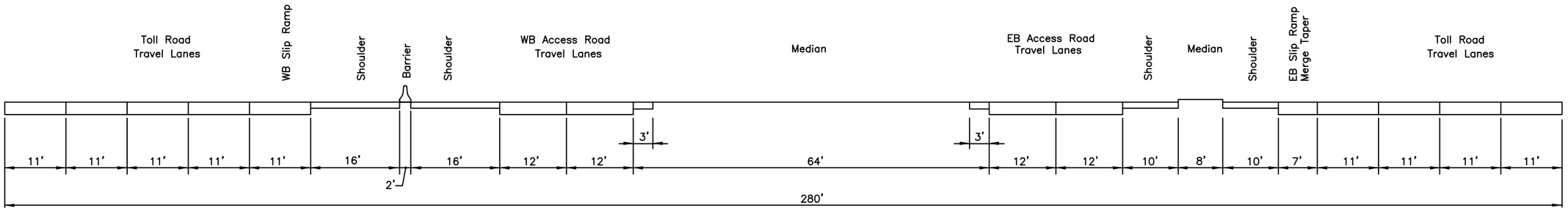
TYPICAL SECTIONS
RAIL
DULLES GREENWAY
ROUTE 606 STATION

SCALE: 1"=10' (5 0 5 10)

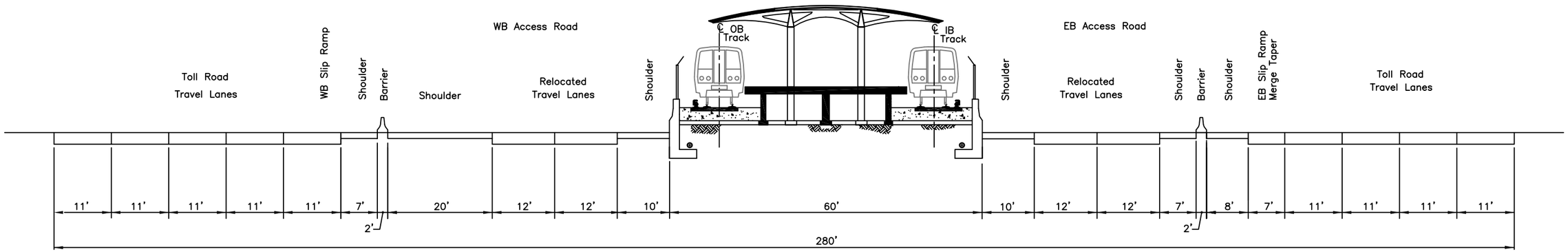
DRAWING NO.: GPN-C-060

155

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EXISTING CONDITIONS AT ROUTE 28 STATION ①



SECTION AT ROUTE 28 STATION ②

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. TWYMAN 10-12-01	REFERENCE DRAWINGS	REVISIONS
DRAWN: A. JOHNSON 10-15-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. KASHIF 3-11-02		
APPROVED: P. ELMAN 5-2002		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

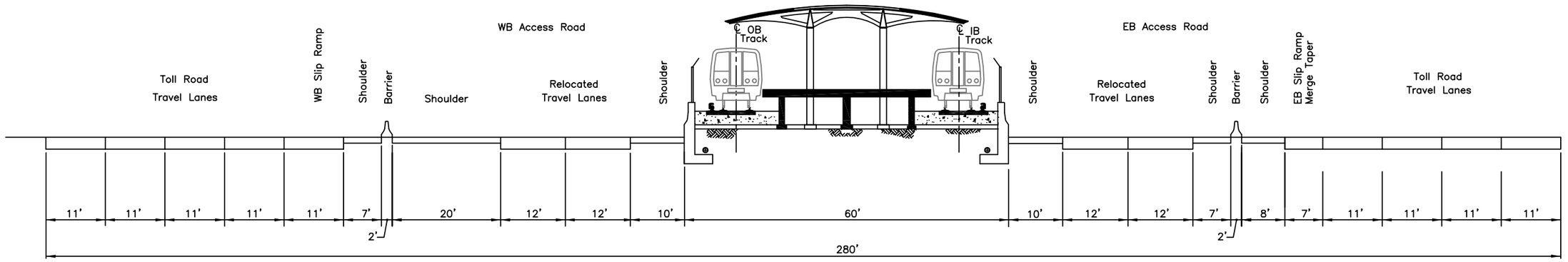
TYPICAL SECTIONS
RAIL
DULLES AIRPORT ACCESS ROAD
ROUTE 28 STATION

SCALE: 1"=10' (5 0 5 10)

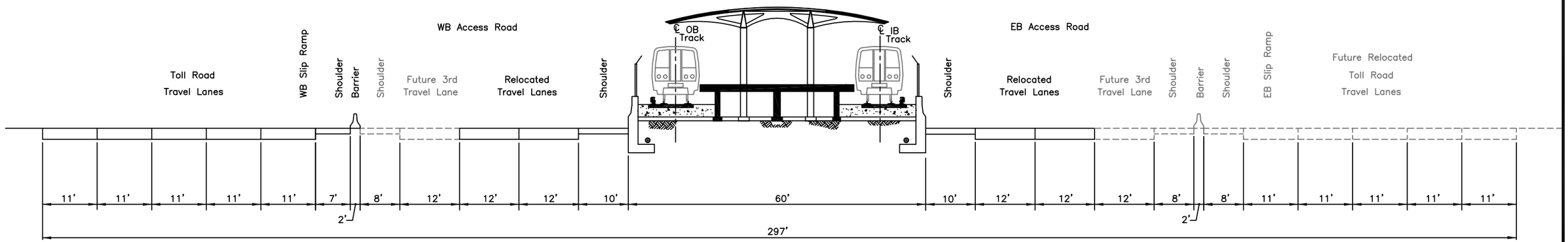
DRAWING NO.: GPN-C-020

156

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SECTION AT ROUTE 28 STATION ②



SECTION AT ROUTE 28 STATION (W/ FUTURE 3rd DAAR LANE) ③

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. TWYMAN 10-12-01	REFERENCE DRAWINGS	REVISIONS
DRAWN: A. JOHNSON 10-15-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. KASHIF 3-11-02		
APPROVED: P. ELMAN 5-2002		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

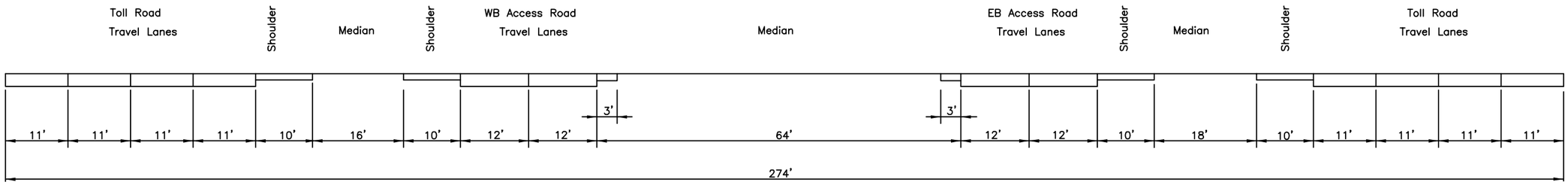
TYPICAL SECTIONS
RAIL
DULLES AIRPORT ACCESS ROAD (FUTURE)
ROUTE 28 STATION

SCALE: 1"=10' (5 0 5 10)

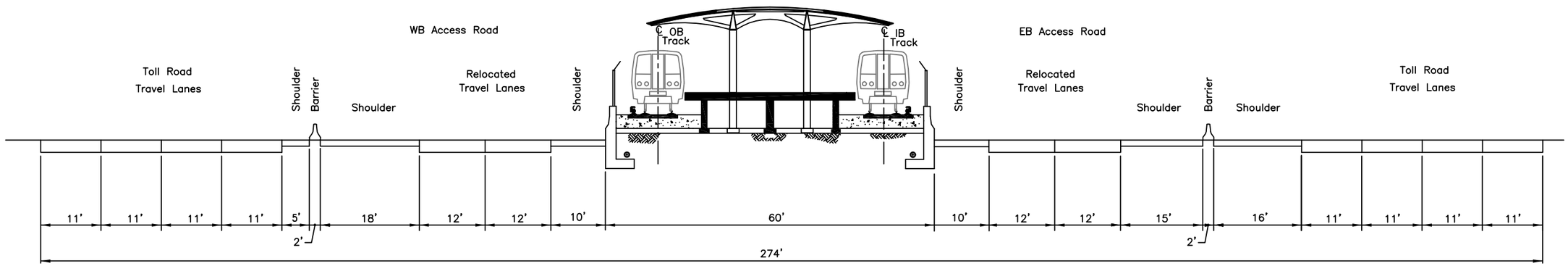
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157

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EXISTING CONDITIONS AT HERNDON–MONROE STATION ①



SECTION AT HERNDON–MONROE STATION ②

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. TWYMAN 10–12–01	REFERENCE DRAWINGS	REVISIONS
DRAWN: A. JOHNSON 10–15–01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. KASHIF 3–11–02		
APPROVED: P. ELMAN 5–2002		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

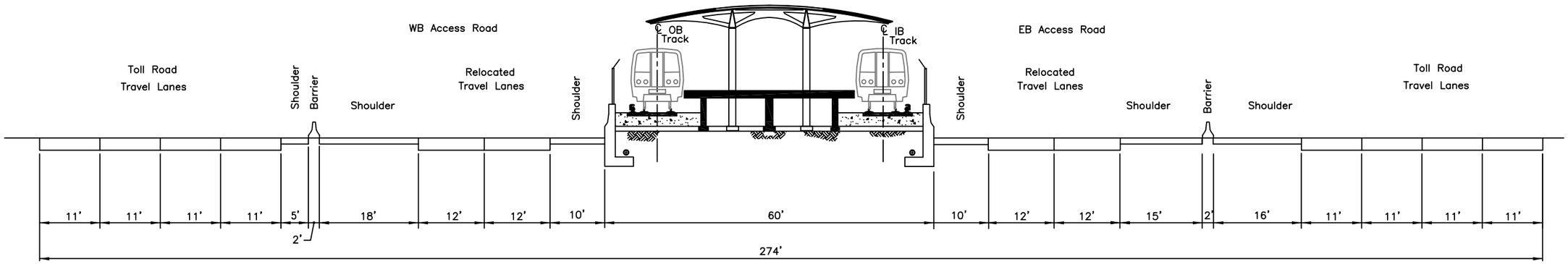
TYPICAL SECTIONS
RAIL
DULLES AIRPORT ACCESS ROAD
HERNDON–MONROE STATION

SCALE: 1"=10' (5 0 5 10)

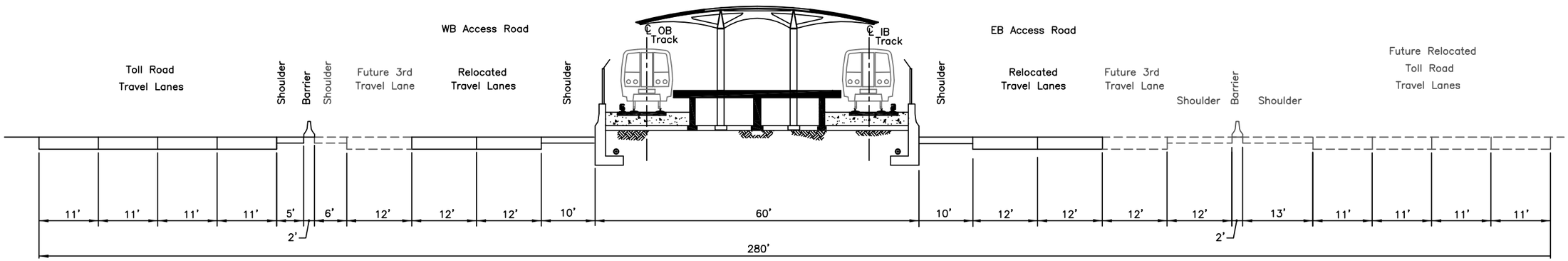
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SECTION AT HERNDON–MONROE STATION ②



SECTION AT HERNDON–MONROE STATION (W/ FUTURE 3rd DAAR LANE) ③

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. TWYMAN	10–12–01 DATE
DRAWN: A. JOHNSON	10–15–01 DATE
CHECKED: R. KASHIF	3–11–02 DATE
APPROVED: P. ELMAN	5–2002 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

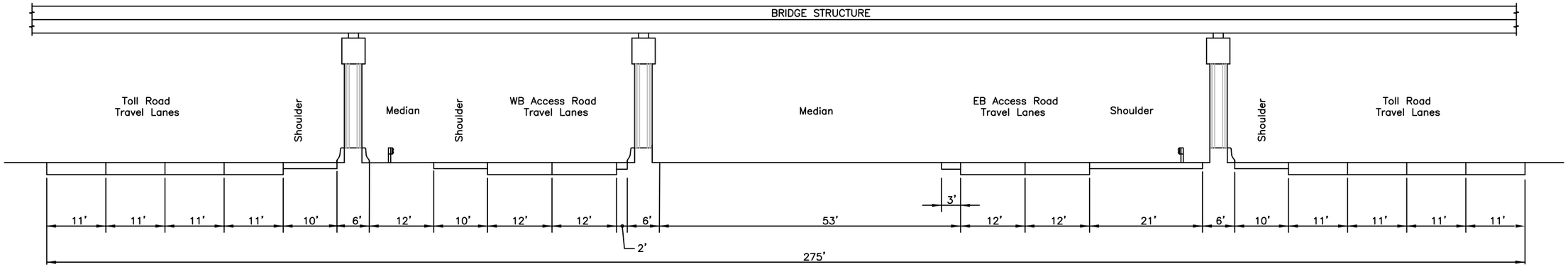
TYPICAL SECTIONS
RAIL
DULLES AIRPORT ACCESS ROAD (FUTURE)
HERNDON–MONROE STATION

SCALE: 1"=10' (5 0 5 10)

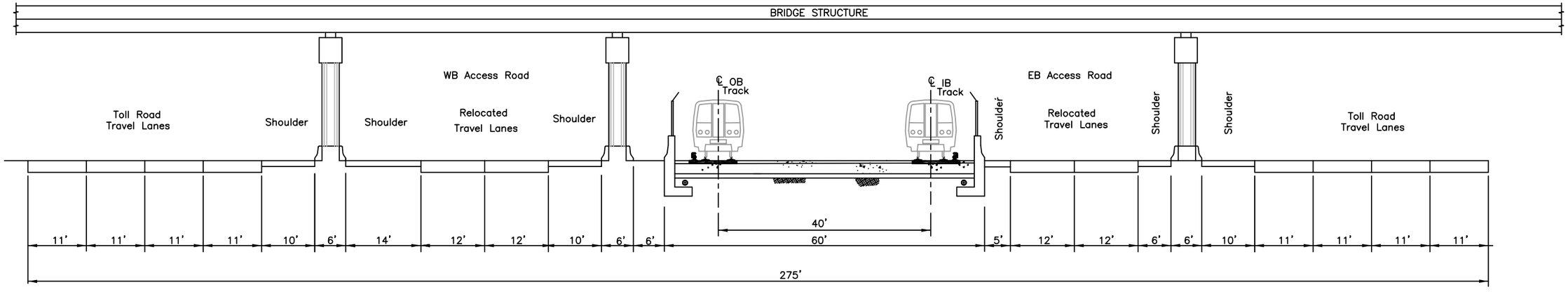
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EXISTING CONDITIONS AT HERNDON MONROE PARK AND RIDE BRIDGE ①



SECTION AT HERNDON MONROE PARK AND RIDE BRIDGE ②

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. TWYMAN	10-02-01 DATE	
DRAWN: T. TWYMAN	12-04-01 DATE	
CHECKED: R. KASHIF	3-11-02 DATE	
APPROVED: P. ELMAN	5-2002 DATE	

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

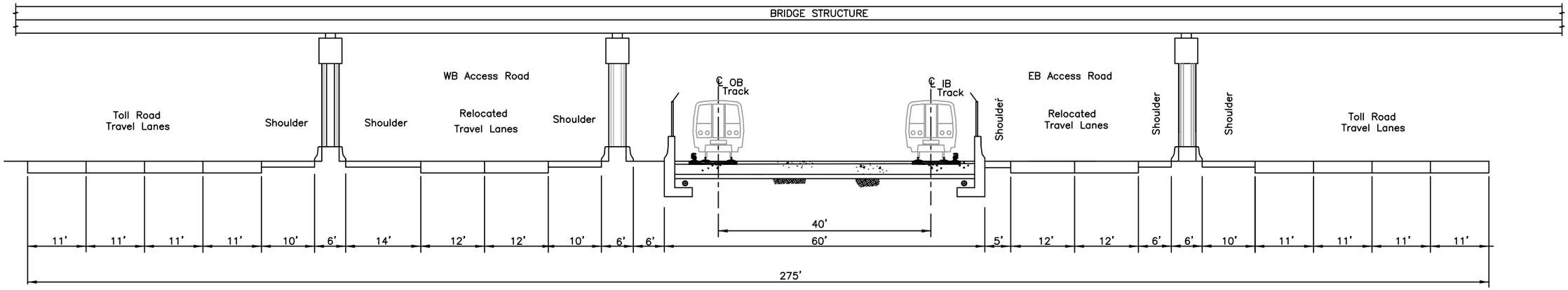
TYPICAL SECTIONS
RAIL
DULLES AIRPORT ACCESS ROAD
HERNDON-MONROE PARK AND RIDE BRIDGE

SCALE: 1"=10' (5 0 5 10)

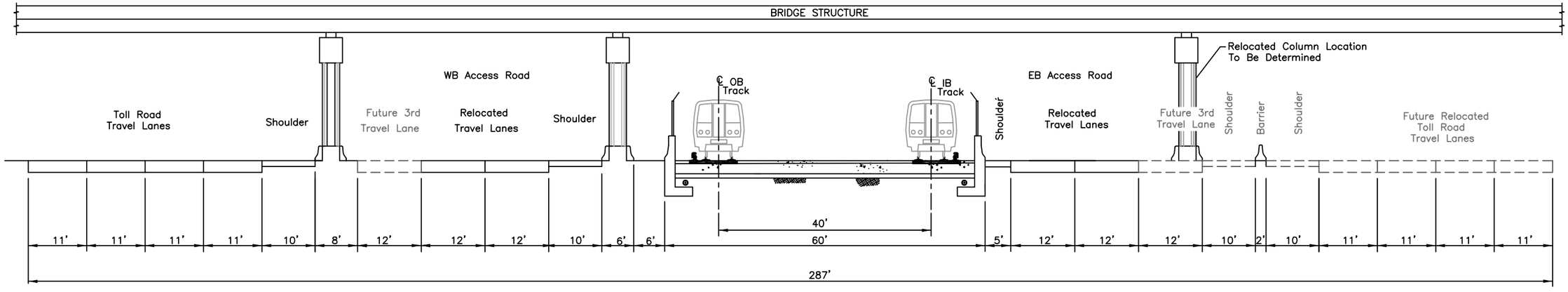
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SECTION AT HERNDON MONROE PARK AND RIDE BRIDGE ②



SECTION AT HERNDON MONROE PARK AND RIDE BRIDGE (W/ FUTURE 3rd DAAR LANE) ③

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. TWYMAN	10-02-01 DATE	
DRAWN: T. TWYMAN	12-04-01 DATE	
CHECKED: R. KASHIF	3-11-02 DATE	
APPROVED: P. ELMAN	5-2002 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

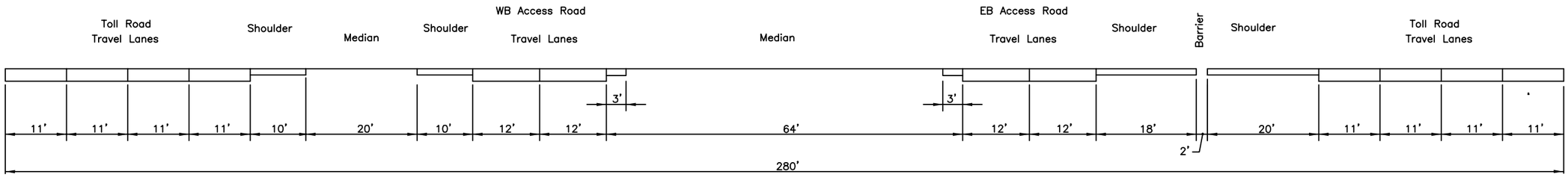
TYPICAL SECTIONS
RAIL
DULLES AIRPORT ACCESS ROAD (FUTURE)
HERNDON-MONROE PARK AND RIDE BRIDGE

SCALE: 1"=10' (5 0 5 10)

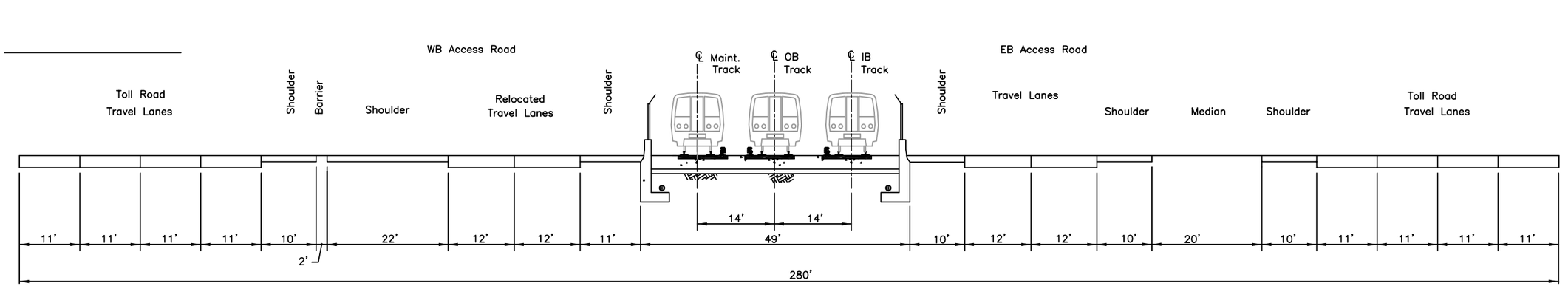
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EXISTING CONDITIONS AT STATION 1430+00 ①



SECTION AT STATION 1430+00 ②

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. TWYMAN 10-12-01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: A. JOHNSON 10-15-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. KASHIF 3-11-02 DATE		
APPROVED: P. ELMAN 5-2002 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

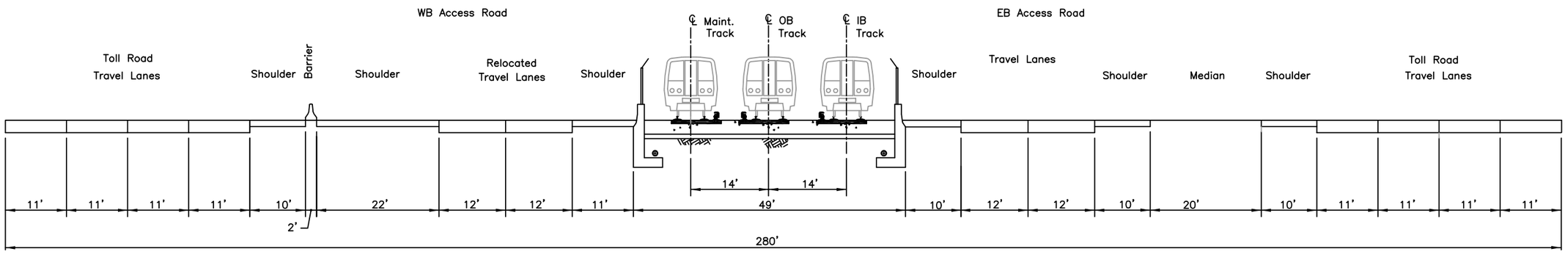
TYPICAL SECTIONS
RAIL
DULLES AIRPORT ACCESS ROAD
STATION 1430+00

SCALE: 1"=10' (5 0 5 10)

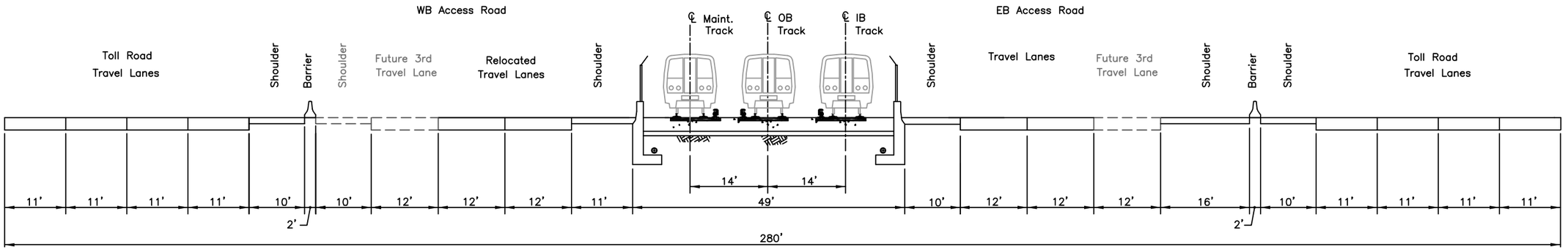
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162

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SECTION AT STATION 1430+00 ②



SECTION AT STATION 1430+00 (W/ FUTURE 3rd DAAR LANE) ③

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. TWYMAN 10-12-01	REFERENCE DRAWINGS	REVISIONS
DRAWN: A. JOHNSON 10-15-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. KASHIF 3-11-02		
APPROVED: P. ELMAN 5-2002		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

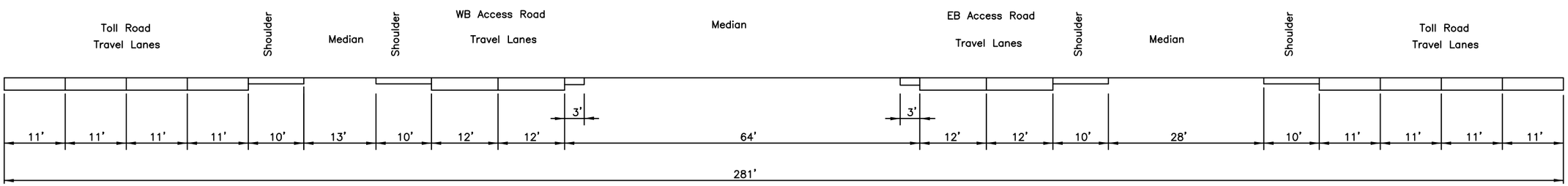
TYPICAL SECTIONS
RAIL
DULLES AIRPORT ACCESS ROAD (FUTURE)
STATION 1430+00

SCALE: 1"=10' (5 0 5 10)

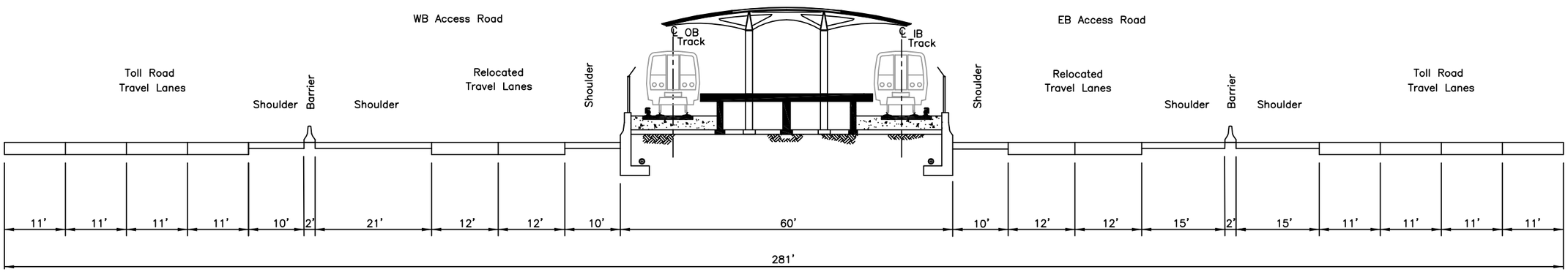
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163

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EXISTING CONDITIONS AT RESTON PARKWAY STATION ①



SECTION AT RESTON PARKWAY STATION ②

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. TWYMAN 10-12-01	REFERENCE DRAWINGS	REVISIONS
DRAWN: A. JOHNSON 10-15-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. KASHIF 3-11-02		
APPROVED: P. ELMAN 5-2002		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

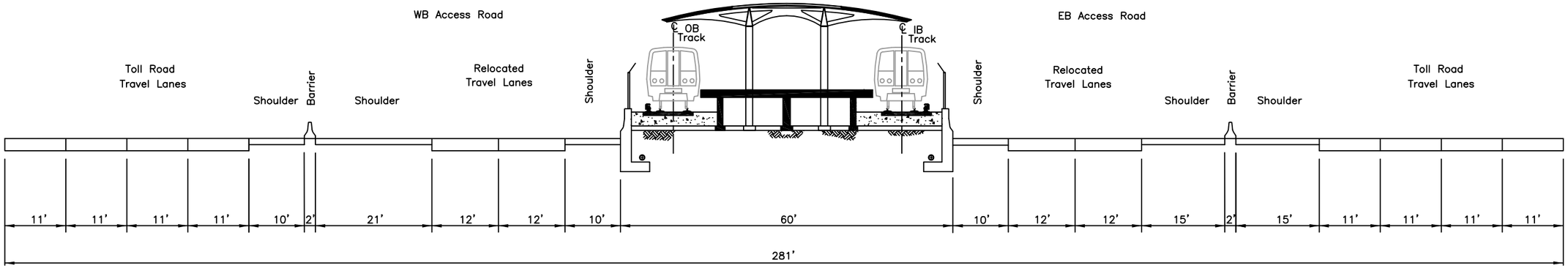
TYPICAL SECTIONS
RAIL
DULLES AIRPORT ACCESS ROAD
RESTON PARKWAY STATION

SCALE: 1"=10' (5 0 5 10)

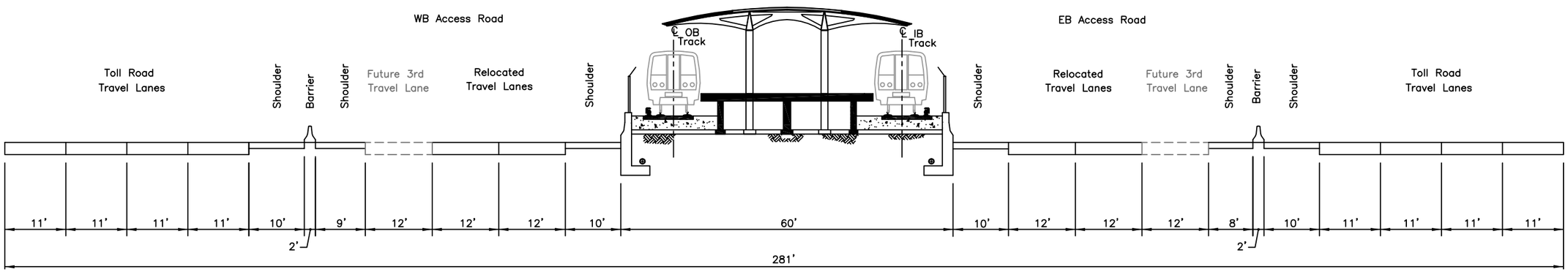
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SECTION AT RESTON PARKWAY STATION ②



SECTION AT RESTON PARKWAY STATION (W/ FUTURE 3rd DAAR LANE) ③

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. TWYMAN 10-12-01	REFERENCE DRAWINGS	REVISIONS
DRAWN: A. JOHNSON 10-15-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. KASHIF 3-11-02		
APPROVED: P. ELMAN 5-2002		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

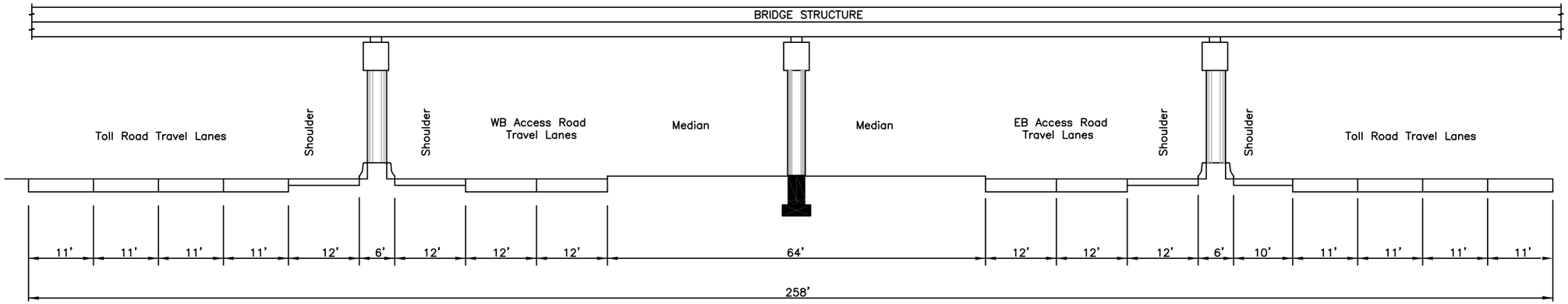
TYPICAL SECTIONS
RAIL
DULLES AIRPORT ACCESS ROAD (FUTURE)
RESTON PARKWAY STATION

SCALE: 1"=10' (5 0 5 10)

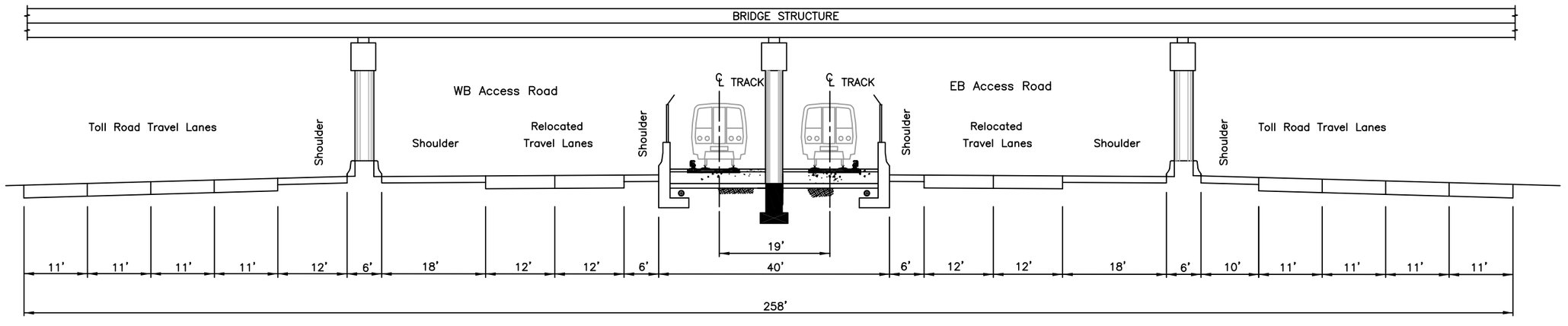
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165

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EXISTING CONDITIONS AT RESTON PARKWAY BRIDGE ①



SECTION CONDITIONS AT RESTON PARKWAY BRIDGE ②

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. TWYMAN	10-02-01	DATE
DRAWN: T. TWYMAN	12-04-01	DATE
CHECKED: R. KASHIF	3-11-02	DATE
APPROVED: P. ELMAN	5-2002	DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

SUBMITTED — CAPITAL TRANSIT CONSULTANTS
Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

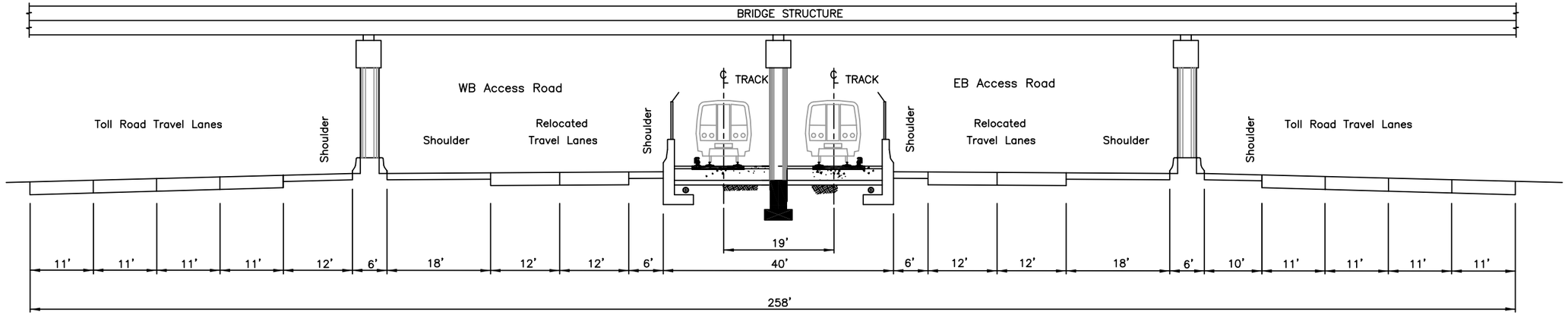
TYPICAL SECTIONS
RAIL
DULLES AIRPORT ACCESS ROAD
RESTON PARKWAY BRIDGE

SCALE: 1"=10' (5 0 5 10)

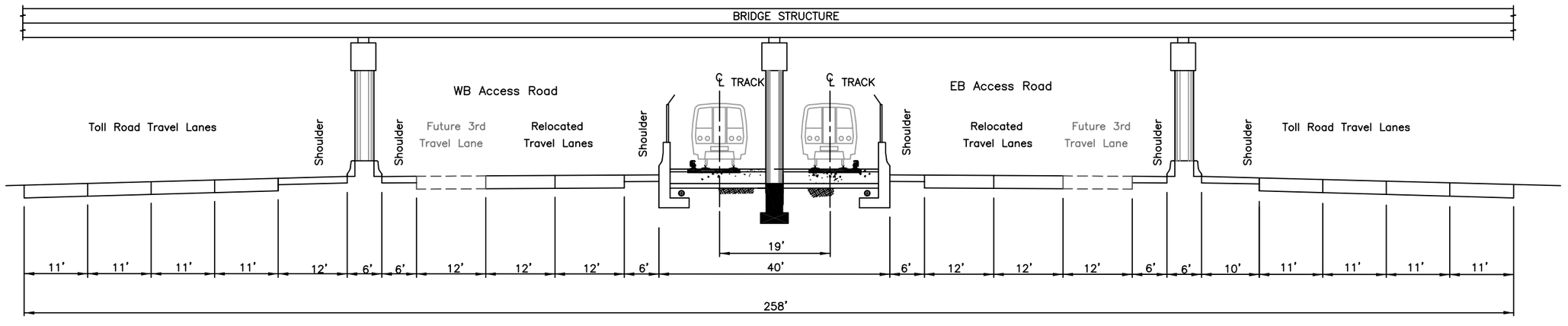
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166

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SECTION AT RESTON PARKWAY BRIDGE ②



SECTION CONDITIONS AT RESTON PARKWAY BRIDGE (W/ FUTURE 3rd DAAR LANE) ③

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. TWYMAN	10-02-01 DATE	
DRAWN: T. TWYMAN	12-04-01 DATE	
CHECKED: R. KASHIF	3-11-02 DATE	
APPROVED: P. ELMAN	5-2002 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

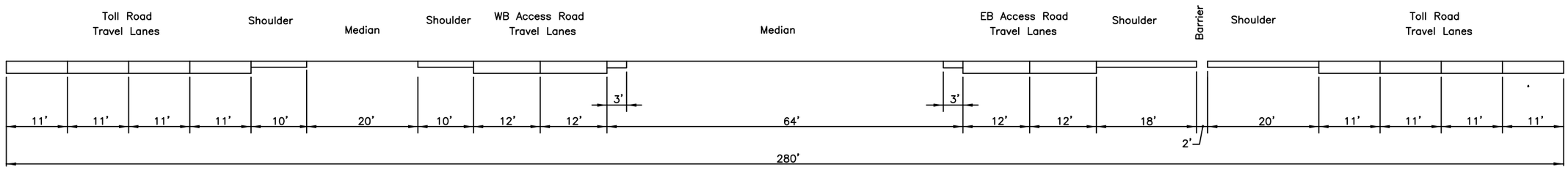
TYPICAL SECTIONS
RAIL
DULLES AIRPORT ACCESS ROAD (FUTURE)
RESTON PARKWAY BRIDGE

SCALE: 1"=10' (5 0 5 10)

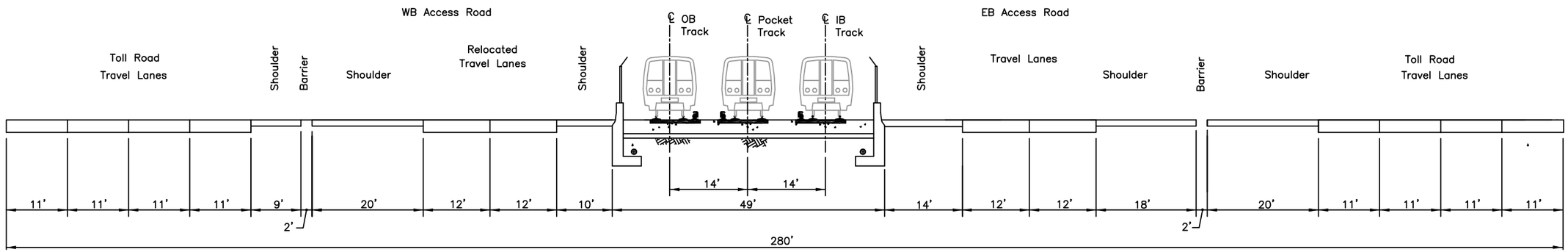
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167

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EXISTING CONDITIONS AT STATION 1330+00 ①



SECTION AT STATION 1330+00 ②

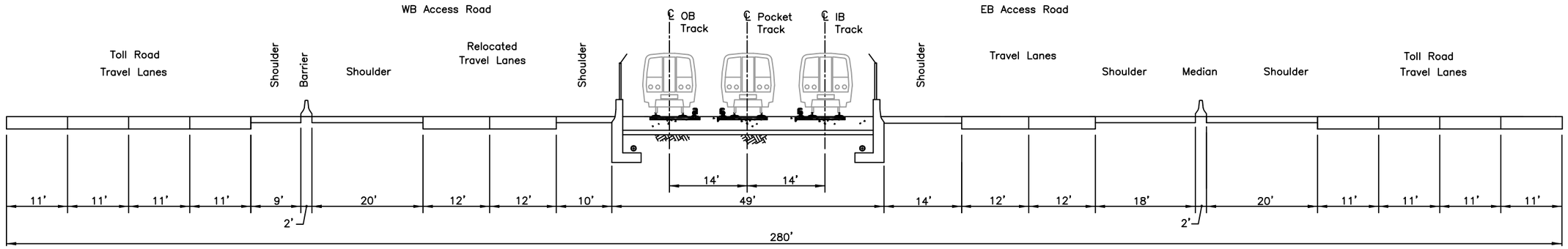
HALF-SIZE DRAWING

CONTRACT NO.:

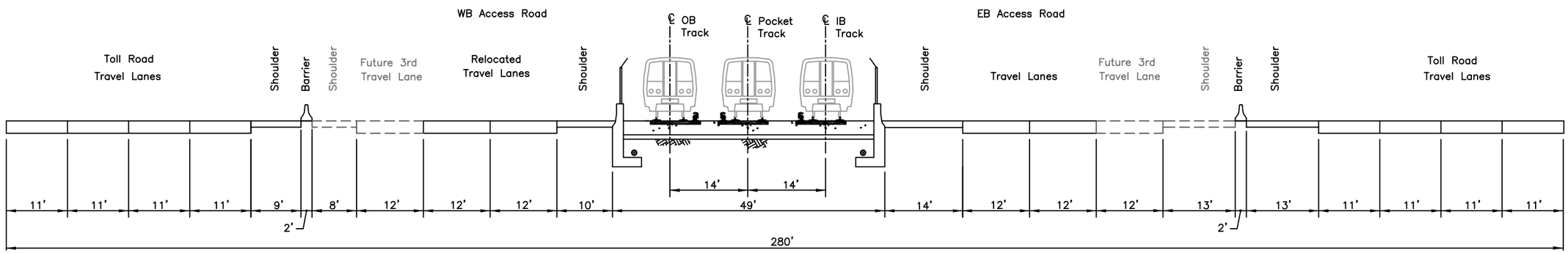
DESIGNED: T. TWYMAN 10-12-01 DATE	DULLES CORRIDOR RAPID TRANSIT PROJECT	TYPICAL SECTIONS RAIL DULLES AIRPORT ACCESS ROAD STATION 1330+00
DRAWN: A. JOHNSON 10-15-01 DATE	CAPITAL TRANSIT CONSULTANTS	FINAL GENERAL PLANS JULY 2004
CHECKED: R. KASHIF 3-11-02 DATE	SUBMITTED Diana C. Mendes PROJECT MANAGER	SCALE: 1"=10' (5 0 5 10)
APPROVED: P. ELMAN 5-2002 DATE		DRAWING NO.: GPN-C-026
		168

REFERENCE DRAWINGS		REVISIONS		
NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION

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SECTION AT STATION 1330+00 ②



SECTION AT STATION 1330+00 (W/ FUTURE 3rd DAAR LANE) ③

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. TWYMAN 10-12-01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: A. JOHNSON 10-15-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. KASHIF 3-11-02 DATE		
APPROVED: P. ELMAN 5-2002 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

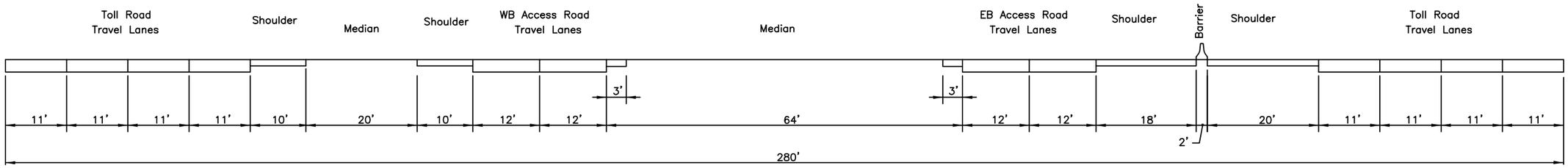
TYPICAL SECTIONS
RAIL
DULLES AIRPORT ACCESS ROAD (FUTURE)
STATION 1330+00

SCALE: 1"=10' (5 0 5 10)

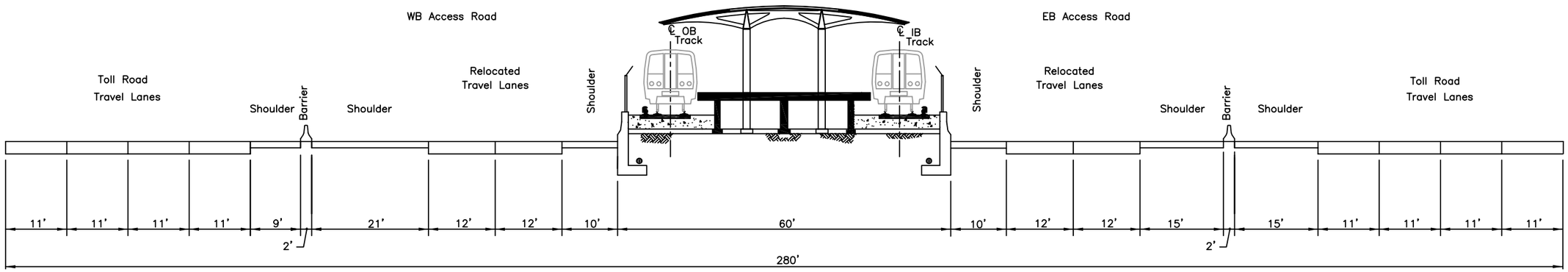
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169

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EXISTING CONDITIONS AT WIEHLE AVENUE STATION ①



SECTION AT WIEHLE AVENUE STATION ②

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. TWYMAN 10-12-01 DATE	REFERENCE DRAWINGS: NUMBER / DESCRIPTION	REVISIONS: DATE / BY / DESCRIPTION
DRAWN: A. JOHNSON 10-15-01 DATE		
CHECKED: R. KASHIF 3-11-02 DATE		
APPROVED: P. ELMAN 5-2002 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

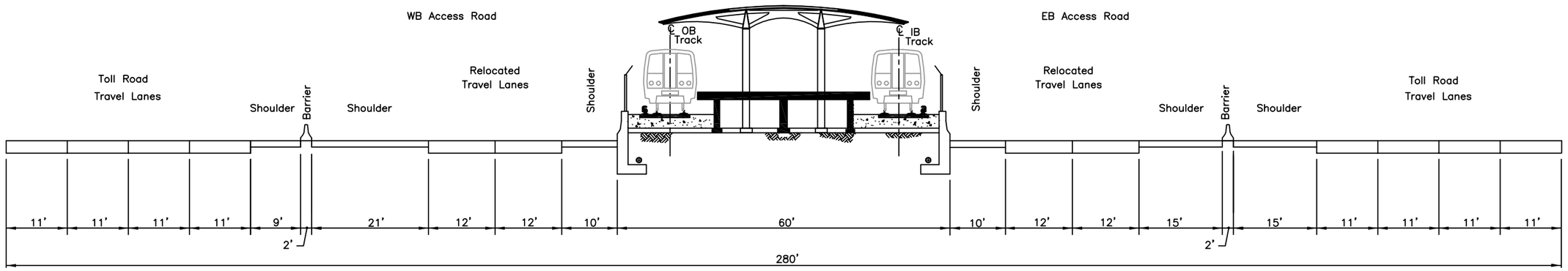
TYPICAL SECTIONS
RAIL
DULLES AIRPORT ACCESS ROAD
WIEHLE AVENUE STATION

SCALE: 1"=10' (5 0 5 10)

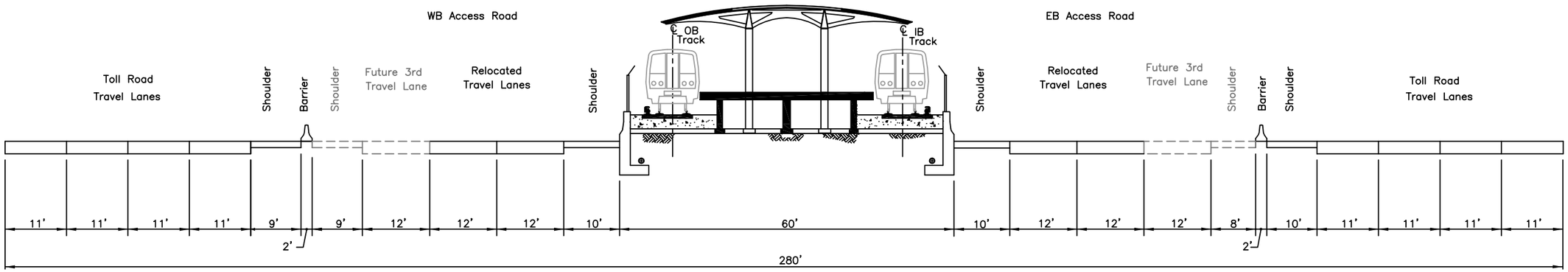
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170

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SECTION AT WIEHLE AVENUE STATION ②



SECTION AT WIEHLE AVENUE STATION (W/ FUTURE 3rd DAAR LANE) ③

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. TWYMAN 10-12-01	REFERENCE DRAWINGS	REVISIONS
DRAWN: A. JOHNSON 10-15-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. KASHIF 3-11-02		
APPROVED: P. ELMAN 5-2002		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

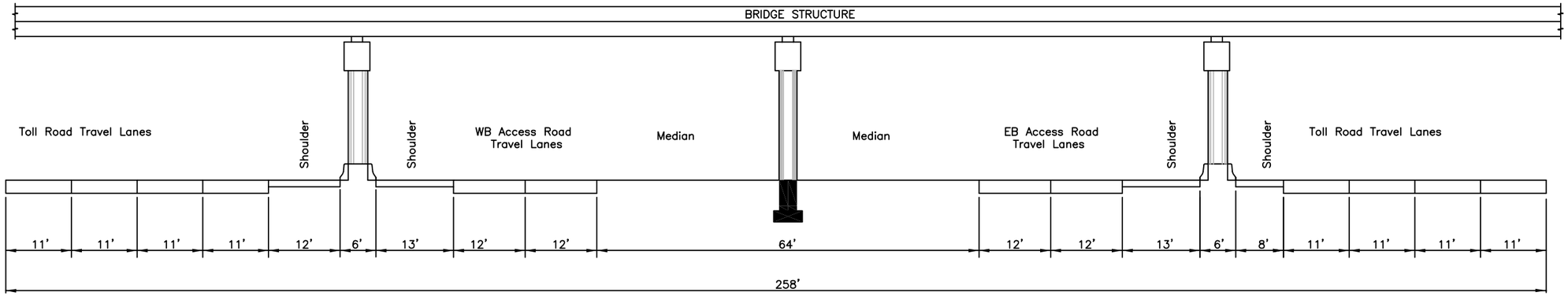
TYPICAL SECTIONS
RAIL
DULLES AIRPORT ACCESS ROAD (FUTURE)
WIEHLE AVENUE STATION

SCALE: 1"=10' (5 0 5 10)

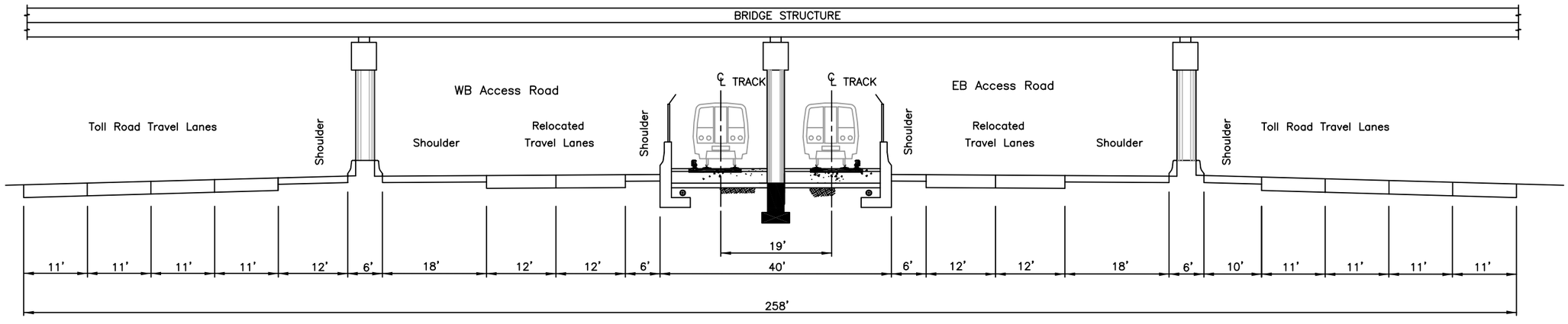
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EXISTING CONDITIONS AT WIEHLE AVENUE BRIDGE ①



SECTION CONDITIONS AT WIEHLE AVENUE BRIDGE ②

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. TWYMAN 10-02-01	REFERENCE DRAWINGS	REVISIONS
DRAWN: T. TWYMAN 12-04-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. KASHIF 3-11-02		
APPROVED: P. ELMAN 5-2002		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

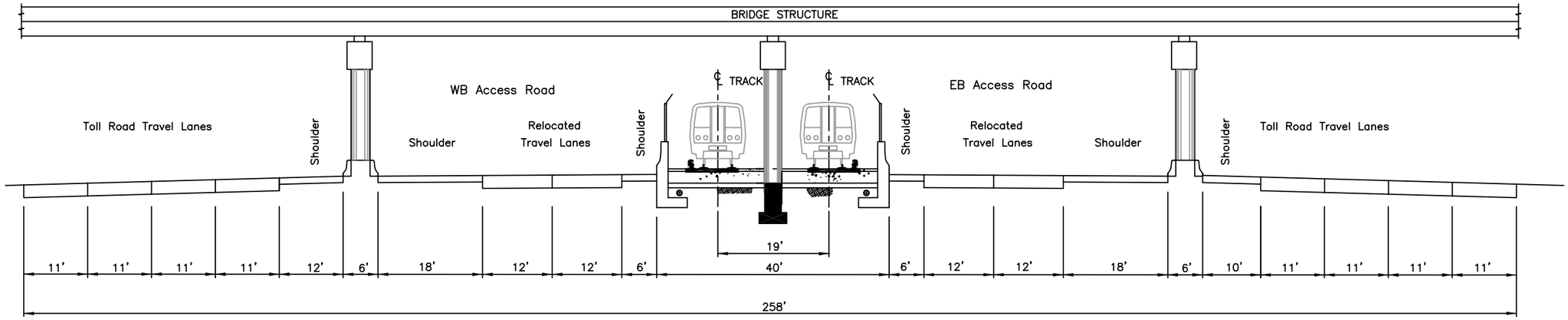
TYPICAL SECTIONS
RAIL
DULLES AIRPORT ACCESS ROAD
WIEHLE AVENUE BRIDGE

SCALE: 1"=10' (5 0 5 10)

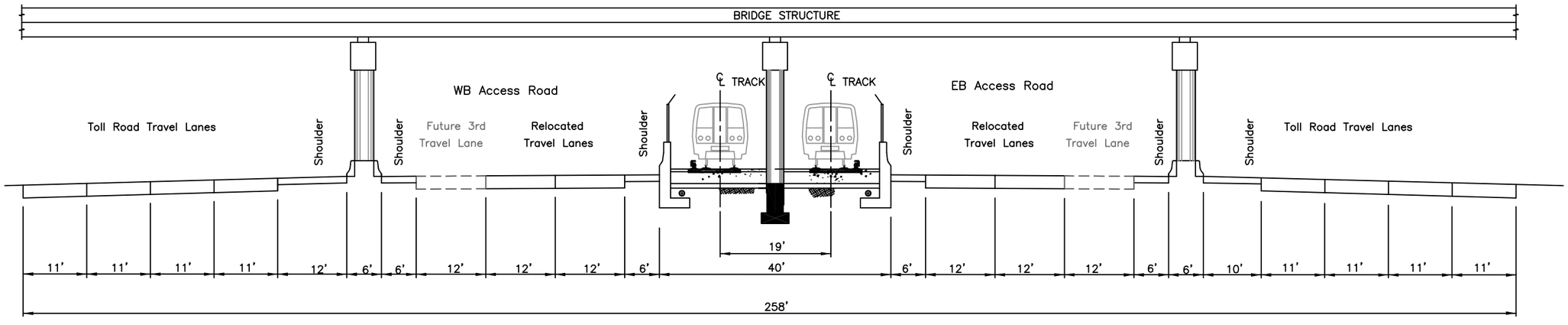
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172

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SECTION AT WIEHLE AVENUE BRIDGE ②



SECTION CONDITIONS AT WIEHLE AVENUE BRIDGE (W/ FUTURE 3rd DAAR LANE) ③

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. TWYMAN	10-02-01 DATE	
DRAWN: T. TWYMAN	12-04-01 DATE	
CHECKED: R. KASHIF	3-11-02 DATE	
APPROVED: P. ELMAN	5-2002 DATE	

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

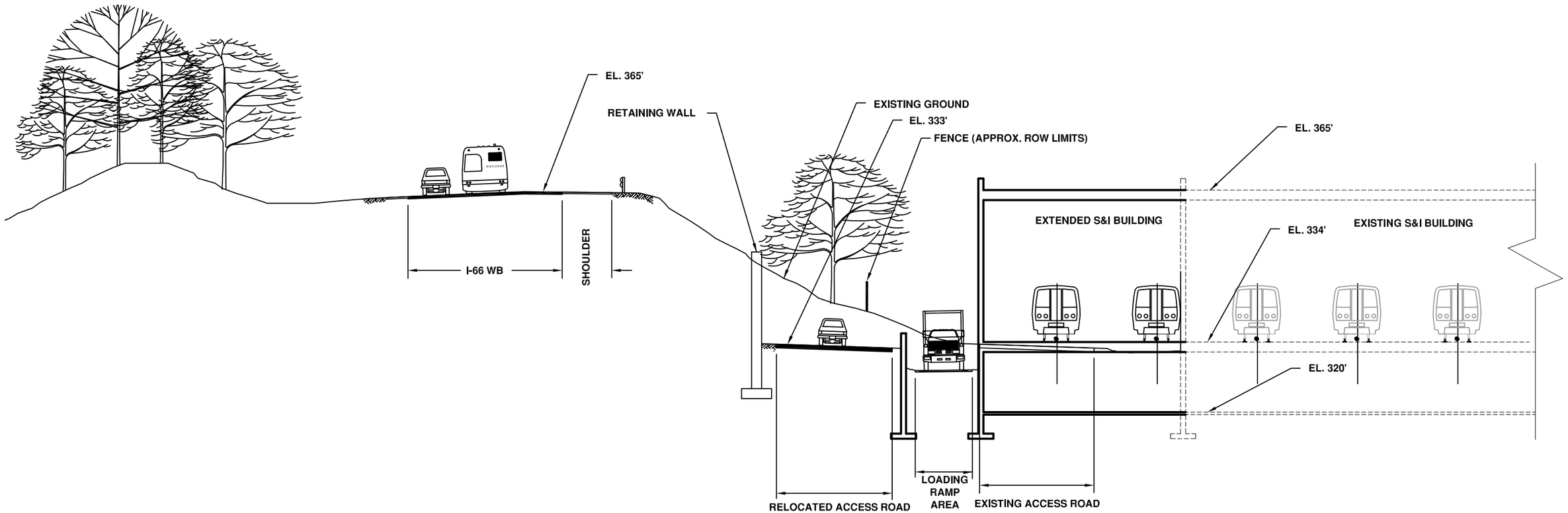
TYPICAL SECTIONS
RAIL
DULLES AIRPORT ACCESS ROAD (FUTURE)
WIEHLE AVENUE BRIDGE

SCALE: 1"=10' (5 0 5 10)

DRAWING NO.: GPN-C-044

173

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: R. KASHIF 9-11-03	REFERENCE DRAWINGS	REVISIONS
DRAWN: R. KASHIF 9-12-03	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: P. ELMAN 9-11-03		
APPROVED: P. ELMAN 9-2003		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

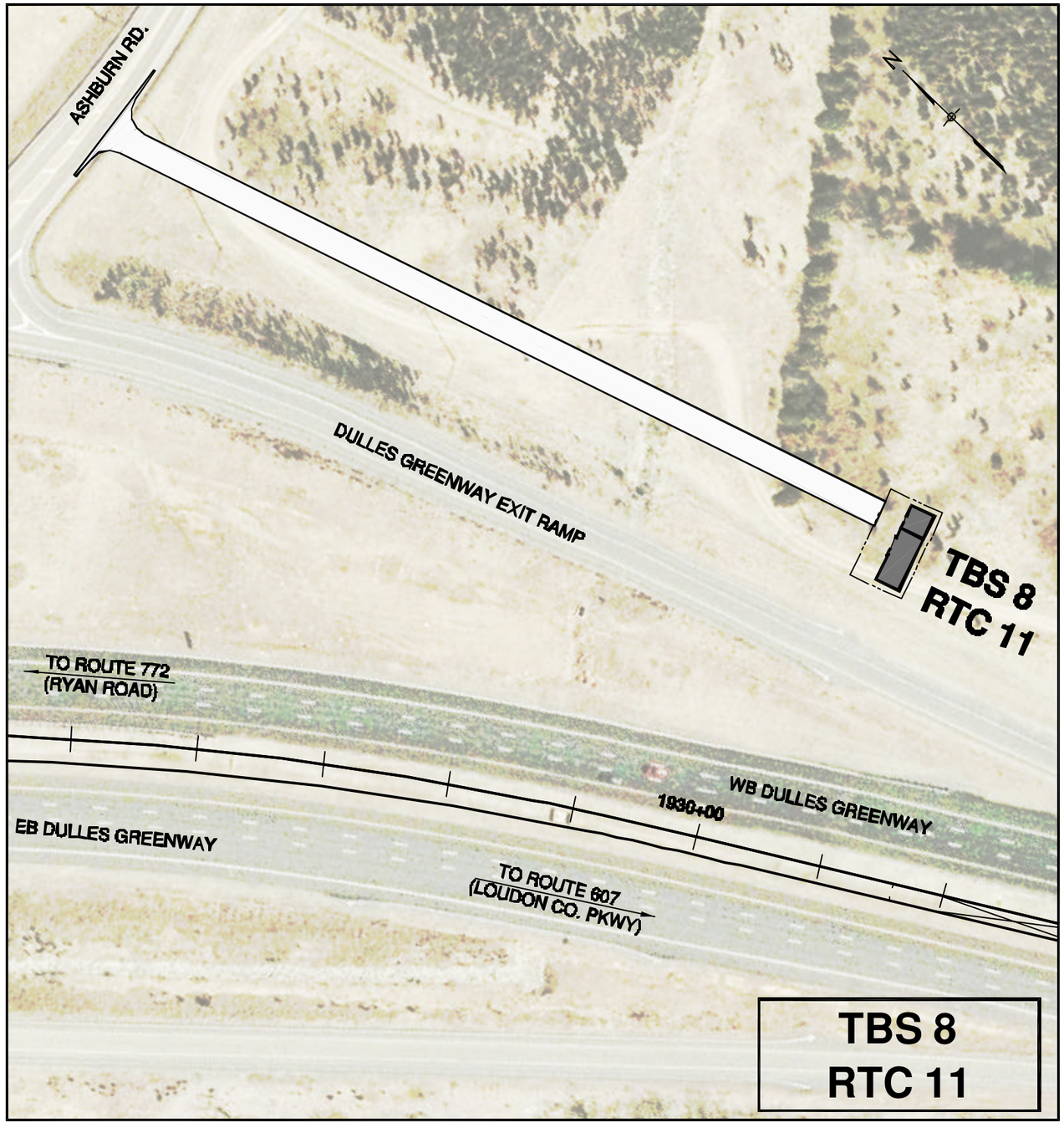
TYPICAL SECTION
WEST FALLS CHURCH
SERVICE AND INSPECTION YARD
IMPROVEMENTS

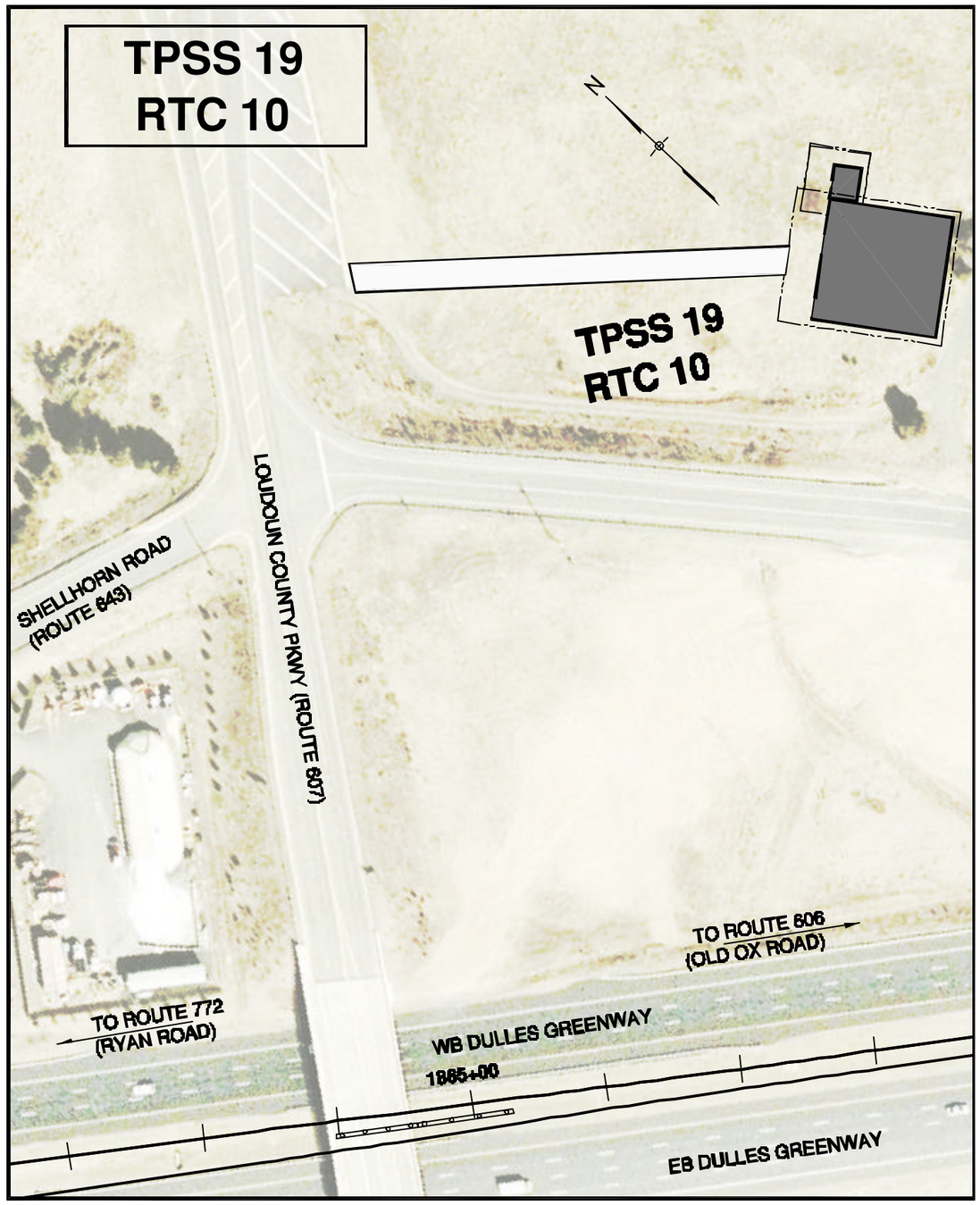
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174

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. KUMJIAN 10-17-01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: D. MADSEN 10-17-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. KASHIF 9-30-03 DATE		
APPROVED: P. ELMAN 01-2004 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

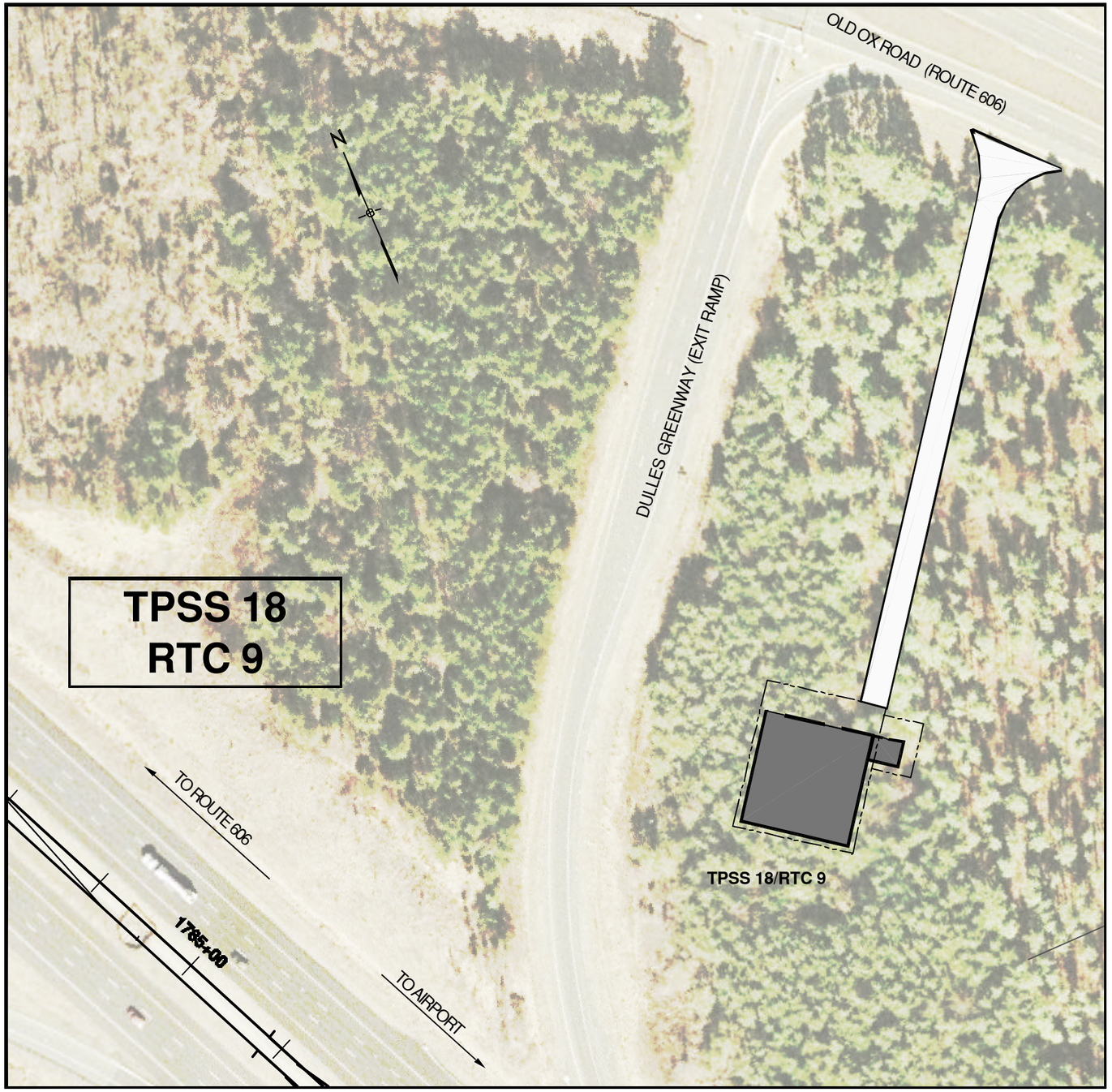
TPSS & TBS/RTC LOCATION PLAN
DULLES GREENWAY
L1 ALIGNMENT
TBS 8, RTC 11, TPSS 19, RTC 10

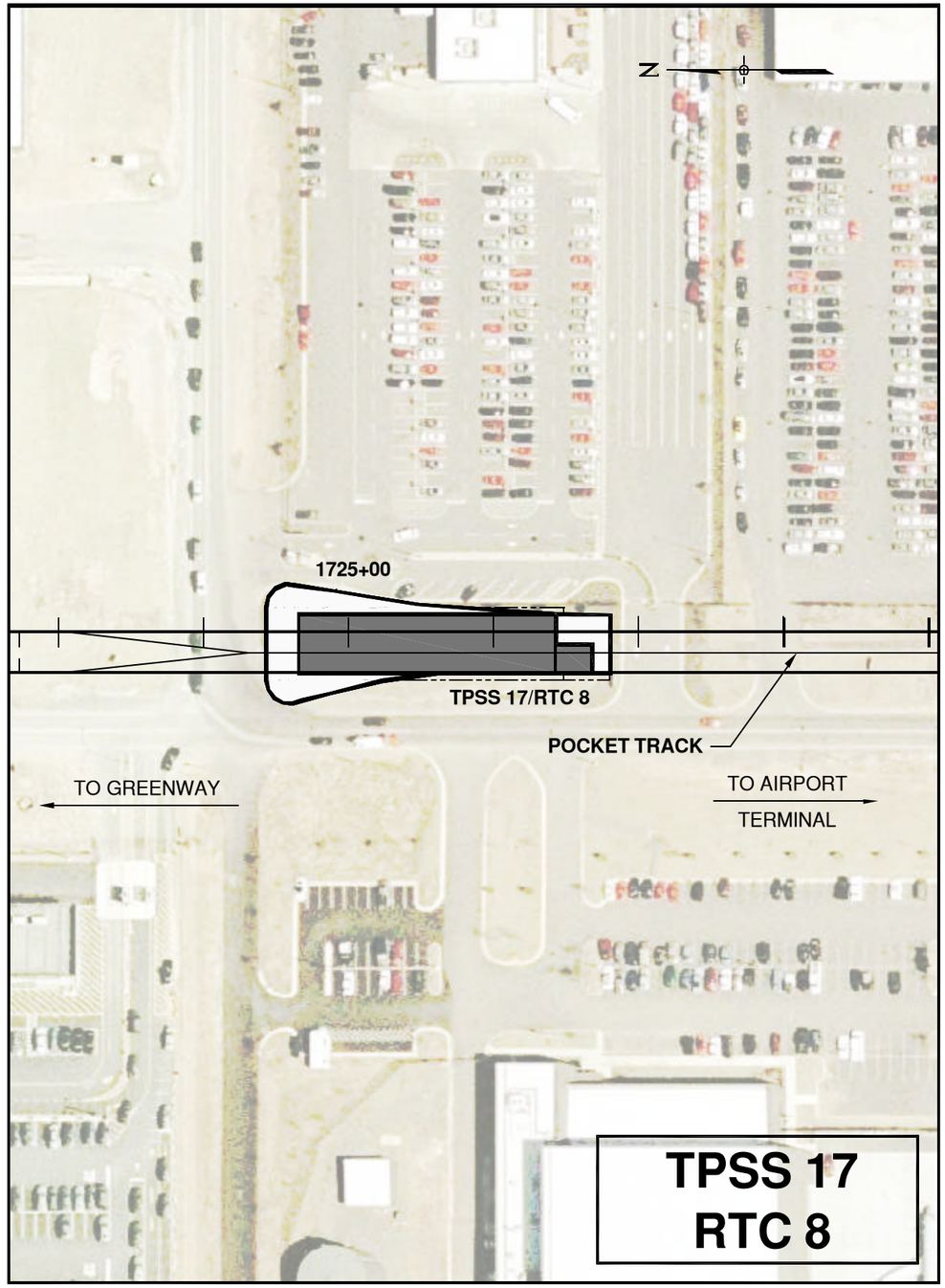
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175

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. KUNJAN 10-22-01	REFERENCE DRAWINGS	REVISIONS
DRAWN: D. NADSEN 10-22-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. KASHIF 9-30-03		
APPROVED: P. ELNAN 10-2003		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

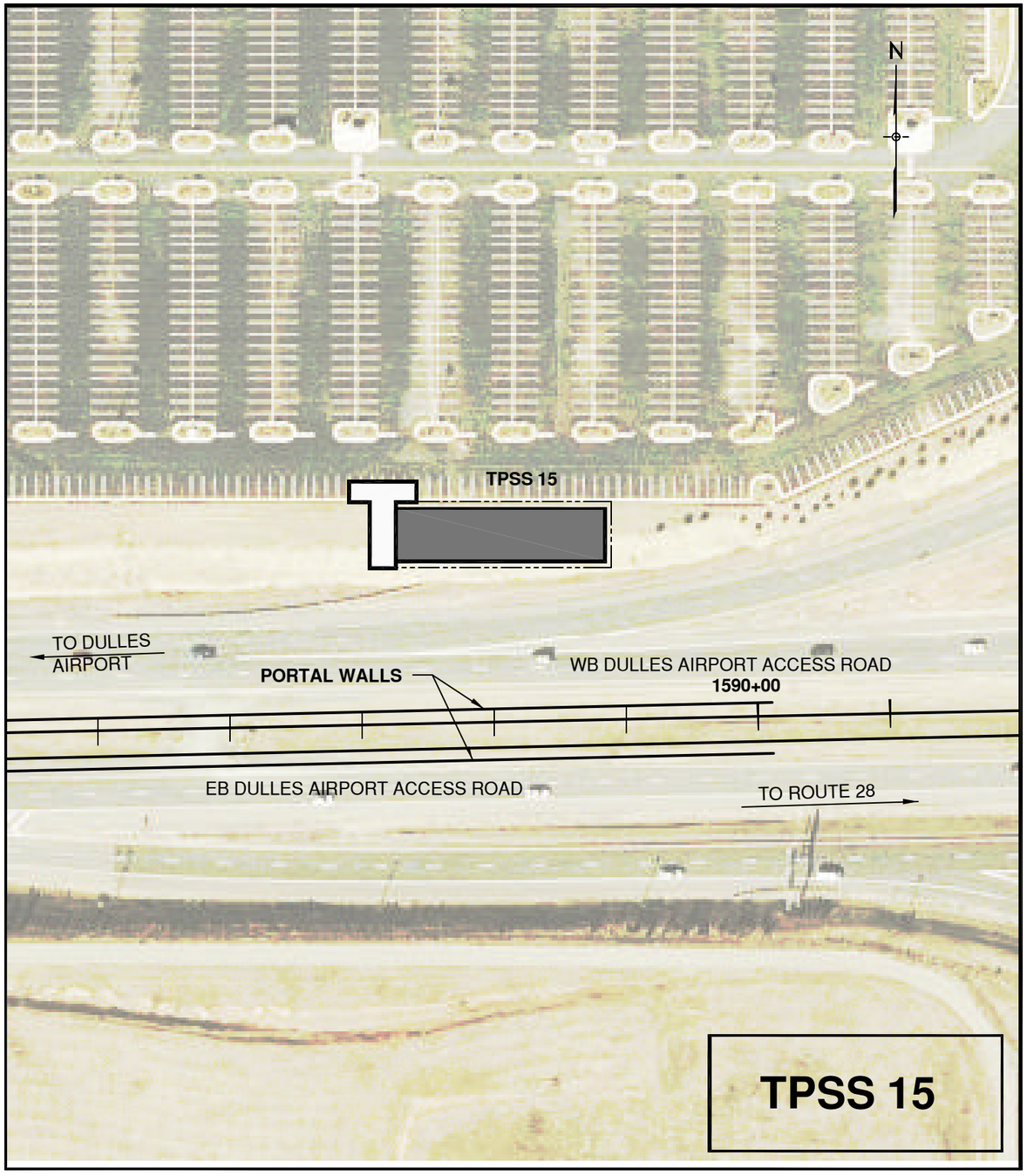
TPSS & TBS/RTC LOCATION PLAN
DULLES AIRPORT
L1 AND A1 ALIGNMENTS
TPSS 18, RTC 9, TPSS 17, RTC 8

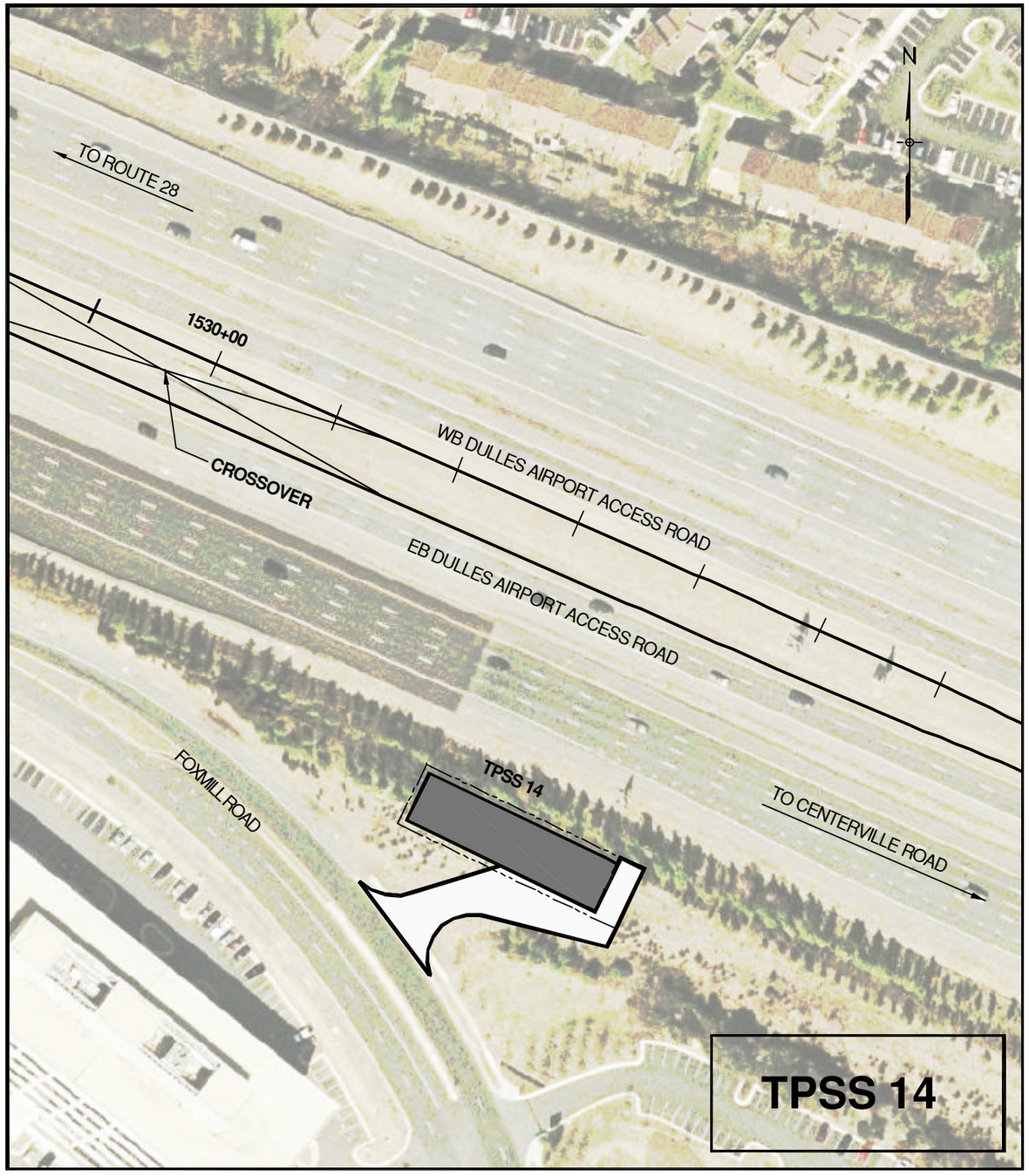
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DRAWING NO.: GPN-C-102

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. KUMJIAN 10-22-01	REFERENCE DRAWINGS	REVISIONS
DRAWN: D. MADSEN 10-22-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: D. SMITH 3-11-02		
APPROVED: P. ELMAN 01-2004		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

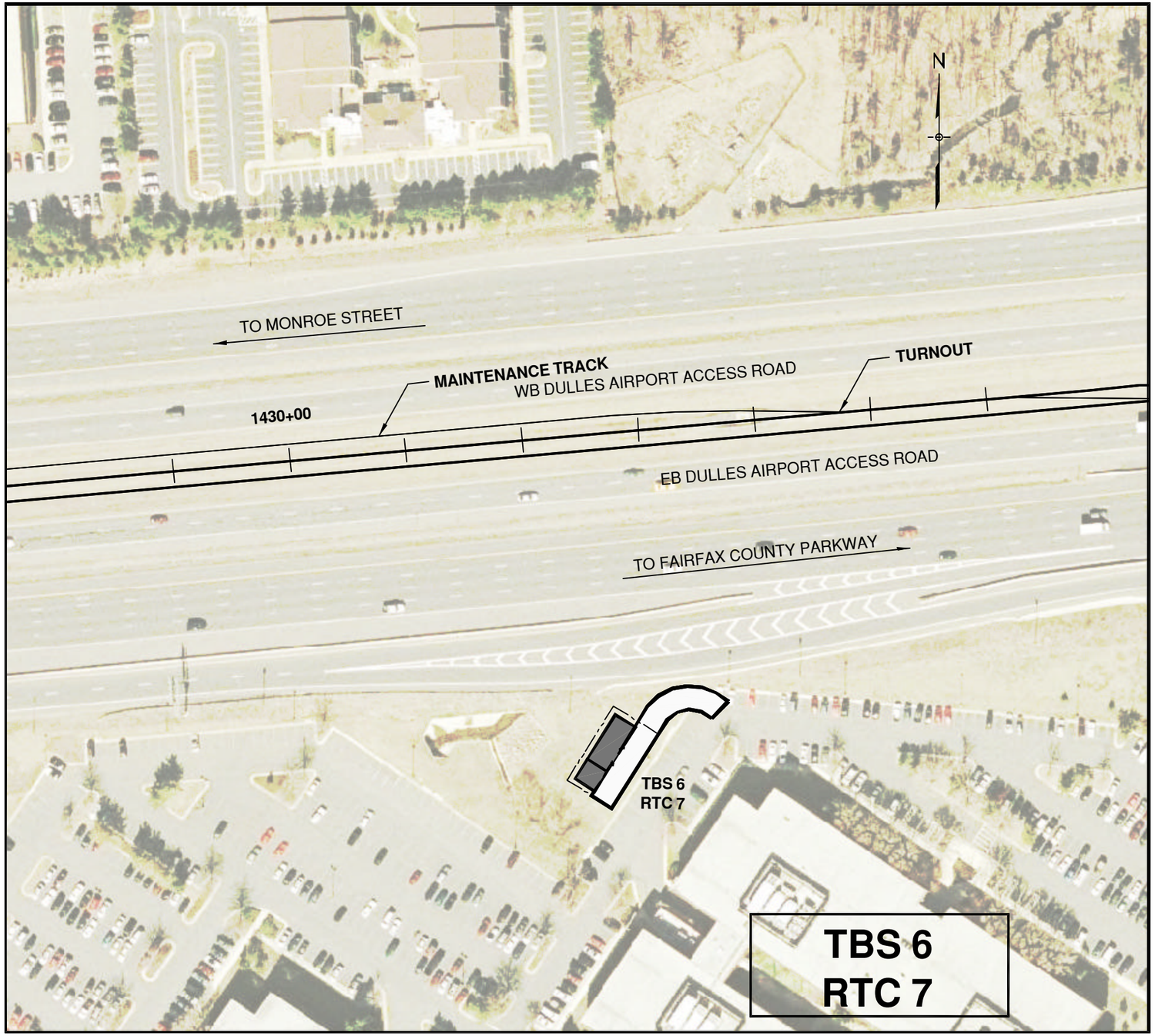
TPSS & TBS/RTC LOCATION PLAN
DULLES AIRPORT
A1 AND D1 ALIGNMENTS
TPSS 15, TPSS 14

SCALE: 1"=50' (25 0 25 50)

DRAWING NO.: GPN-C-103

177

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. KUNJAN 10-17-01	REFERENCE DRAWINGS	REVISIONS
DRAWN: D. NADSEN 10-17-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: D. SMITH 3-11-02		
APPROVED: P. ELMAN 01-2004		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

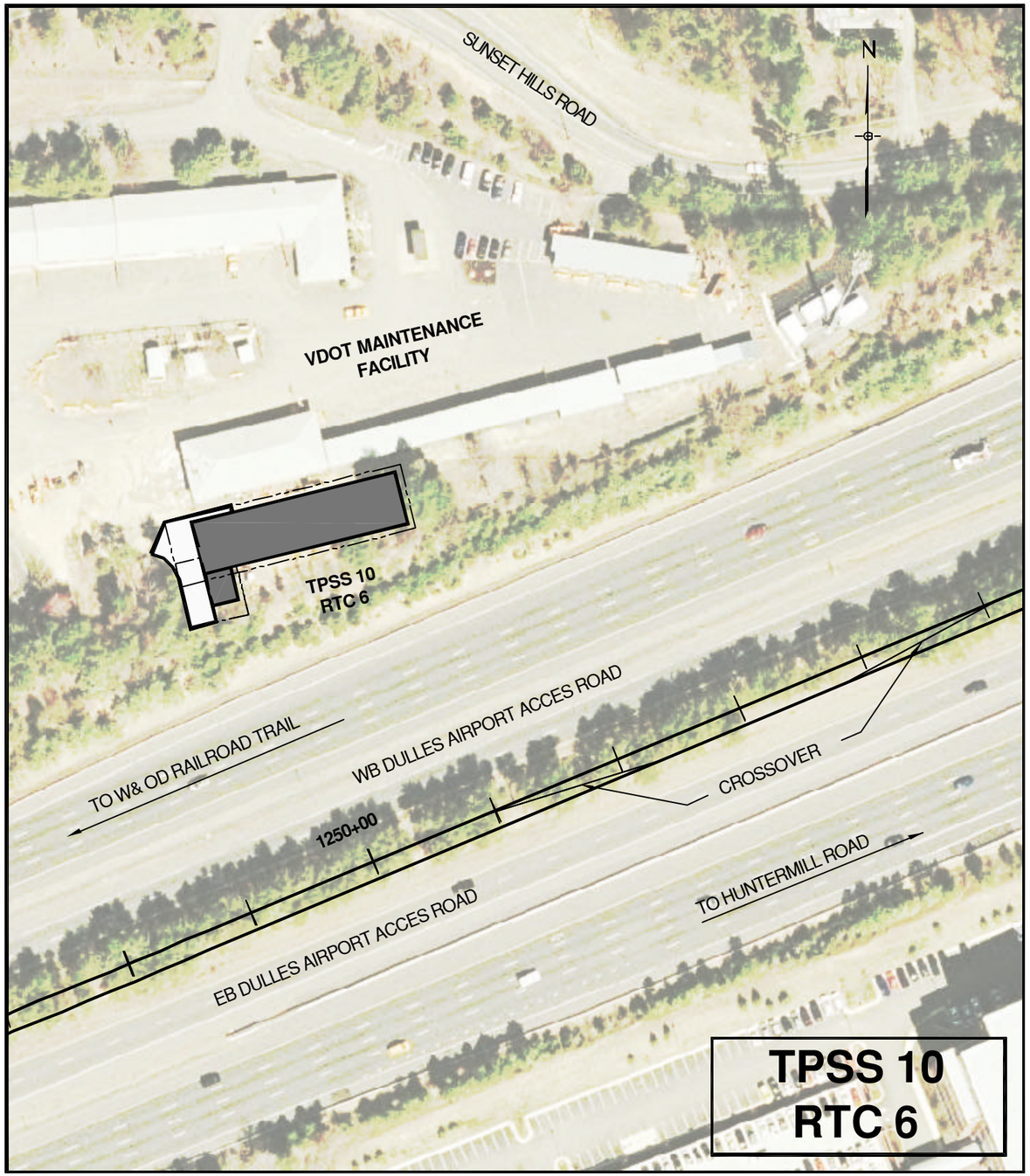
TPSS & TBS/RTC LOCATION PLAN
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
TBS 6, RTC 7

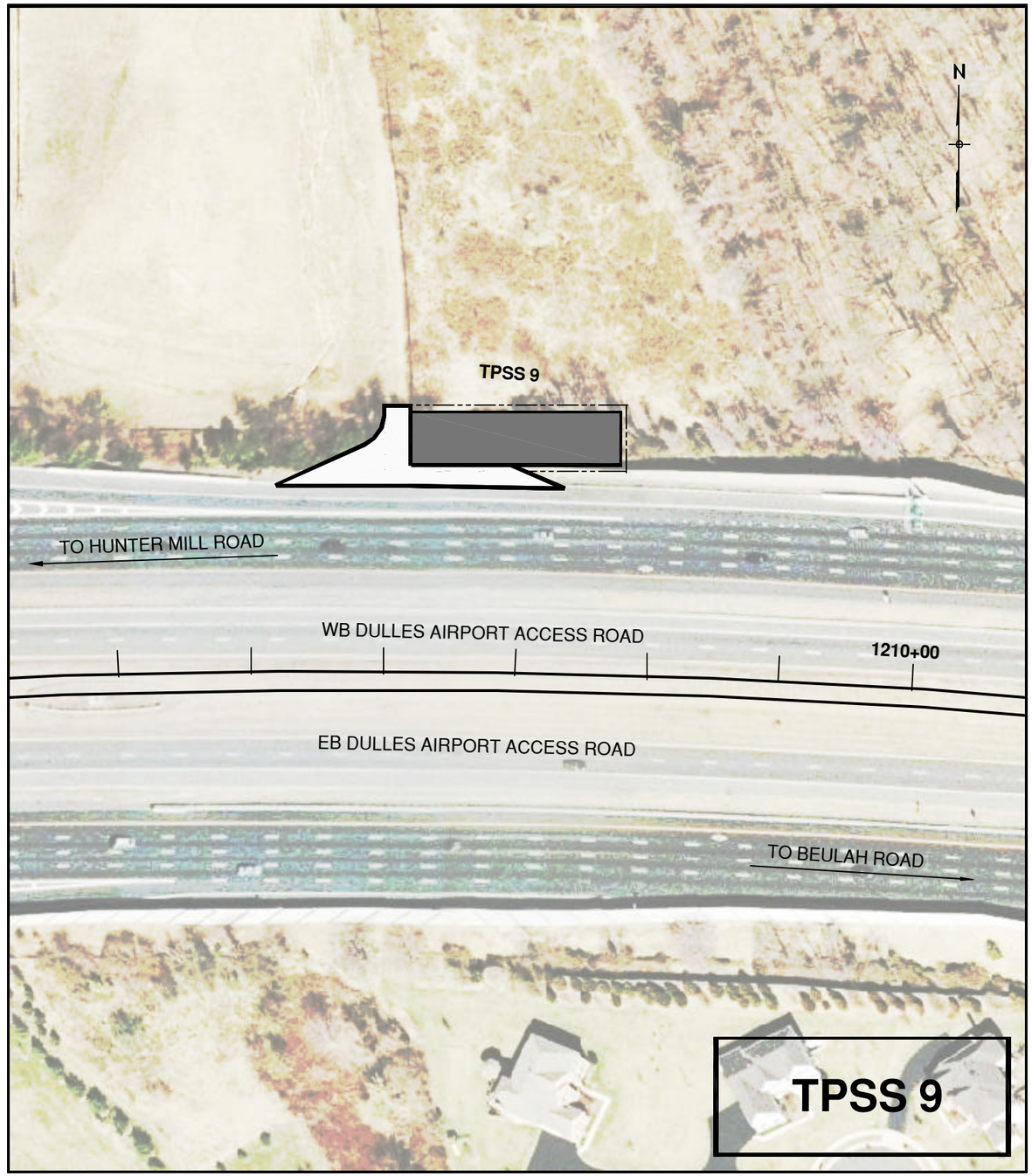
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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. KUNJAN 10-17-01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: D. NADSEN 10-17-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. KASHIF 9-30-03 DATE		
APPROVED: P. ELMAN 01-2004 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

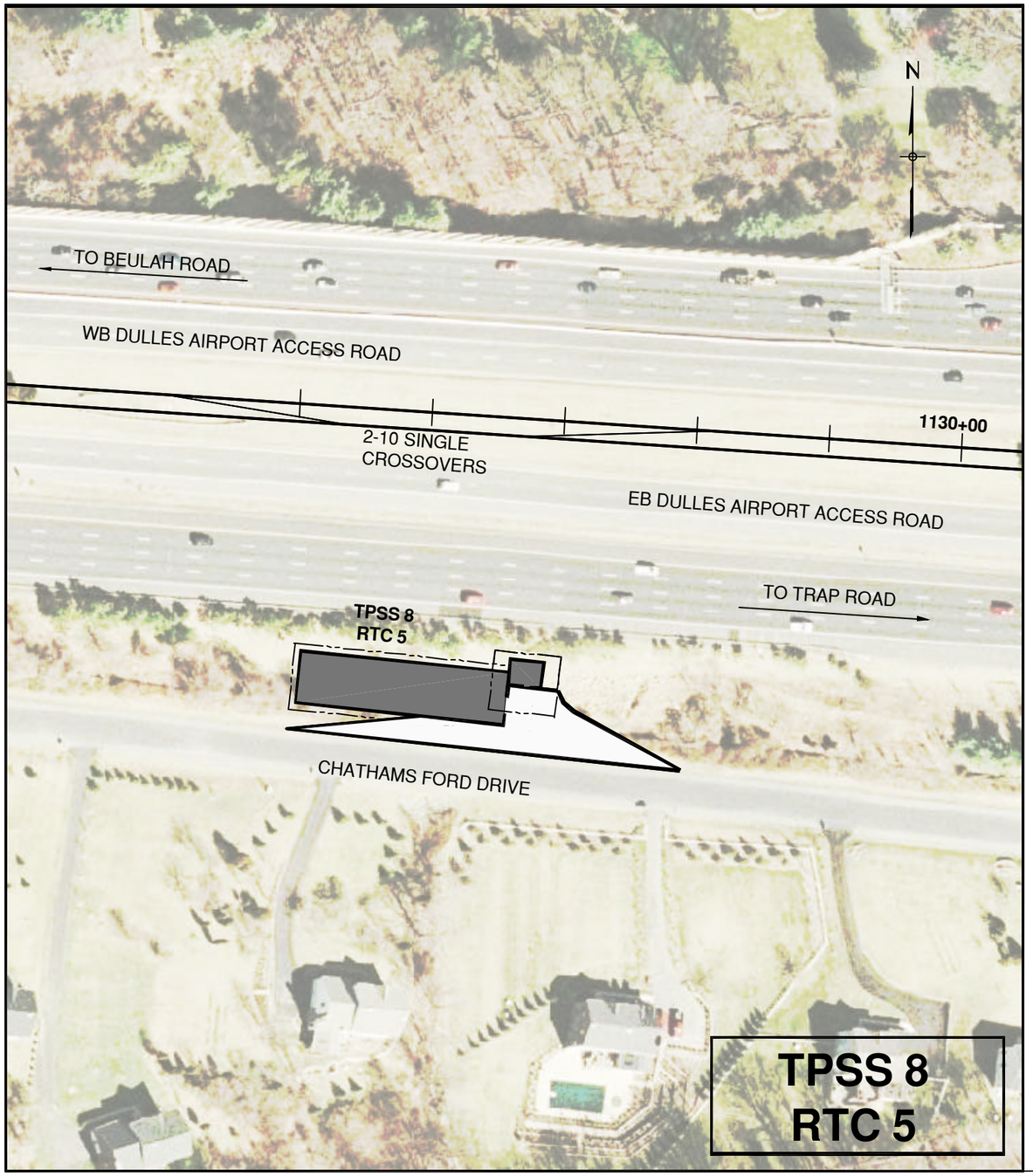
FINAL GENERAL PLANS
JULY 2004

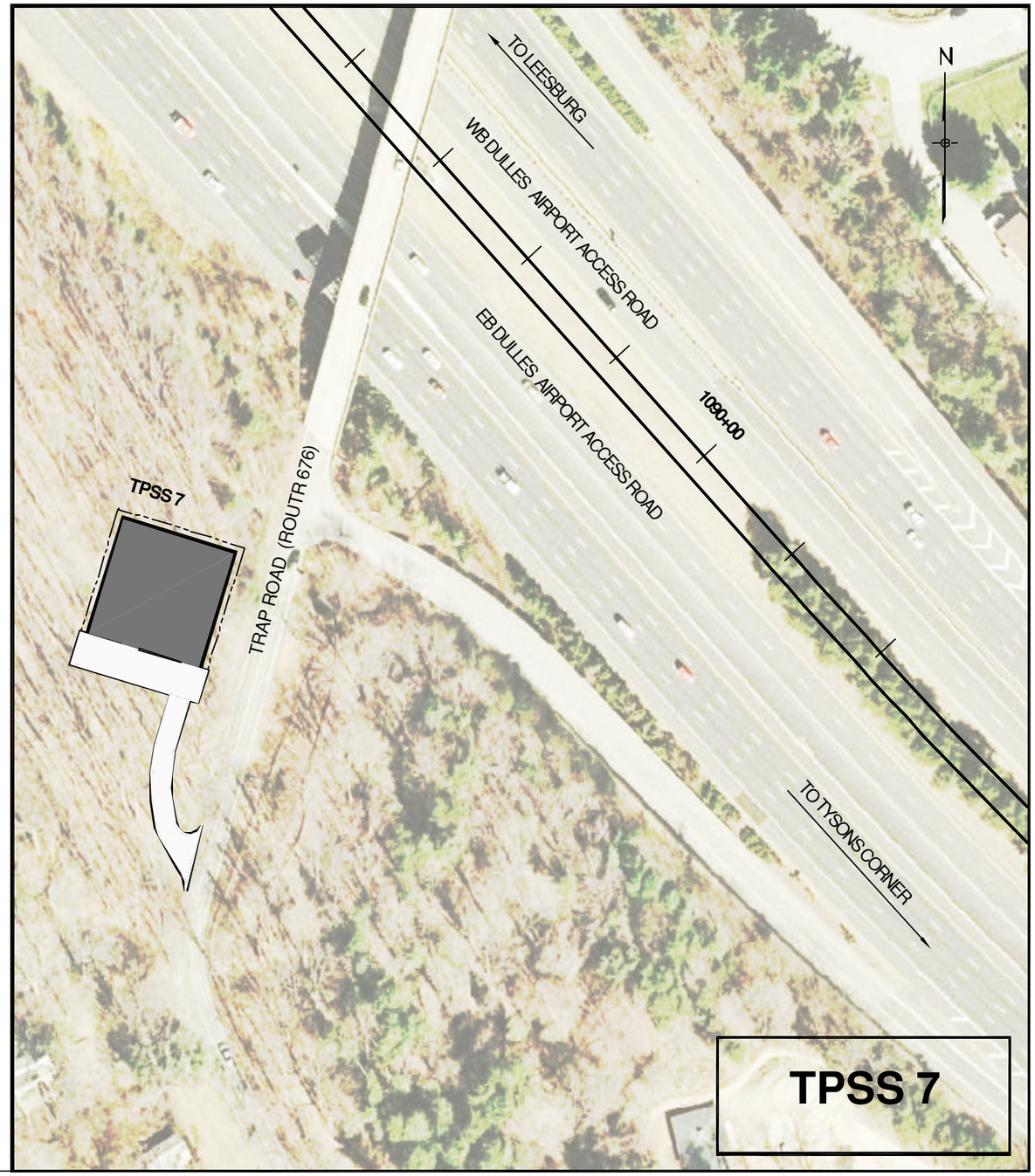
TPSS & TBS/RTC LOCATION PLAN
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
TPSS 10, RTC 6, TPSS 9

SCALE: 1"=50' (25 0 25 50)

DRAWING NO.: GPN-C-106

179





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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. KUNJAN 10-17-01	REFERENCE DRAWINGS	REVISIONS
DRAWN: D. MADSEN 10-17-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: D. SMITH 3-11-02		
APPROVED: P. ELMAN 01-2004		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

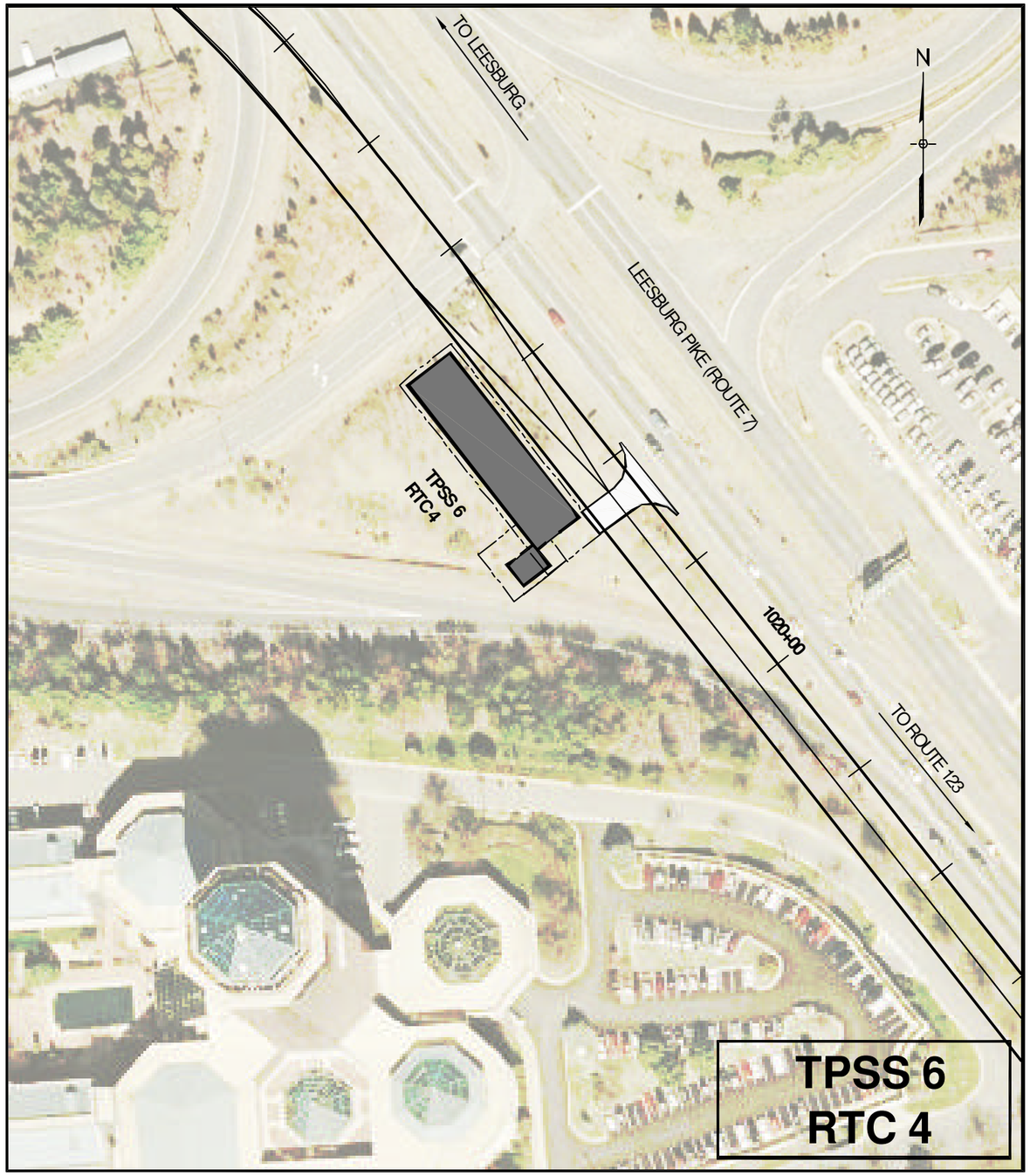
FINAL GENERAL PLANS
JULY 2004

TPSS & TBS/RTC LOCATION PLAN
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
TPSS 8, RTC 5, TPSS 7

SCALE: 1"=50' (25 0 25 50)

DRAWING NO.: GPN-C-107

180



HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. KUMJIAN 10-17-01 DATE	REFERENCE DRAWINGS	REVISIONS	DULLES CORRIDOR RAPID TRANSIT PROJECT
DRAWN: D. MADSEN 10-17-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION	CAPITAL TRANSIT CONSULTANTS
CHECKED: R. KASHIF 9-30-03 DATE			SUBMITTED Diana C. Mendes PROJECT MANAGER
APPROVED: P. ELMAN 01-2004 DATE			FINAL GENERAL PLANS JULY 2004

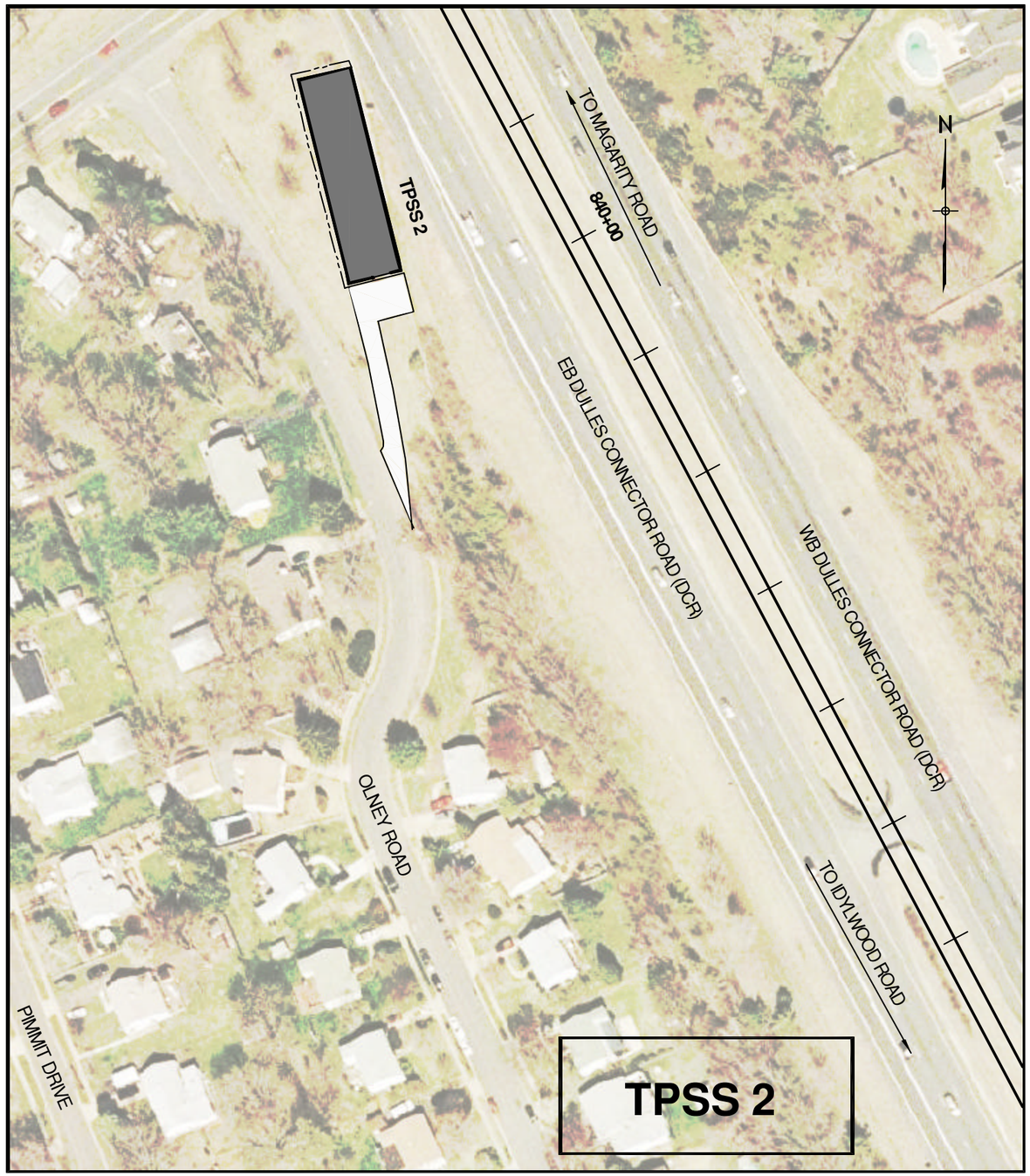
TPSS & TBS/RTC LOCATION PLAN
DULLES AIRPORT ACCESS ROAD
D1 ALIGNMENT
TPSS 6, RTC 4

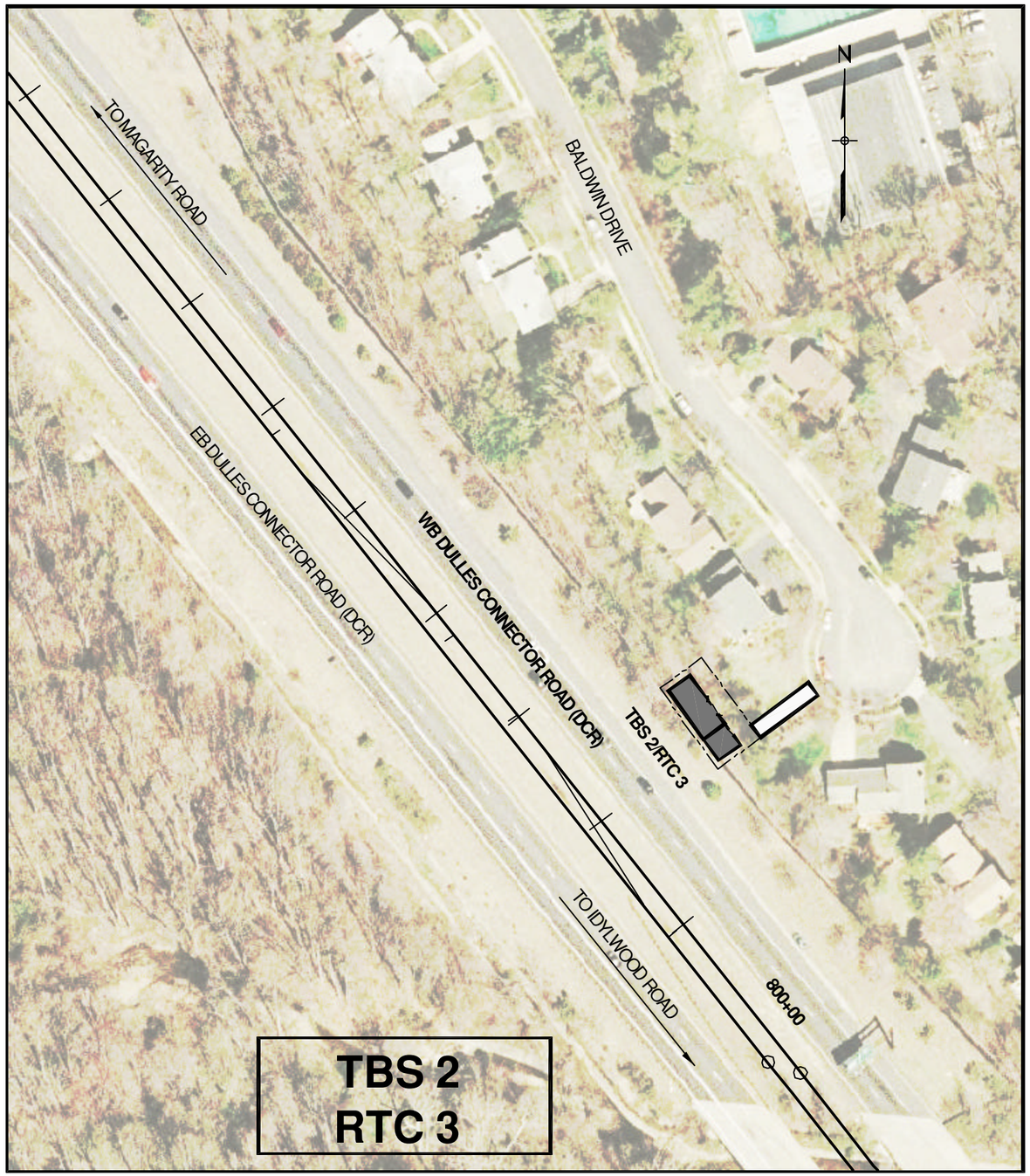
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DRAWING NO.: GPN-C-108

181

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. KUNJAN 10-17-01	REFERENCE DRAWINGS	REVISIONS
DRAWN: D. NADSEN 10-17-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: R. KASHIF 9-30-03		
APPROVED: P. ELNAN 01-2004		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

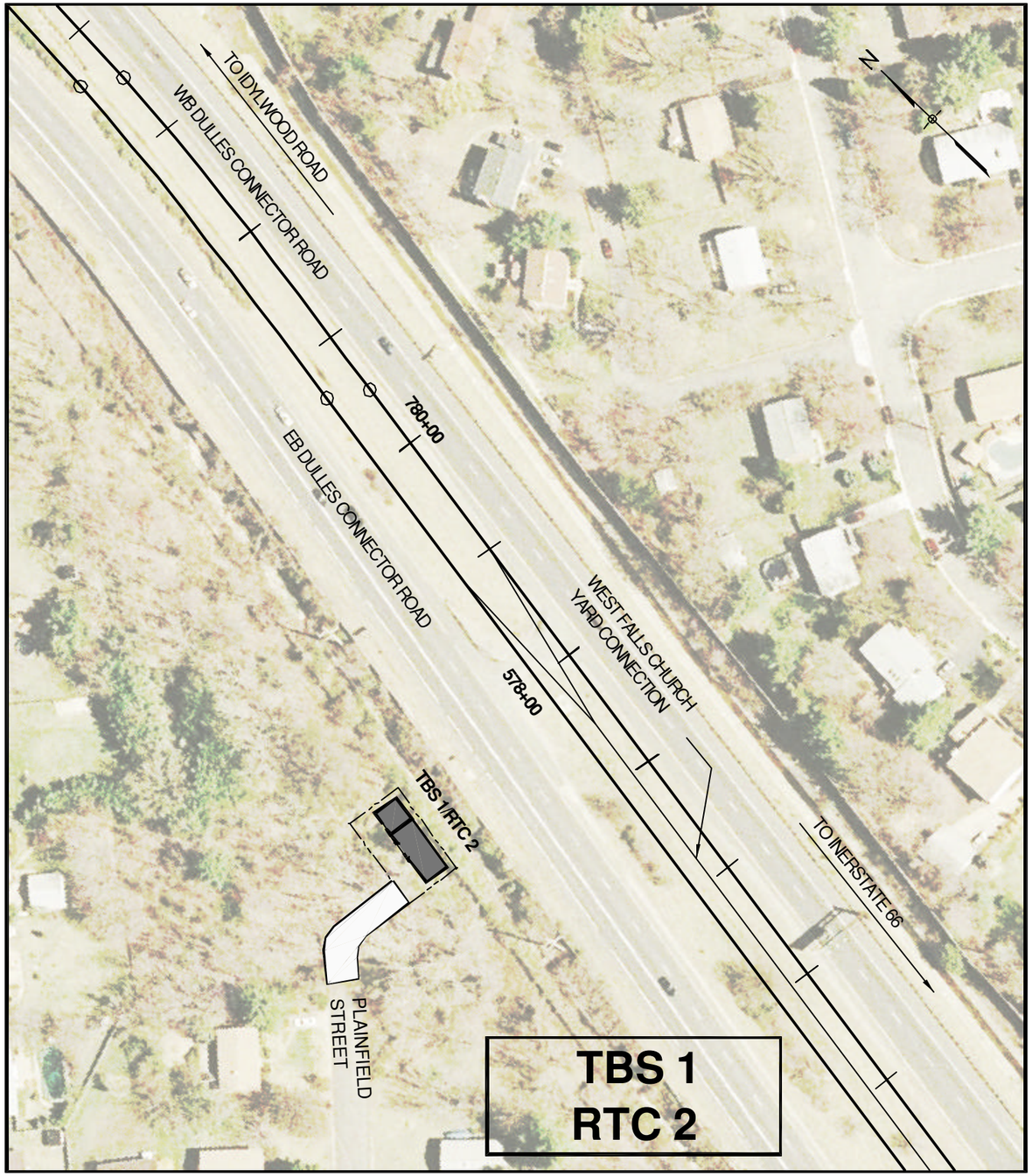
TPSS & TBS/RTC LOCATION PLAN
ORANGE LINE CONNECTION
01 ALIGNMENT
TPSS 2, TBS 2, RTC 3

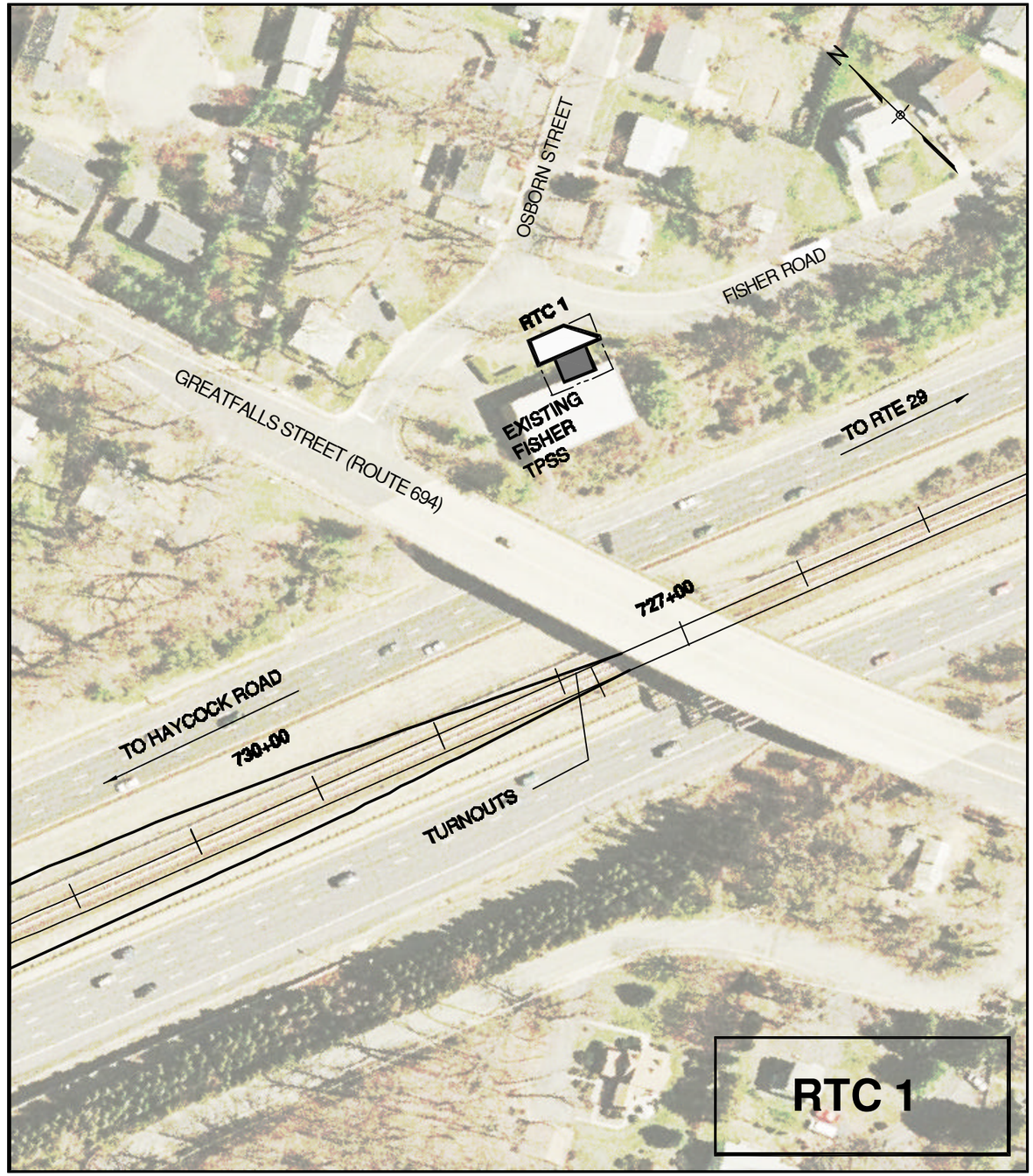
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182

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: T. KUNJAN 10-17-01	REFERENCE DRAWINGS	REVISIONS	DULLES CORRIDOR RAPID TRANSIT PROJECT
DRAWN: D. NADSEN 10-17-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION	CAPITAL TRANSIT CONSULTANTS
CHECKED: R. KASHIF 8-30-03			SUBMITTED Dana C Mendes PROJECT MANAGER
APPROVED: P. ELNAN 01-2004			FINAL GENERAL PLANS JULY 2004

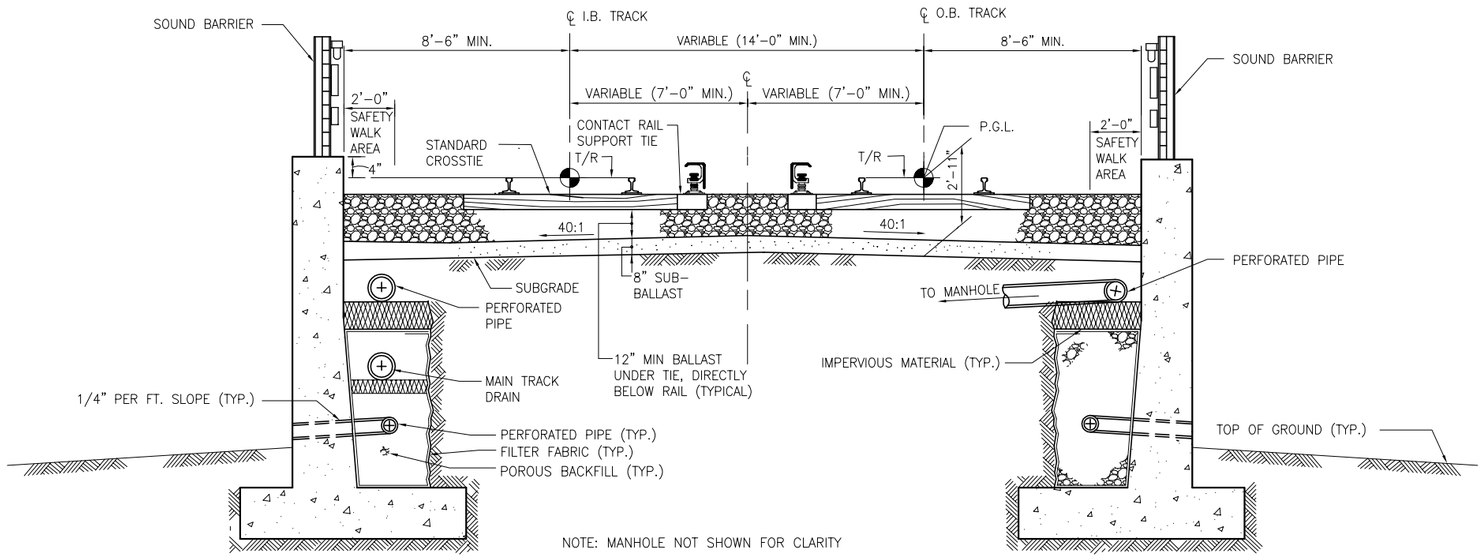
TPSS & TBS/RTC LOCATION PLAN
ORANGE LINE CONNECTION
01 ALIGNMENT
TBS 1, RTC 2, RTC 1

SCALE: 1":50' (25 0 25 50)

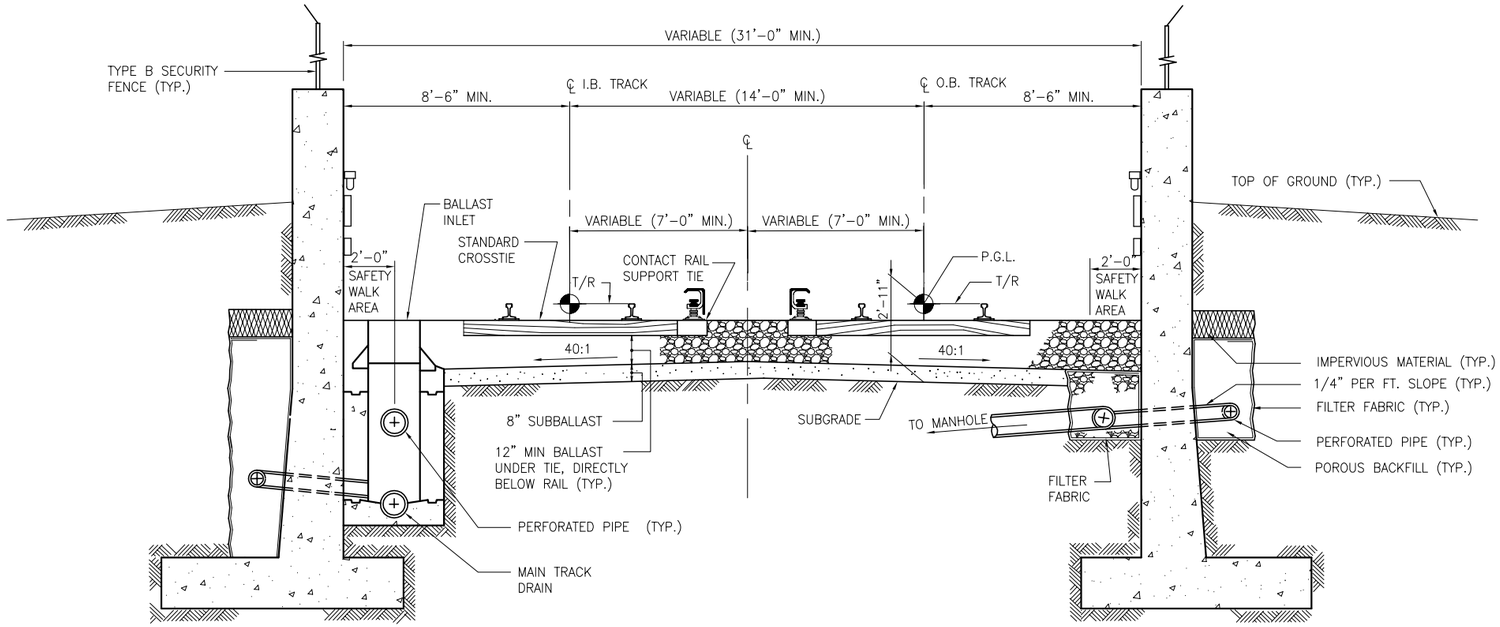
DRAWING NO.: GPN-C-110

183

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STANDARD ROADBED AND BALLAST SECTION IN RETAINED FILL



STANDARD ROADBED AND BALLAST SECTION IN RETAINED CUT

NOTE:

DUAL TRACK SECTION IS SHOWN. FOR THREE AND FOUR TRACK SECTIONS, SEE DRAWINGS GPN–C–050 AND GPN–C–001.

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: V. RATHBURN	10–10–01 DATE	
DRAWN: S. MURDAUGH	10–10–01 DATE	
CHECKED: B. PATEL	11–14–01 DATE	
APPROVED: P. ELMAN	5–2002 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

Diana C. Mendes

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

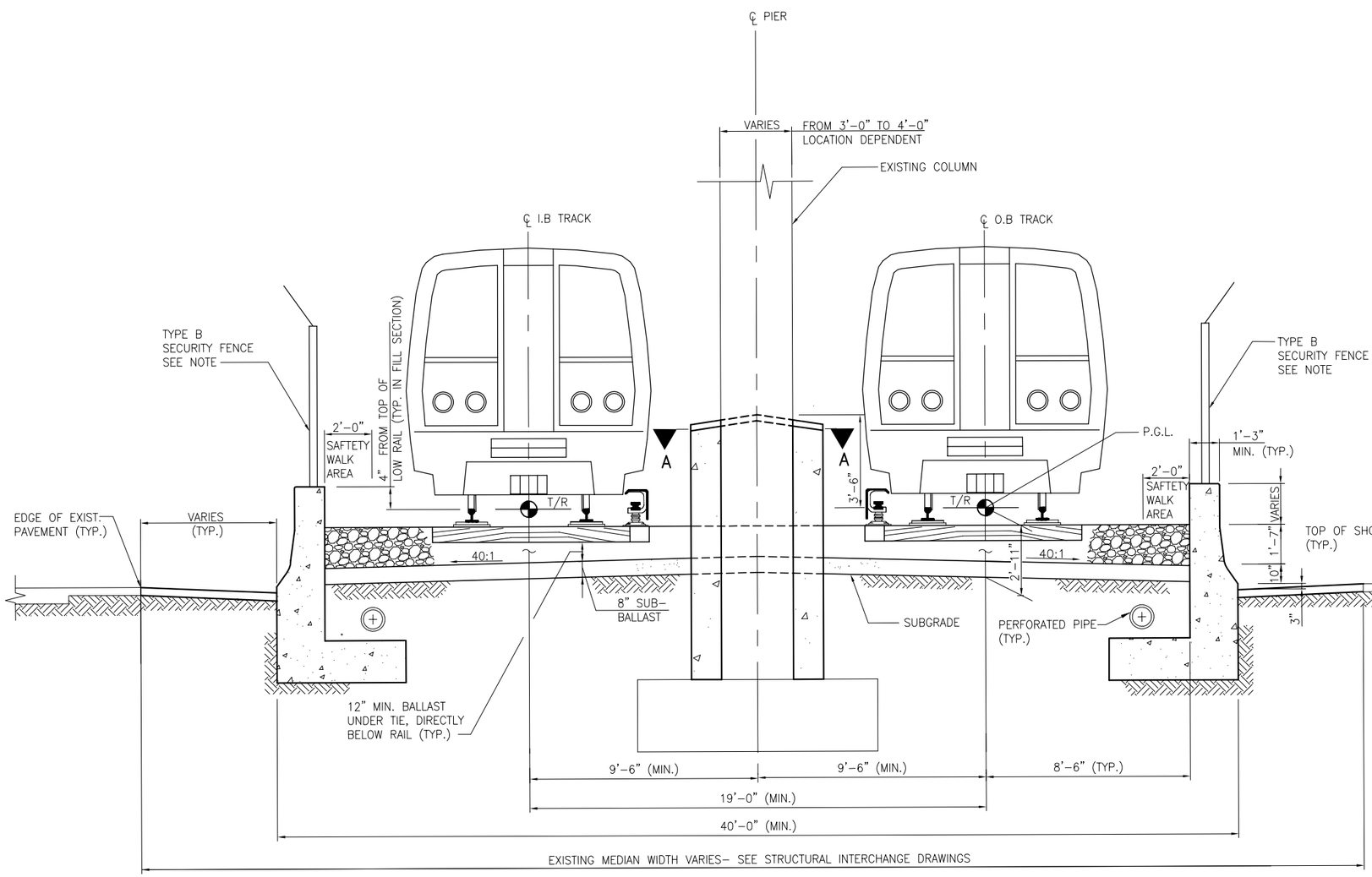
AT GRADE STRUCTURES
TYPICAL SECTIONS

SCALE: NOT TO SCALE

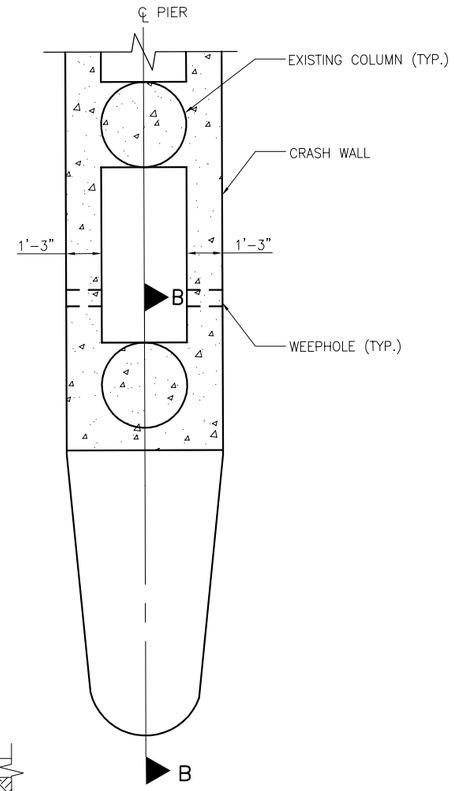
DRAWING NO.: GPN–S–001

300

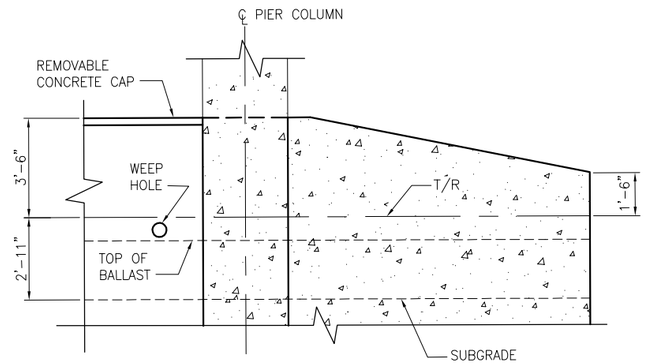
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TYPICAL CROSS SECTION



SECTION A-A



SECTION B-B

NOTE:

SOUND BARRIER MAY BE SUBSTITUTED FOR SECURITY FENCE IF REQUIRED BY NOISE ANALYSIS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: V. RATHBURN 10-10-01	REFERENCE DRAWINGS	REVISIONS
DRAWN: S. MURDAUGH 10-10-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: B. PATEL 11-08-01		
APPROVED: P. ELMAN 5-2002		

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JULY 2004

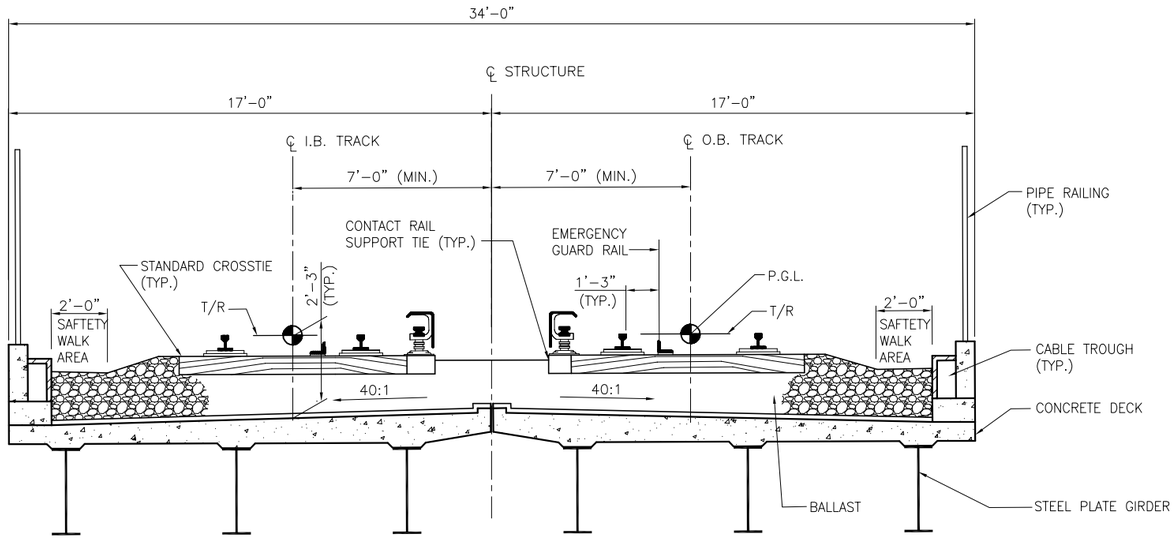
AT GRADE STRUCTURES
TYPICAL SECTIONS AT UNDERPASS

SCALE: 3/8"=1'-0" (1 0 1 2 3)

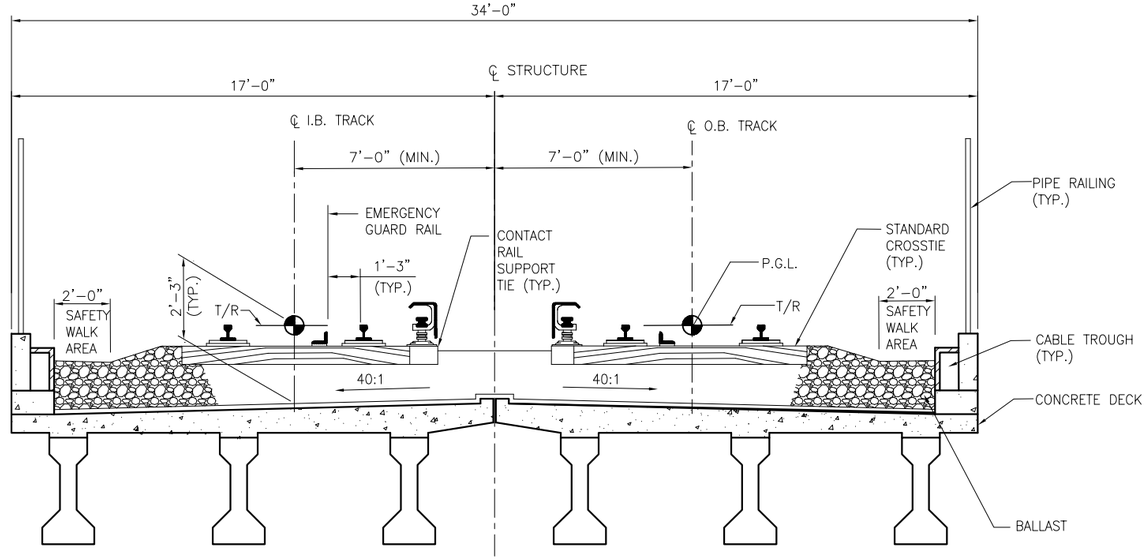
DRAWING NO.: GPN-S-002

301

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CROSS SECTION OF STEEL GIRDER BRIDGE



CROSS SECTION OF AASHTO GIRDER BRIDGE

NOTES:

1. BALLASTED BRIDGES SHALL BE CONSTRUCTED AT OVERPASS INTERCHANGES ALONG THE DULLES ACCESS ROAD AND THE DULLES GREENWAY.
2. SUPERSTRUCTURES CONSISTING OF CONCRETE DECK ON STEEL PLATE GIRDERS AND AASHTO PRE-STRESSED CONCRETE GIRDERS ARE SHOWN ON THESE PLANS. ADDITIONAL SUPERSTRUCTURE TYPES INCLUDING SEGMENTAL CONCRETE BOX GIRDERS SHOULD BE EVALUATED BY THE PRELIMINARY ENGINEERING DESIGNER AND SELECTED BASED ON LIFE-CYCLE COSTS AND CONSTRUCTABILITY.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: V. RATHBURN 10-10-01 DATE
DRAWN: S. MURDAUGH 10-10-01 DATE
CHECKED: B. PATEL 11-8-01 DATE
APPROVED: P. ELMAN 5-2002 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

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FINAL GENERAL PLANS
JULY 2004

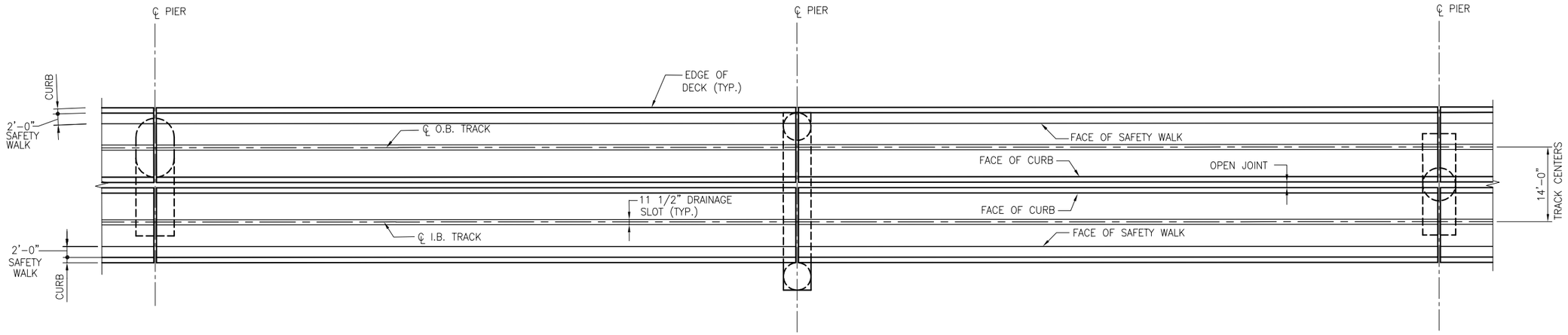
AERIAL STRUCTURES
TYPICAL BALLASTED BRIDGE SECTIONS

SCALE: 3/8"=1'-0" 1 0 1 2 3

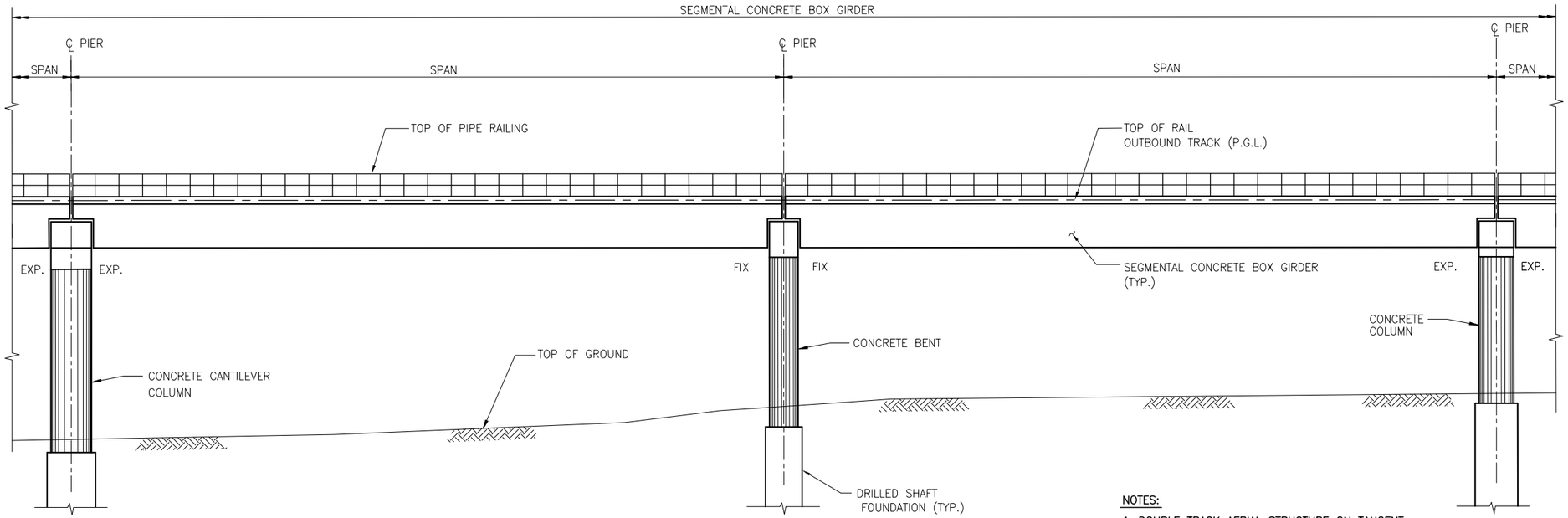
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302

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PLAN



ELEVATION

NOTES:

1. DOUBLE TRACK AERIAL STRUCTURE ON TANGENT ALIGNMENT SHOWN.
2. SEGMENTAL CONCRETE BOX GIRDERS SHOWN FOR REFERENCE ONLY.
3. SIMPLE SPANS ARE SHOWN. TWO SPAN OR THREE SPAN CONTINUOUS SUPERSTRUCTURE MAY BE DESIGNED AT CONTRACTOR'S OPTION.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: V. RATHBURN	10-10-01 DATE	
DRAWN: S. MURDAUGH	10-10-01 DATE	
CHECKED: B. PATEL	11-8-01 DATE	
APPROVED: P. ELMAN	5-2002 DATE	

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

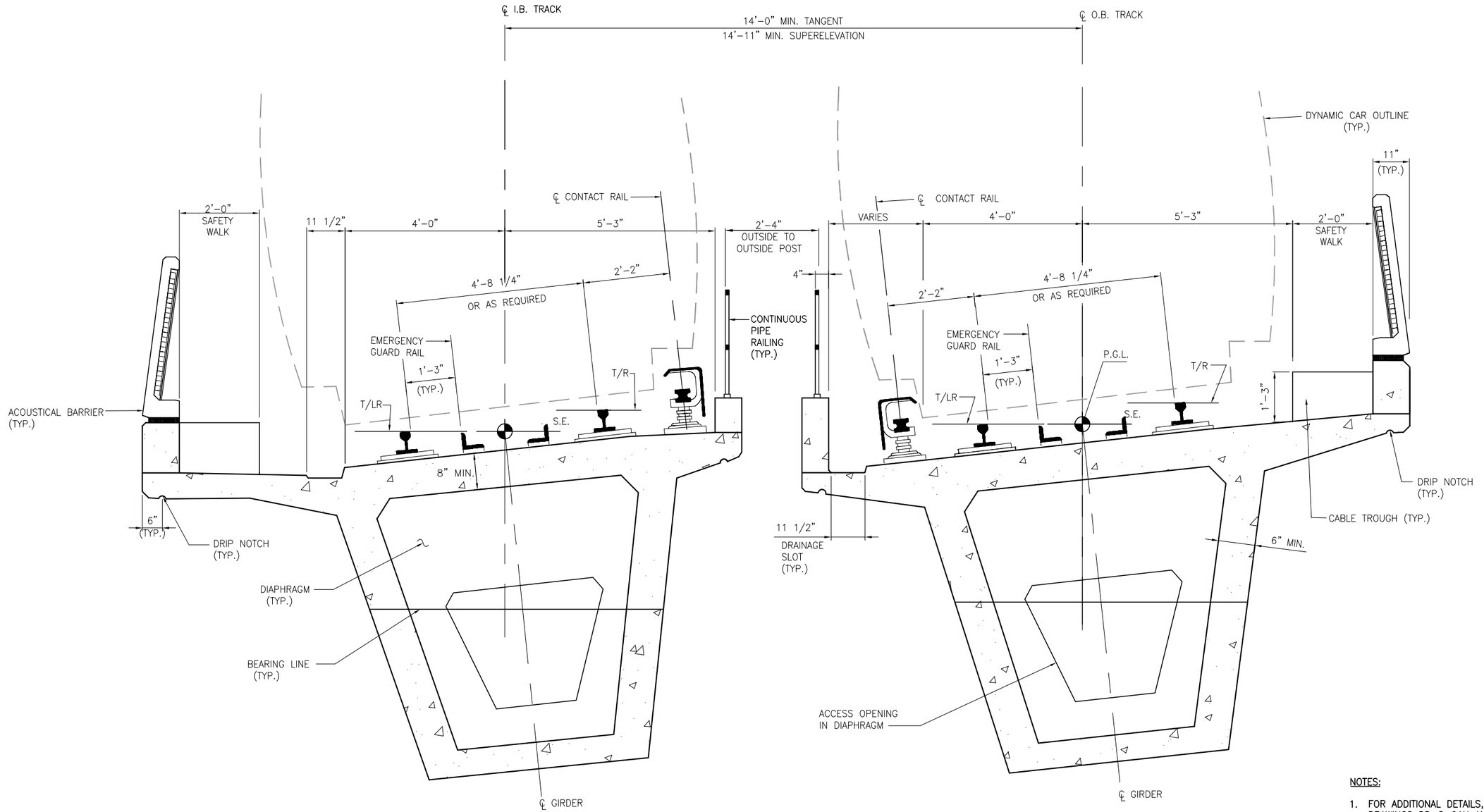
AERIAL STRUCTURES
SEGMENTAL GIRDER
PLAN AND ELEVATION

SCALE: 3/32"=1'-0" 2 0 2 6 10 14

DRAWING NO.: GPN-S-004

303

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TYPICAL CROSS SECTION
DOUBLE TRACK STRUCTURE
(SUPERELEVATED SECTION SHOWN, TANGENT SECTION SIMILAR)

NOTES:

1. FOR ADDITIONAL DETAILS, SEE WMATA DESIGN DRAWINGS DD–S–91H AND DD–S–191H.
2. CONCRETE BOX GIRDER SHOWN FOR REFERENCE ONLY. DESIGN BUILD CONTRACTOR SHALL DETERMINE TYPE, SIZE AND MATERIAL OF SUPERSTRUCTURE.

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: V. RATHBURN 10–10–01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: S. MURDAUGH 10–10–01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: B. PATEL 11–8–01 DATE		
APPROVED: P. ELMAN 5–2002 DATE		

SUBMITTED — CAPITAL TRANSIT CONSULTANTS — Diana C. Mendes — PROJECT MANAGER

DULLES CORRIDOR RAPID TRANSIT PROJECT

FINAL GENERAL PLANS
JULY 2004

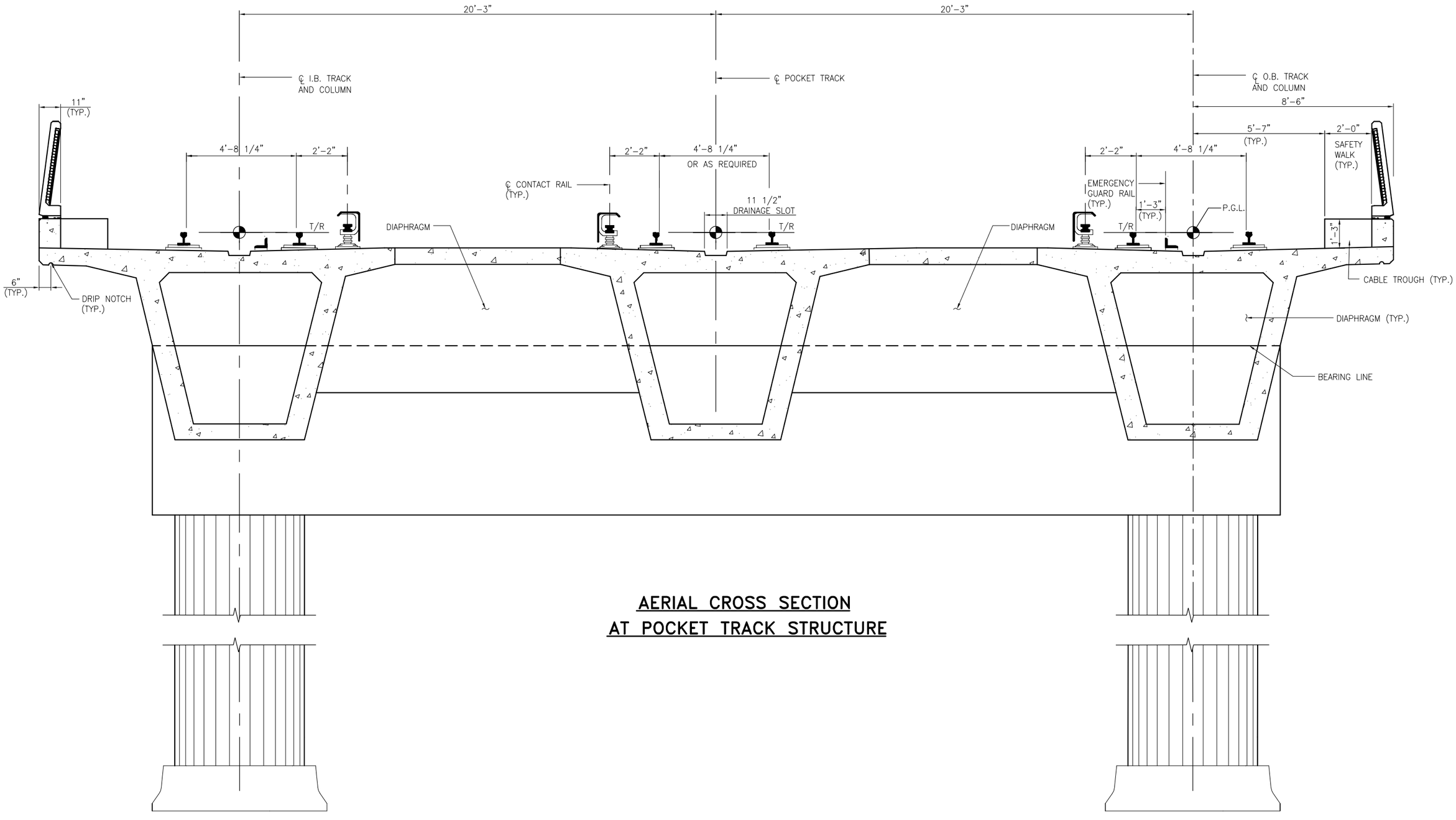
AERIAL STRUCTURES
TYPICAL SEGMENTAL GIRDER SECTION

SCALE: NOT TO SCALE

DRAWING NO.: GPN–S–005

304

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AERIAL CROSS SECTION AT POCKET TRACK STRUCTURE

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: V. RATHBURN	10-10-01 DATE	
DRAWN: S. MURDAUGH	10-10-01 DATE	
CHECKED: B. PATEL	11-8-01 DATE	
APPROVED: P. ELMAN	5-2002 DATE	

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

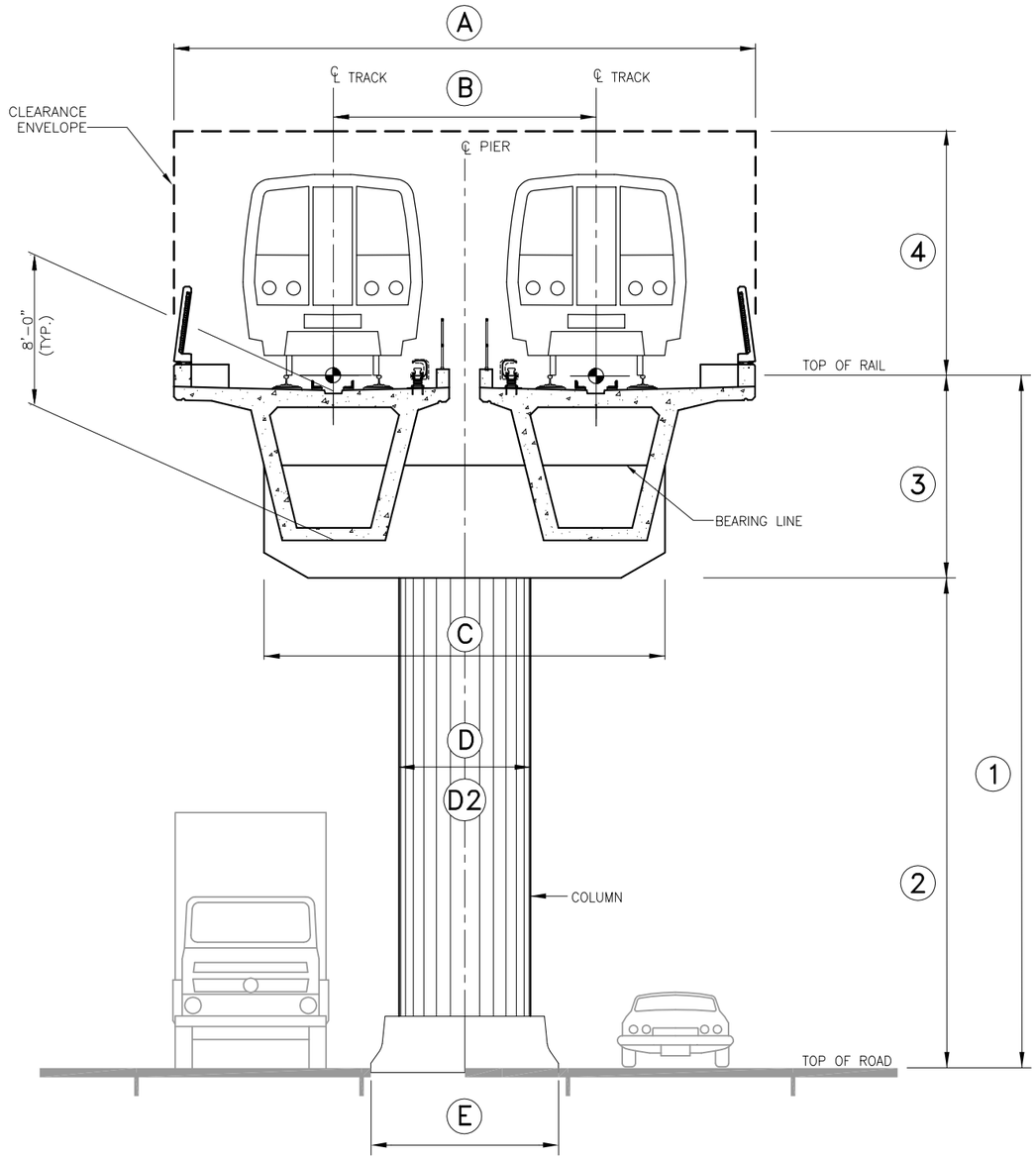
AERIAL STRUCTURES
POCKET TRACK
SECTION

SCALE: 1/2"=1'-0" (1 6" 0 1 2)

DRAWING NO.: GPN-S-045

305

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DOUBLE TRACK BEAMS ON SINGLE COLUMN

SPACE PLANNING FOR PRELIMINARY ALIGNMENT DEVELOPMENT					
AERIAL STRUCTURES (120' SPAN)		TWO TRACKS, SINGLE COLUMN		ONE TRACK, SINGLE COLUMN	
HEIGHT (FEET)					
1	ROAD SURFACE TO TOP OF RAIL (MINIMUM)	28	–	26	–
2	ROAD SURFACE TO SOFFIT OF STRUCTURE(MIN)	17	–	17	–
3	STRUCTURE DEPTH (FROM TOP OF RAIL)	11	–	9	–
4	VERTICAL CLEARANCE ABOVE TOP OF RAIL	13	–	13	–
WIDTH (FEET)					
	CURVE RADII	TANGENT	755 FT	TANGENT	755 FT
A	CAR/DECK CLEARANCE	31	34	17	19
B	TRACK CENTERS	14	15	N/A	N/A
C	WIDTH OF BEAM(S)	24	24	10	10
D	CIRCULAR COLUMN DIA. (HEIGHT 17'–50')	7	9	6	8
D2	CIRCULAR COLUMN DIA. (HEIGHT > 50')	8	10	7	9
E	STRUCTURE WIDTH AT ROADWAY	D + 4	D + 4	D + 4	D + 4

NOTES:

1. FOR SINGLE TRACK ON SINGLE COLUMN, SEE DWG. GPN–S–007.
2. FOR ADDITIONAL SUPERSTRUCTURE DETAILS, SEE DWG. GPN–S–005.

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: V. RATHBURN 10–10–01 DATE
DRAWN: A. JOHNSON 10–10–01 DATE
CHECKED: B. PATEL 11–8–01 DATE
APPROVED: P. ELMAN 5–2002 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

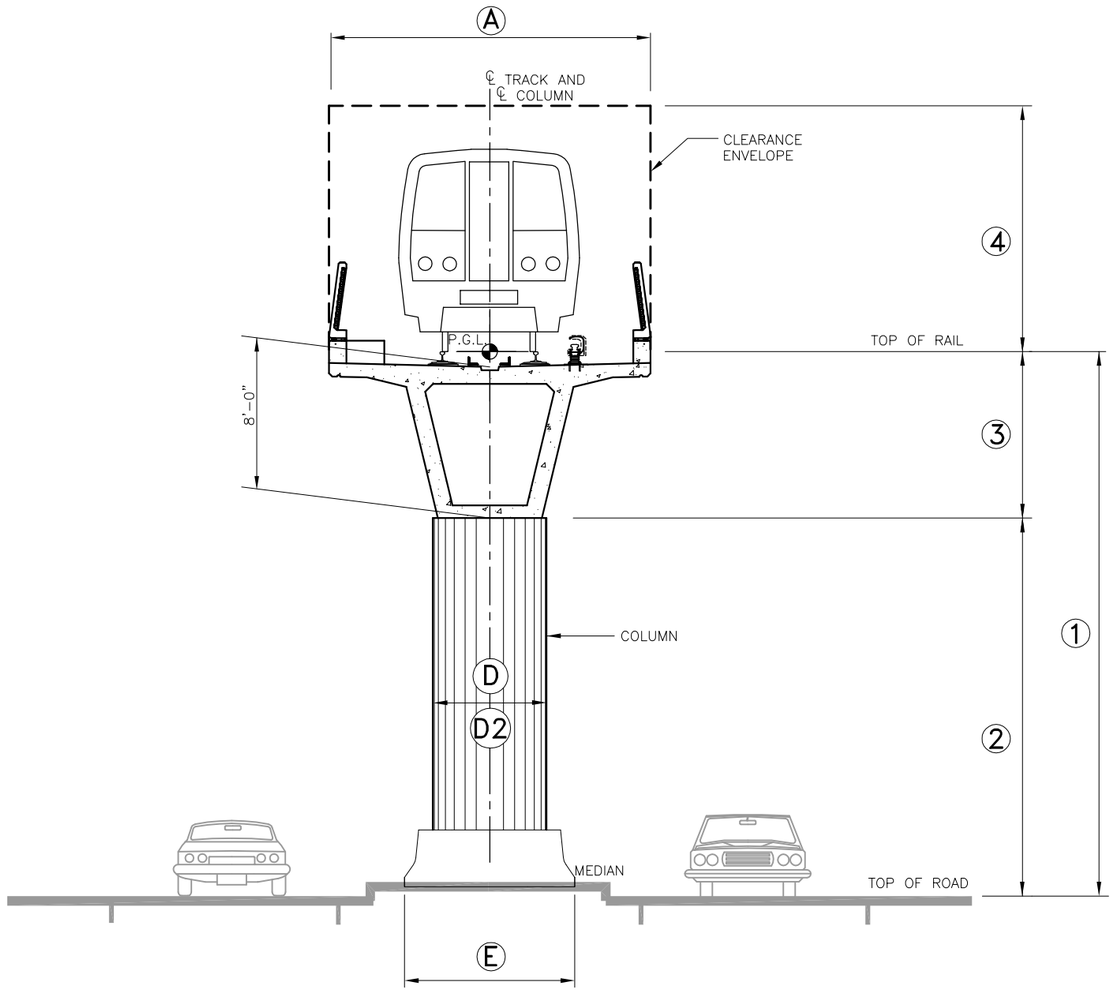
AERIAL STRUCTURES
DOUBLE TRACKS ON SINGLE COLUMN

SCALE: 1/4"=1'–0" 1' 0 1' 2' 3' 4' 5'

DRAWING NO.: GPN–S–006

306

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SINGLE TRACK BEAM ON SINGLE COLUMN

NOTES:

1. FOR VARIABLE VALUES, SEE TABLE ON DWG. GPN–S–006.
2. FOR ADDITIONAL SUPERSTRUCTURE DETAILS, SEE DWG. GPN–S–005.

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: V. RATHBURN 10–10–01	REFERENCE DRAWINGS	REVISIONS
DRAWN: A. JOHNSON 10–10–01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: B. PATEL 11–8–01		
APPROVED: P. ELMAN 5–2002		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

AERIAL STRUCTURES
SINGLE TRACK ON SINGLE COLUMN

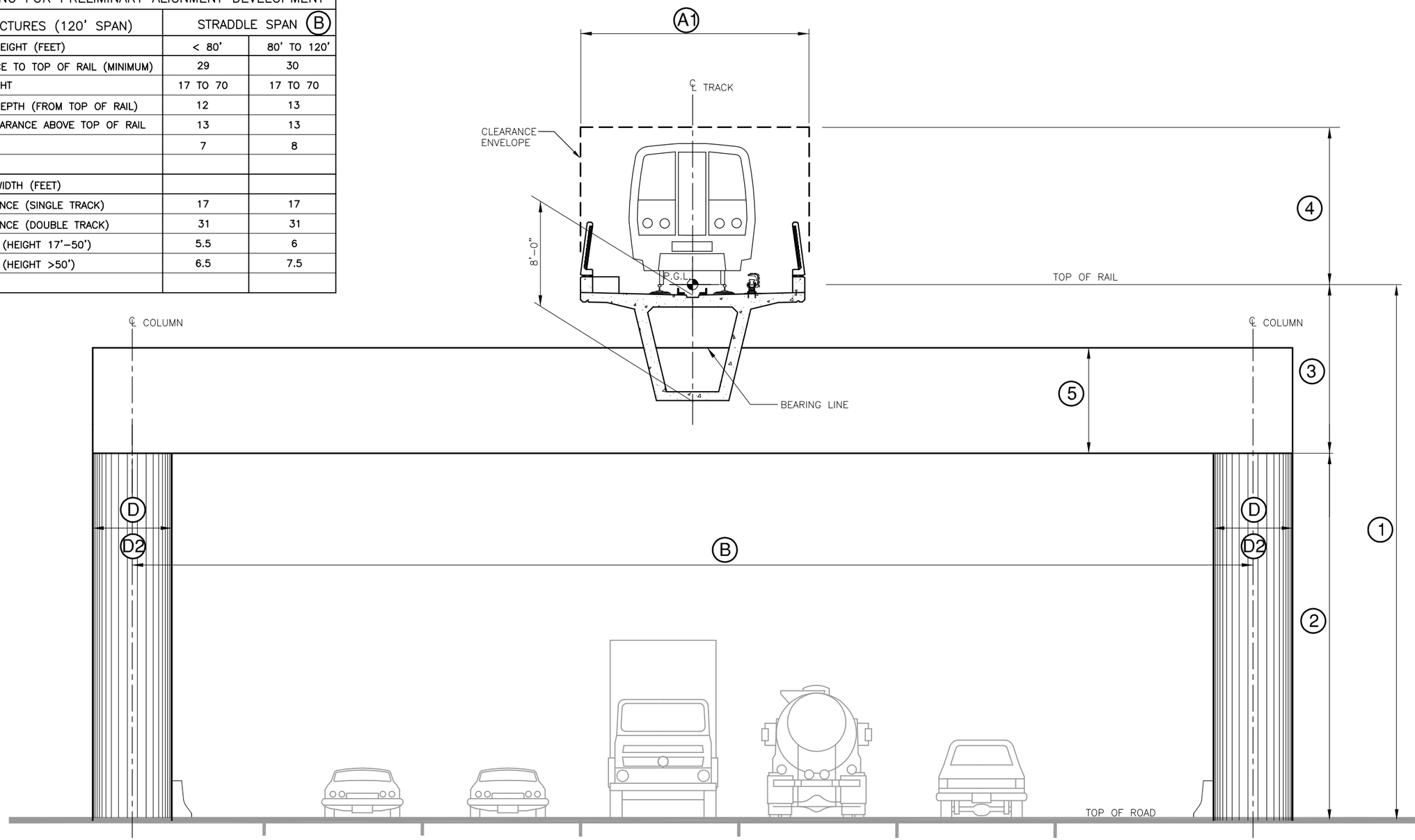
SCALE: 1/4"=1'-0" 1 0 1 2 3 4 5

DRAWING NO.: GPN–S–007

307

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SPACE PLANNING FOR PRELIMINARY ALIGNMENT DEVELOPMENT			
AERIAL STRUCTURES (120' SPAN)		STRADDLE SPAN (B)	
HEIGHT (FEET)		< 80'	80' TO 120'
1	ROAD SURFACE TO TOP OF RAIL (MINIMUM)	29	30
2	COLUMN HEIGHT	17 TO 70	17 TO 70
3	STRUCTURE DEPTH (FROM TOP OF RAIL)	12	13
4	VERTICAL CLEARANCE ABOVE TOP OF RAIL	13	13
5	BENT DEPTH	7	8
WIDTH (FEET)			
A1	DECK CLEARANCE (SINGLE TRACK)	17	17
A2	DECK CLEARANCE (DOUBLE TRACK)	31	31
D	COLUMN DIA. (HEIGHT 17'–50')	5.5	6
D2	COLUMN DIA. (HEIGHT >50')	6.5	7.5



SINGLE TRACK BEAM ON STRUCTURAL BENT

NOTE: DOUBLE TRACK SIMILAR

NOTE:

FOR ADDITIONAL SUPERSTRUCTURE DETAILS, SEE DWG. GPN–S–005.

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: V. RATHBURN	10–10–01	
DRAWN: A. JOHNSON	10–10–01	
CHECKED: B. PATEL	11–8–01	
APPROVED: P. ELMAN	5–2002	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

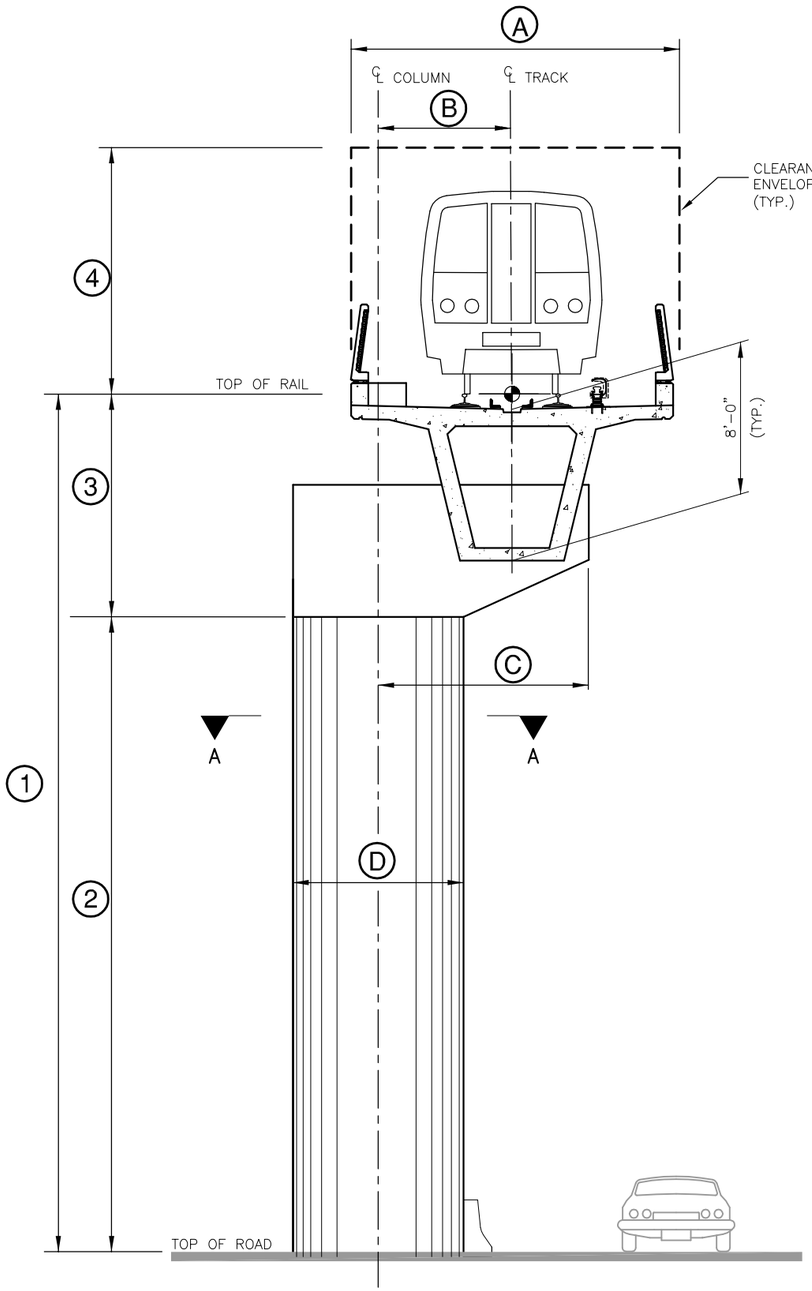
AERIAL STRUCTURES
TYPICAL BENT STRUCTURE

SCALE: 1/4"=1'–0" 1 0 1 2 3 4 5

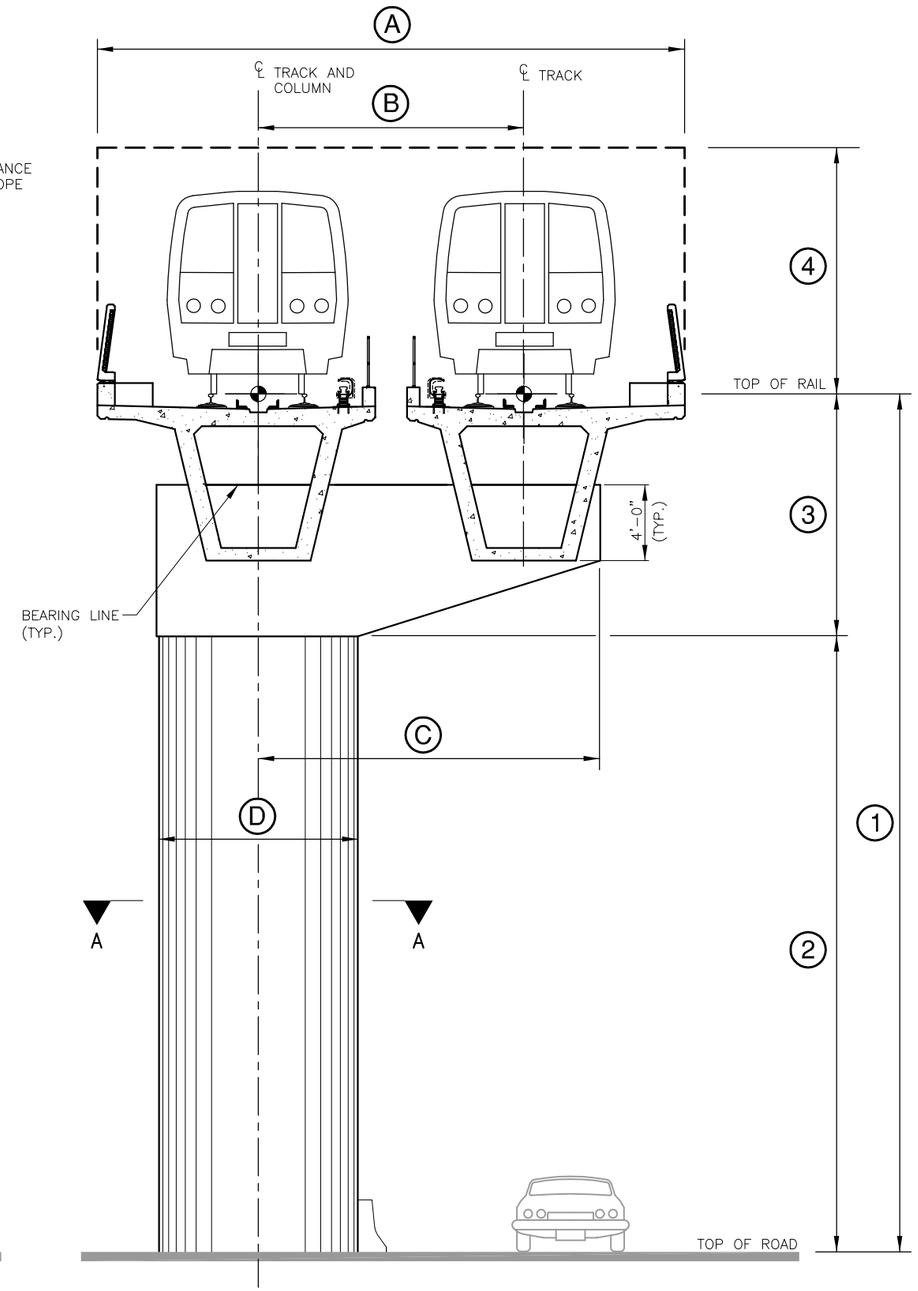
DRAWING NO.: GPN–S–008

308

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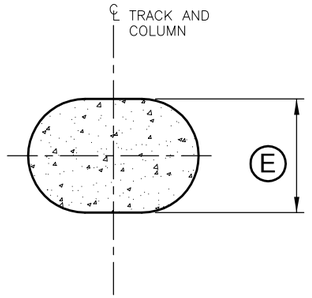


SINGLE TRACK BEAM ON CANTILEVER COLUMN



DOUBLE TRACK BEAM ON CANTILEVER COLUMN

SPACE PLANNING FOR PRELIMINARY ALIGNMENT DEVELOPMENT			
	AERIAL STRUCTURES (120' SPAN)	ONE TRACK, SINGLE COLUMN	TWO TRACKS SINGLE COLUMN
	HEIGHT (FEET)		
1	ROAD SURFACE TO TOP OF RAIL (MINIMUM)	29	30
2	ROAD SURFACE TO SOFFIT OF STRUCTURE	17 TO 50	17 TO 50
3	STRUCTURE DEPTH (FROM TOP OF RAIL)	12	13
4	VERTICAL CLEARANCE ABOVE TOP OF RAIL	13	13
	WIDTH (FEET)		
A	CAR/DECK CLEARANCE	17	31
B	CANTILEVER OFFSET (MAX.)	8	15
C	WIDTH OF PIER CAP	12	18
D	TRANSVERSE COLUMN WIDTH	9	11
E	LONGITUDINAL COLUMN WIDTH	6	7



SECTION A–A
NOT TO SCALE

NOTE:

FOR ADDITIONAL SUPERSTRUCTURE DETAILS, SEE DWG. GPN–S–005.

HALF–SIZE DRAWING

CONTRACT NO.:

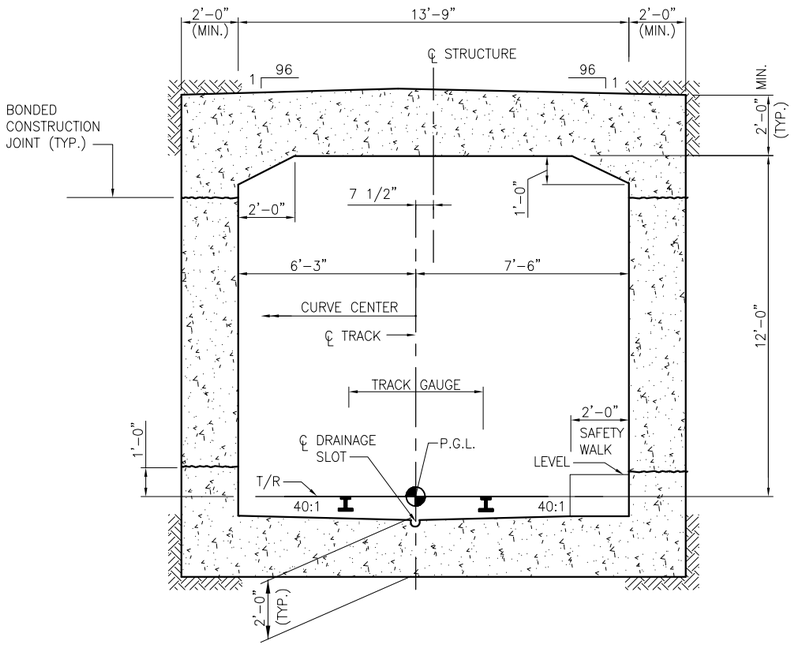
DESIGNED: V. RATHBURN 10–10–01 DATE	REFERENCE DRAWINGS: NUMBER / DESCRIPTION	REVISIONS: DATE / BY / DESCRIPTION	DULLES CORRIDOR RAPID TRANSIT PROJECT
DRAWN: A. JOHNSON 10–10–01 DATE			CAPITAL TRANSIT CONSULTANTS
CHECKED: B. PATEL 11–08–01 DATE			SUBMITTED Diana C. Mendes PROJECT MANAGER
APPROVED: P. ELMAN 5–2002 DATE			FINAL GENERAL PLANS JULY 2004

AERIAL STRUCTURES
CANTILEVER COLUMN

SCALE: 1/4"=1'-0" (1 0 1 2 3 4 5)

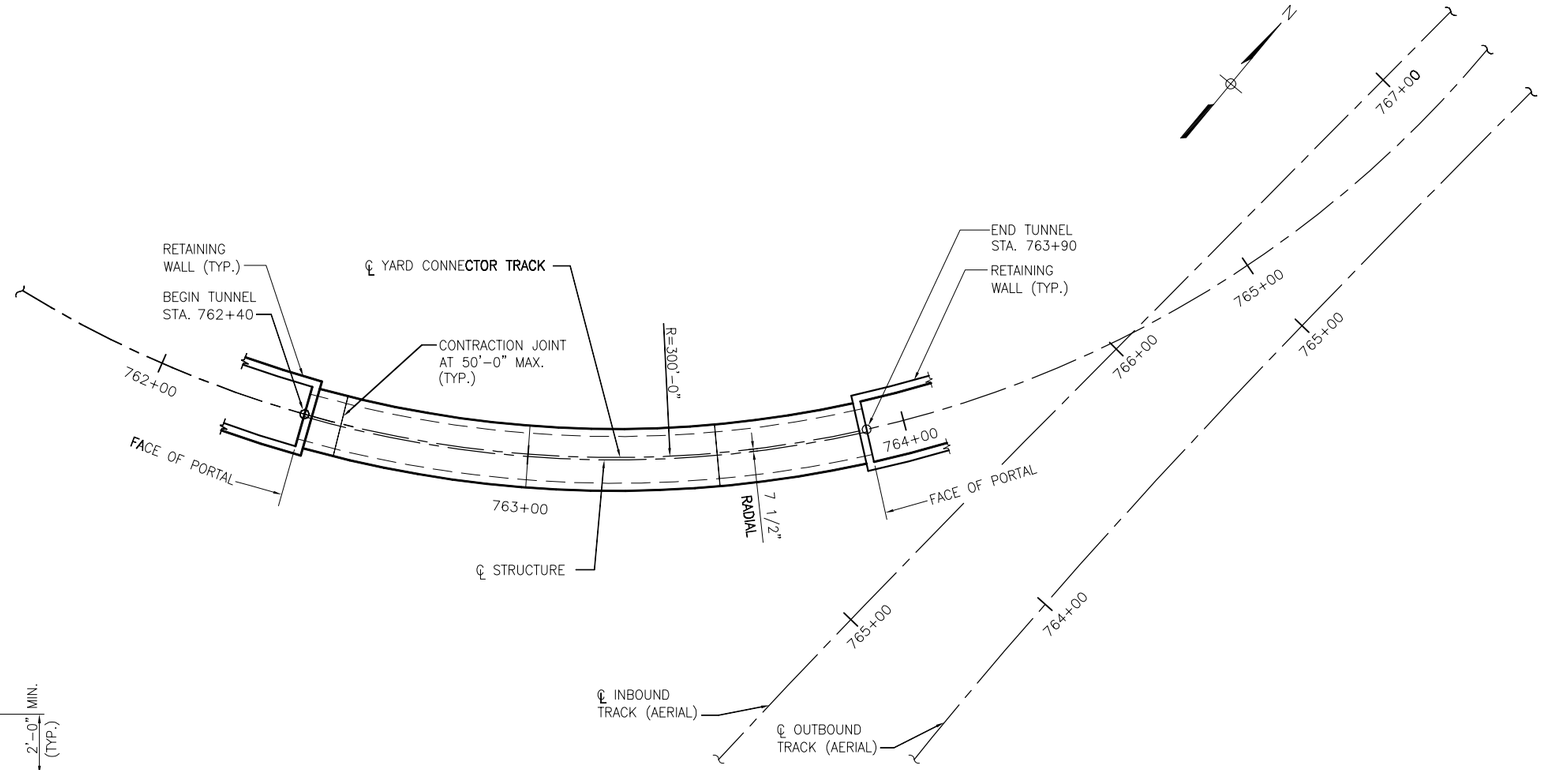
DRAWING NO.: GPN–S–009 309

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TYPICAL CROSS SECTION

SCALE: 3/8" = 1'-0"



PLAN

NOTES:

1. SINGLE BOX CUT AND COVER TUNNEL FOR YARD CONNECTOR FOR Y7 YARD TRACK IS SHOWN. THE TUNNEL FOR THE Y20 YARD CONNECTOR TRACKS IS SIMILAR.
2. DOUBLE BOX CUT AND COVER TUNNELS ARE SIMILAR EXCEPT THAT A VERTICAL WALL SEPARATES THE TWO BOXES.
3. FOR ADDITIONAL DETAILS, SEE WMATA DESIGN DRAWING DD-S-14.
4. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWG. GPN-PP-061.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: V. RATHBURN 10-10-01 DATE	REFERENCE DRAWINGS: NUMBER / DESCRIPTION	REVISIONS: DATE / BY / DESCRIPTION
DRAWN: S. MURDAUGH 10-10-01 DATE		
CHECKED: B. PATEL 11-8-01 DATE		
APPROVED: P. ELMAN 5-2002 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

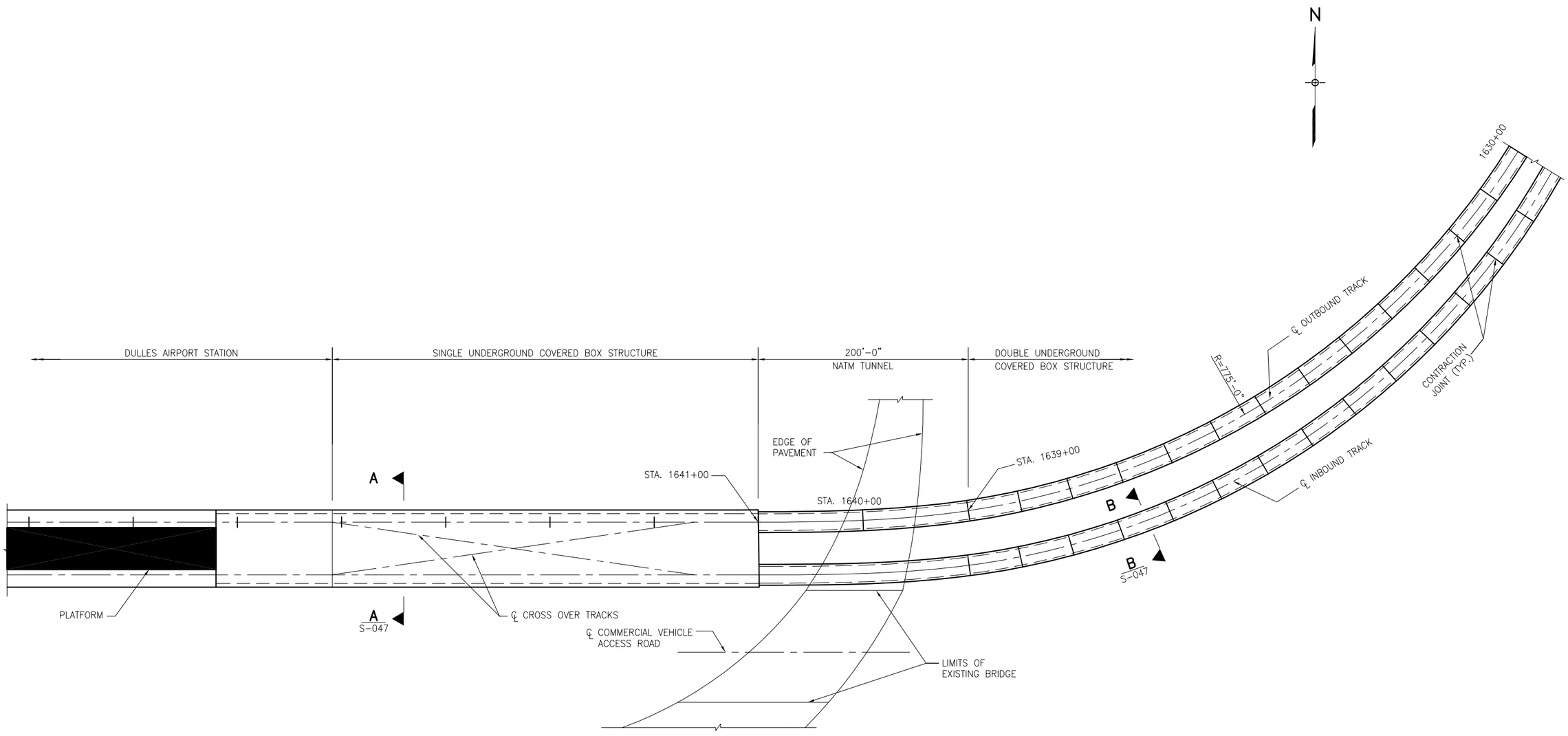
UNDERGROUND STRUCTURES
01 ALIGNMENT YARD CONNECTOR
CUT AND COVER BOX
PLAN AND SECTION

SCALE: 1"=20'-0" AND AS NOTED 10 0 10 20

DRAWING NO.: GPN-S-010

310

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PLAN

NOTES:

1. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWG. GPN-PP-016.
2. FOR NATM TUNNEL DETAILS, SEE DWG. GPN-S-048.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: B. PATEL 10-10-01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: S. MURDAUGH 10-10-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: V. RATHBURN 11-11-01 DATE		
APPROVED: P. ELMAN 5-2002 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

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SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

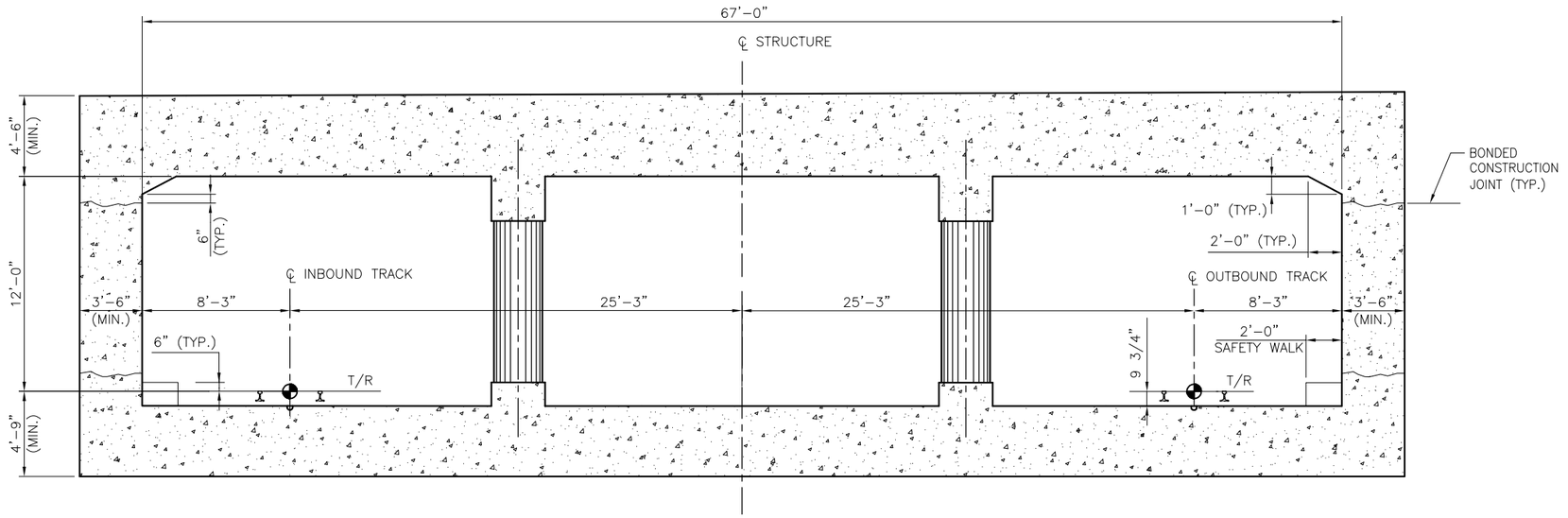
UNDERGROUND STRUCTURES
AIRPORT ALIGNMENT
CUT AND COVER BOX
PLAN

SCALE: 1"=50'-0" 25 0 25 50

DRAWING NO.: GPN-S-046

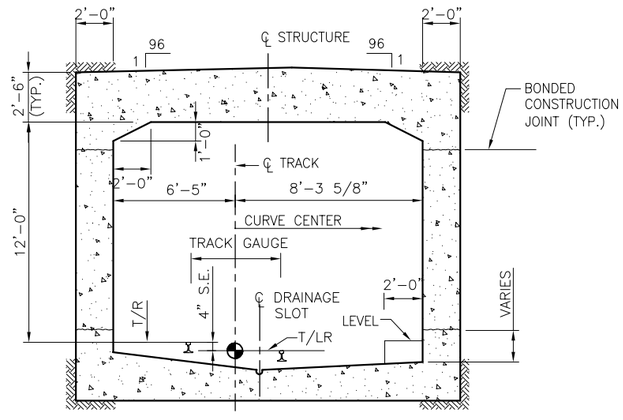
311

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SECTION A–A

S–046



SECTION B–B

S–046

NOTES:

FOR ADDITIONAL CUT AND COVER BOX DETAILS, SEE WAMATA DESIGN DRAWING DD–S–14.

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: B. PATEL	10–10–01 DATE	
DRAWN: S. MURDAUGH	10–10–01 DATE	
CHECKED: V. RATHBURN	11–9–01 DATE	
APPROVED: P. ELMAN	5–2002 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

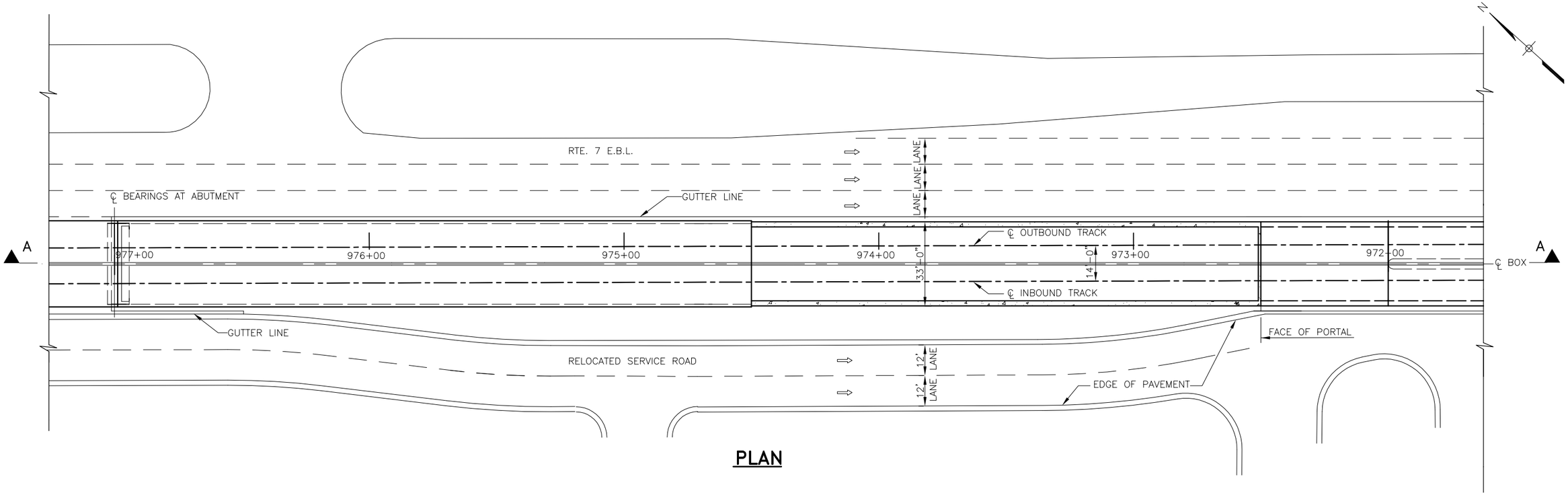
UNDERGROUND STRUCTURES
AIRPORT ALIGNMENT
CUT AND COVER BOX
SECTIONS

SCALE: 1/4"=1'-0" 0 2" 4" 6"

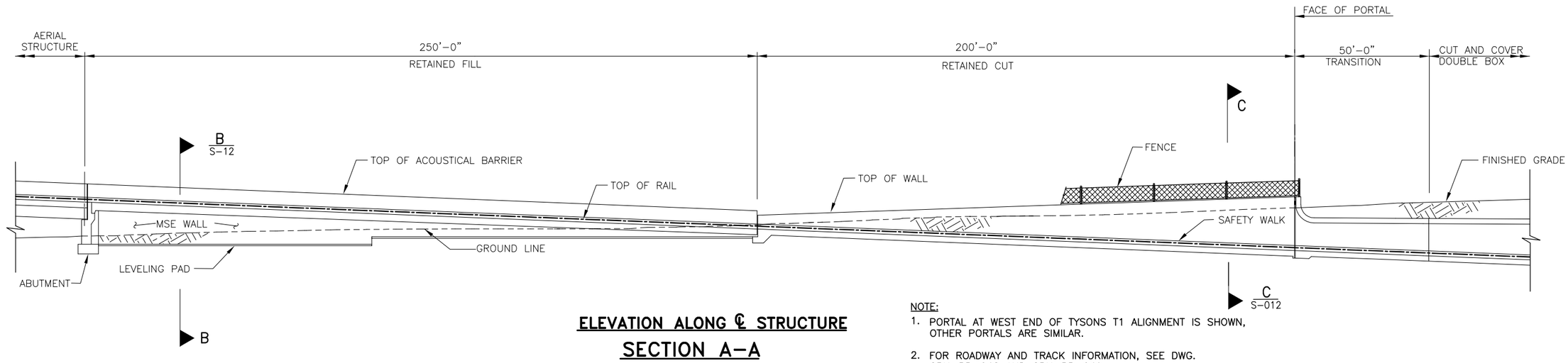
DRAWING NO.: GPN–S–047

312

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PLAN



ELEVATION ALONG ℄ STRUCTURE
SECTION A–A

NOTE:

1. PORTAL AT WEST END OF TYSONS T1 ALIGNMENT IS SHOWN, OTHER PORTALS ARE SIMILAR.
2. FOR ROADWAY AND TRACK INFORMATION, SEE DWG. GPN–PP–048 AND GPN–PP–049.
3. FOR ADDITIONAL DETAILS, SEE WMATA DESIGN DRAWING DD–S–64.

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: B. PATEL	10–10–01	
DRAWN: D. HAWKINS	10–10–01	
CHECKED: V. RATHBURN	12–05–01	
APPROVED: P. ELMAN	5–2002	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

SUBMITTED — CAPITAL TRANSIT CONSULTANTS

Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

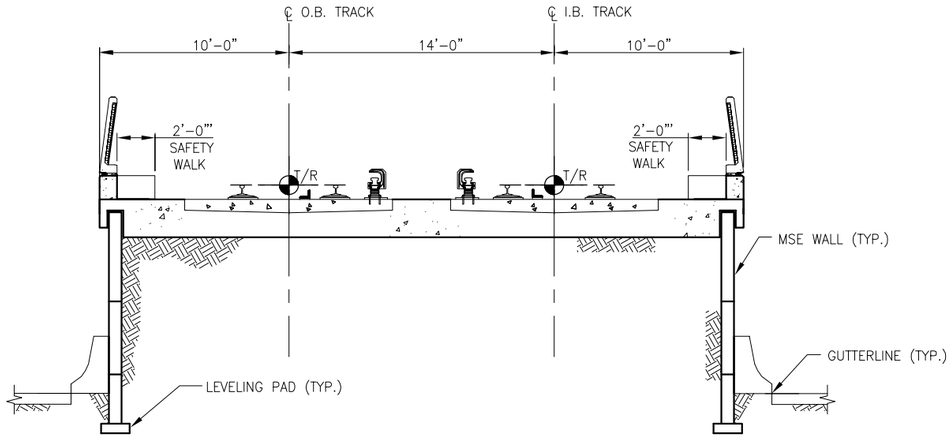
UNDERGROUND STRUCTURES
WEST TUNNEL PORTAL – T1 ALIGNMENT
PLAN AND ELEVATION

SCALE: 1"=20'–0" (10 0 10 20)

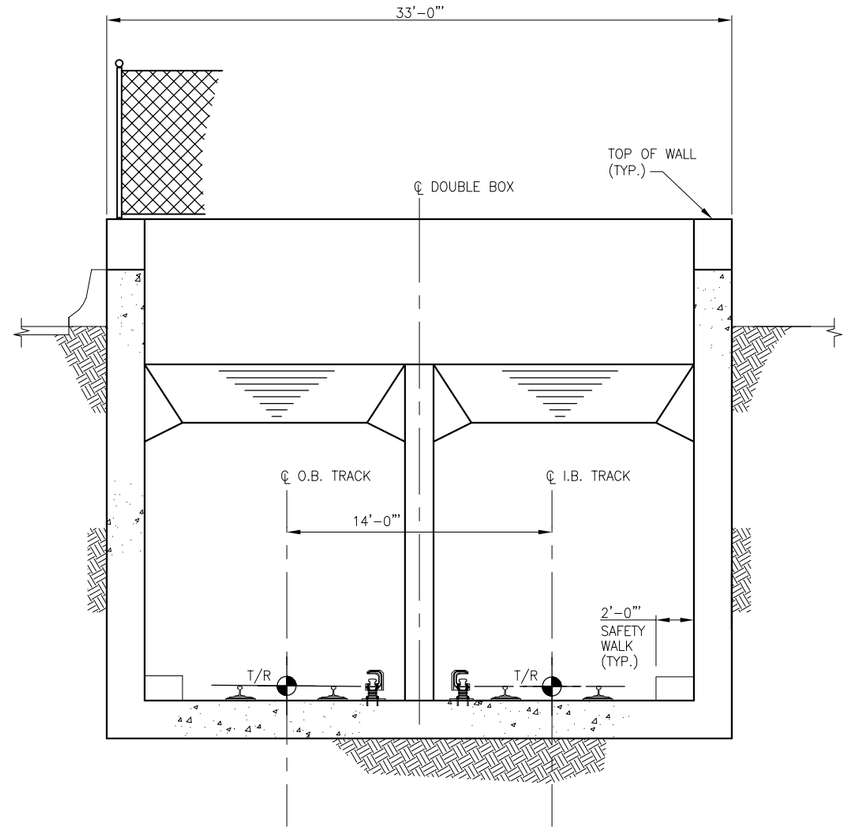
DRAWING NO.: GPN–S–011

313

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SECTION B–B
S–011



SECTION C–C
S–011

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: B. PATEL 10–10–01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: D. HAWKINS 10–10–01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: V. RATHBURN 1–5–02 DATE		
APPROVED: P. ELMAN 5–2002 DATE		

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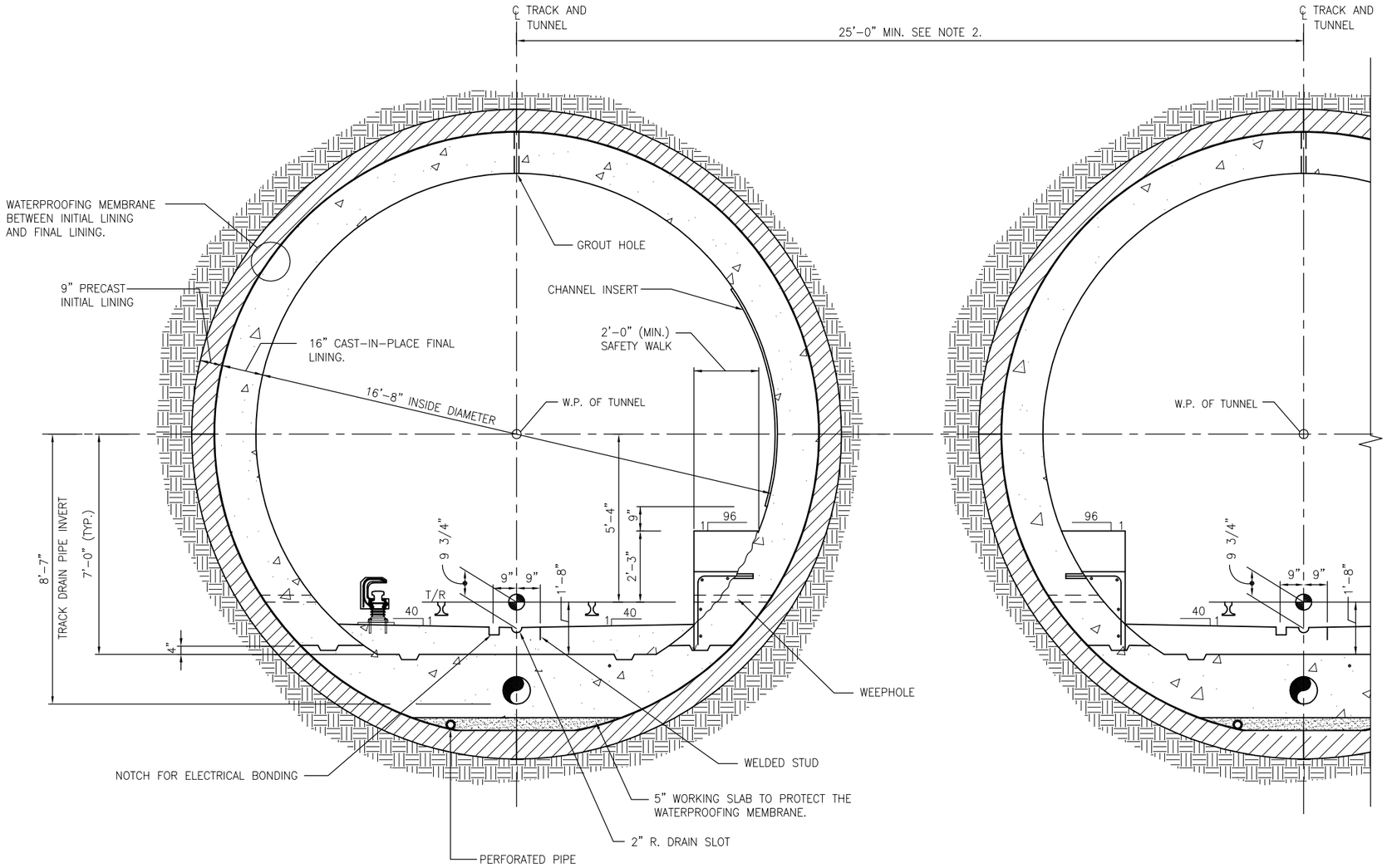
UNDERGROUND STRUCTURES
WEST TUNNEL PORTAL – T1 ALIGNMENT
SECTIONS

SCALE: 1/4"=1'–0" 1 0 1 2 3 4 5

DRAWING NO.: GPN–S–012

314

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TYPICAL TANGENT TUNNEL SECTION

NOTES:

1. FOR ADDITIONAL DETAILS, SEE WMATA DESIGN DRAWING DD-S-123.
2. BORED TWIN TUNNELS CONSTRUCTED WITH TUNNEL BORING MACHINES MAY BE USED FOR UNDERGROUND ALIGNMENTS WITH TRACK CENTERS GREATER THAN 25'-0". AT OTHER LOCATIONS, ALTERNATE TUNNEL TYPES AND CONSTRUCTION METHODS SUCH AS CUT AND COVER BOXES AND NATM SHALL BE USED.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: V. RATHBURN 10-10-01 DATE	REFERENCE DRAWINGS: NUMBER / DESCRIPTION	REVISIONS: DATE / BY / DESCRIPTION
DRAWN: S. MURDAUGH 10-10-01 DATE		
CHECKED: B. PATEL 11-8-01 DATE		
APPROVED: P. ELMAN 5-2002 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

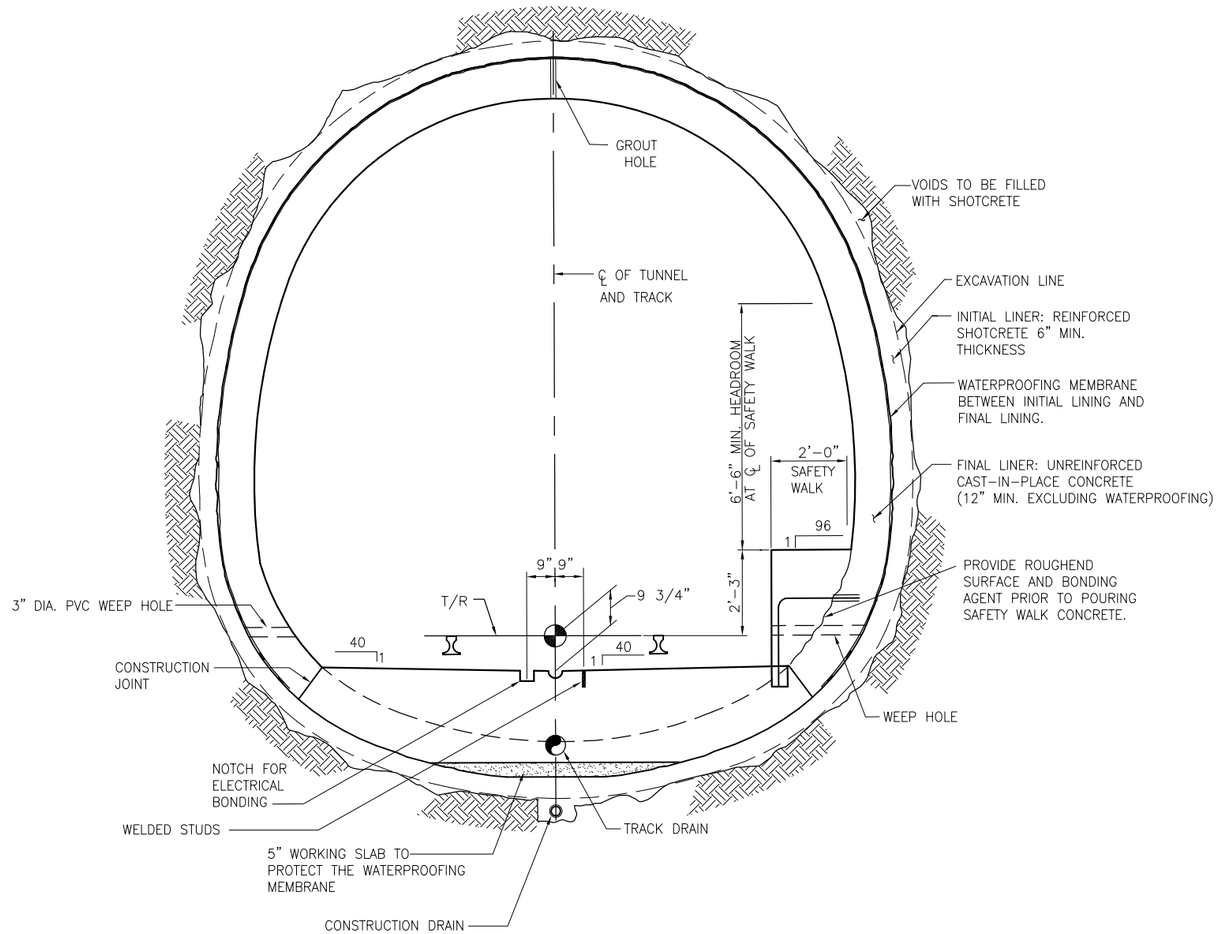
SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

UNDERGROUND STRUCTURES
TYPICAL CIRCULAR TUNNEL CROSS SECTION

SCALE:	DRAWING NO.:	
NOT TO SCALE	GPN-S-013	315

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TUNNEL CROSS SECTION

NOTE:

1. FOR ADDITIONAL DETAILS AND NOTES, SEE WAMATA DESIGN DRAWING DD-S-121.
2. FOR LOCATIION OF PROPOSED NATM TUNNEL, SEE DWG. GPN-S-046. NATM TUNNELS MAY BE USED AT OTHER LOCATIONS AS DETERMINED BY THE DESIGN BUILD CONTRACTOR.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: B. PATEL 10-10-01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: D. HAWKINS 10-10-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: V. RATHBURN 12-04-02 DATE		
APPROVED: P. ELMAN 5-2002 DATE		

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CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

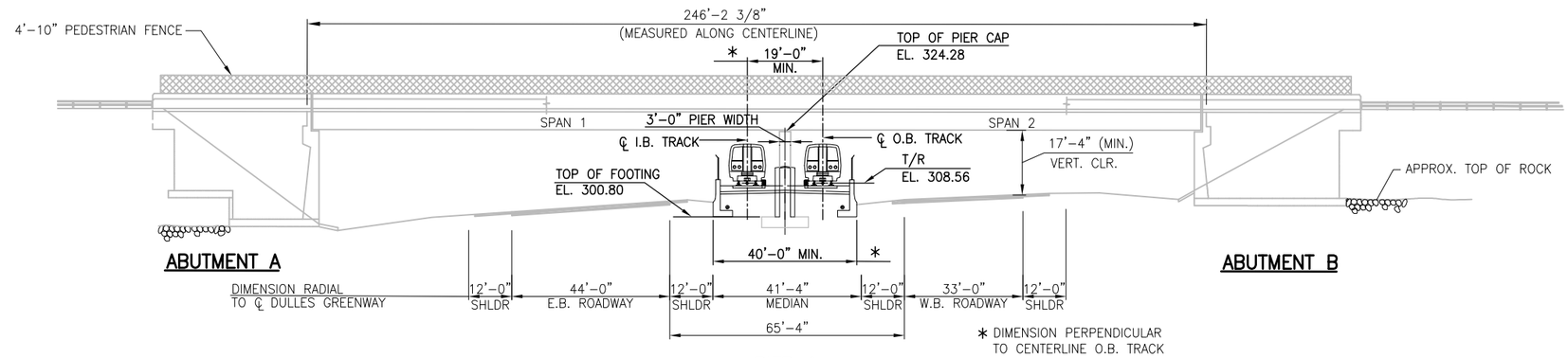
UNDERGROUND STRUCTURES
NATM TUNNEL
CROSS SECTION

SCALE: 1/2"=1'-0" 6" 0 1

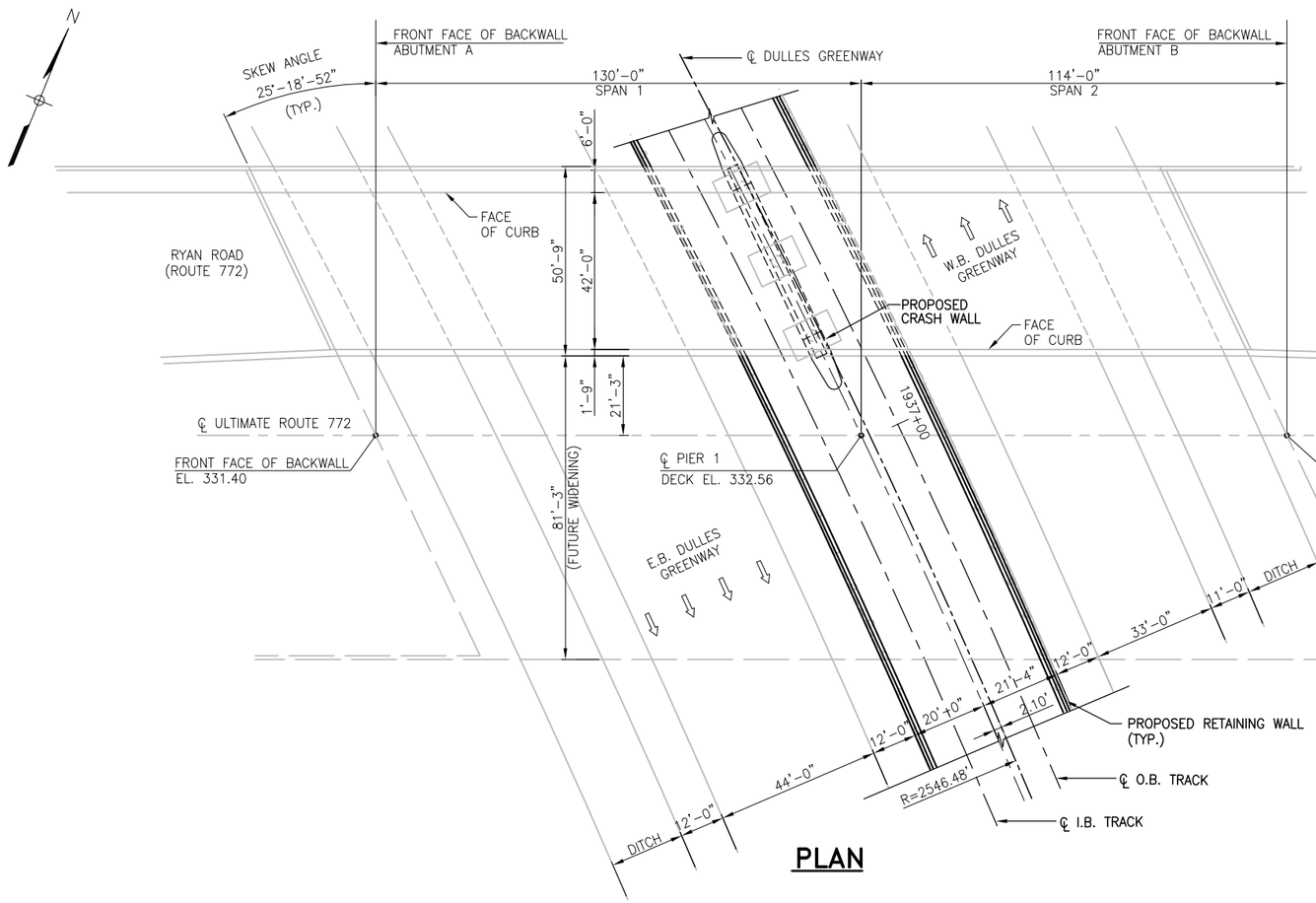
DRAWING NO.: GPN-S-048

316

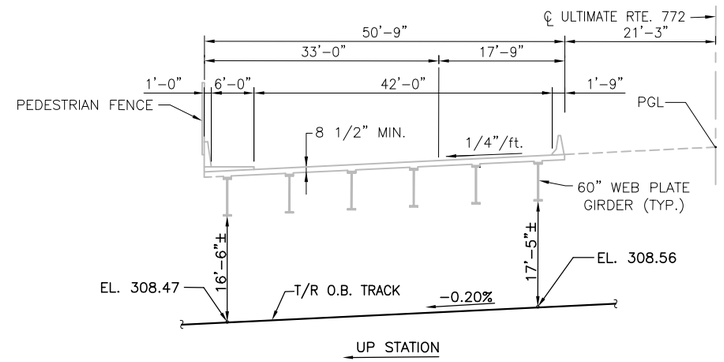
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PIER 1
ELEVATION



PLAN



TYPICAL CROSS SECTION
SCALE: 3/32"=1'-0"

NOTES:

1. EXISTING SUPERSTRUCTURE CONSISTS OF CONCRETE DECK ON STEEL PLATE GIRDERS.
2. FOOTINGS FOR THE EXISTING PIER REST ON SOLID ROCK.
3. INFORMATION ON THIS DRAWING HAS BEEN OBTAINED FROM THE AVAILABLE EXISTING BRIDGE DRAWINGS.
4. FOR CROSS SECTION OF TYPICAL UNDERPASS SECTION, SEE DWG. GPN-S-002.
5. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWG. GPN-PP-001.
6. SUBSTRUCTURE FOR FUTURE WIDENING OF BRIDGE SHALL BE CONSTRUCTED PRIOR TO CONSTRUCTION OF RAIL.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: V. RATHBURN 10-10-01 DATE	REFERENCE DRAWINGS: NUMBER / DESCRIPTION	REVISIONS: DATE / BY / DESCRIPTION
DRAWN: A. JOHNSON 10-10-01 DATE		
CHECKED: B. PATEL 12-04-02 DATE		
APPROVED: P. ELMAN 5-2002 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

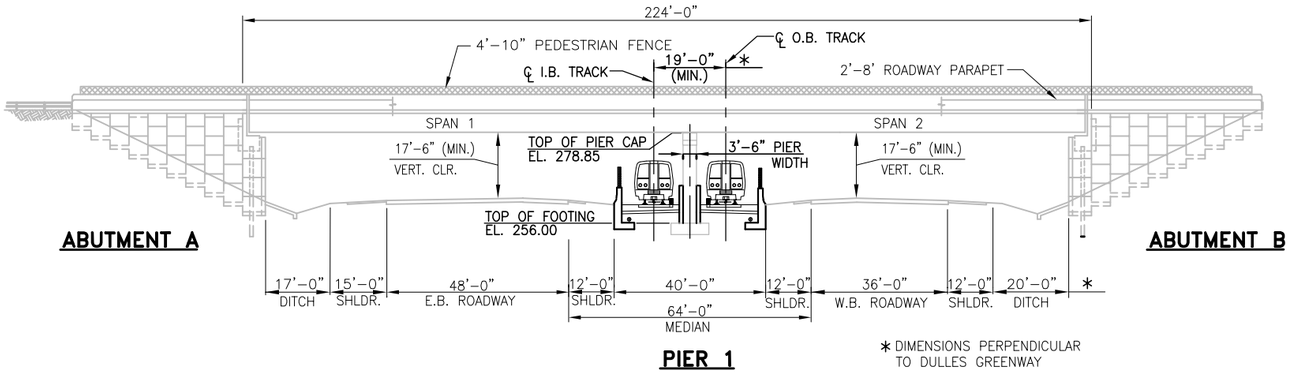
INTERCHANGES
RYAN ROAD BRIDGE (RTE. 772) OVER
DULLES GREENWAY
PLAN, ELEVATION AND SECTION

SCALE: 1"=20'-0" AND AS NOTED (10 0 10 20)

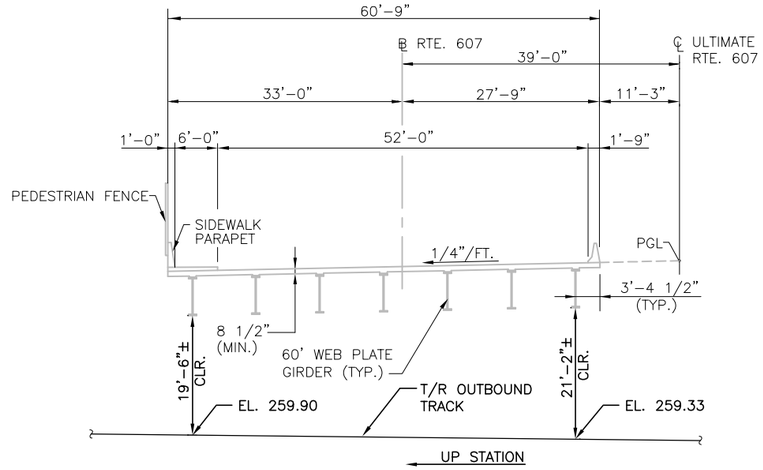
DRAWING NO.: GPN-S-042

317

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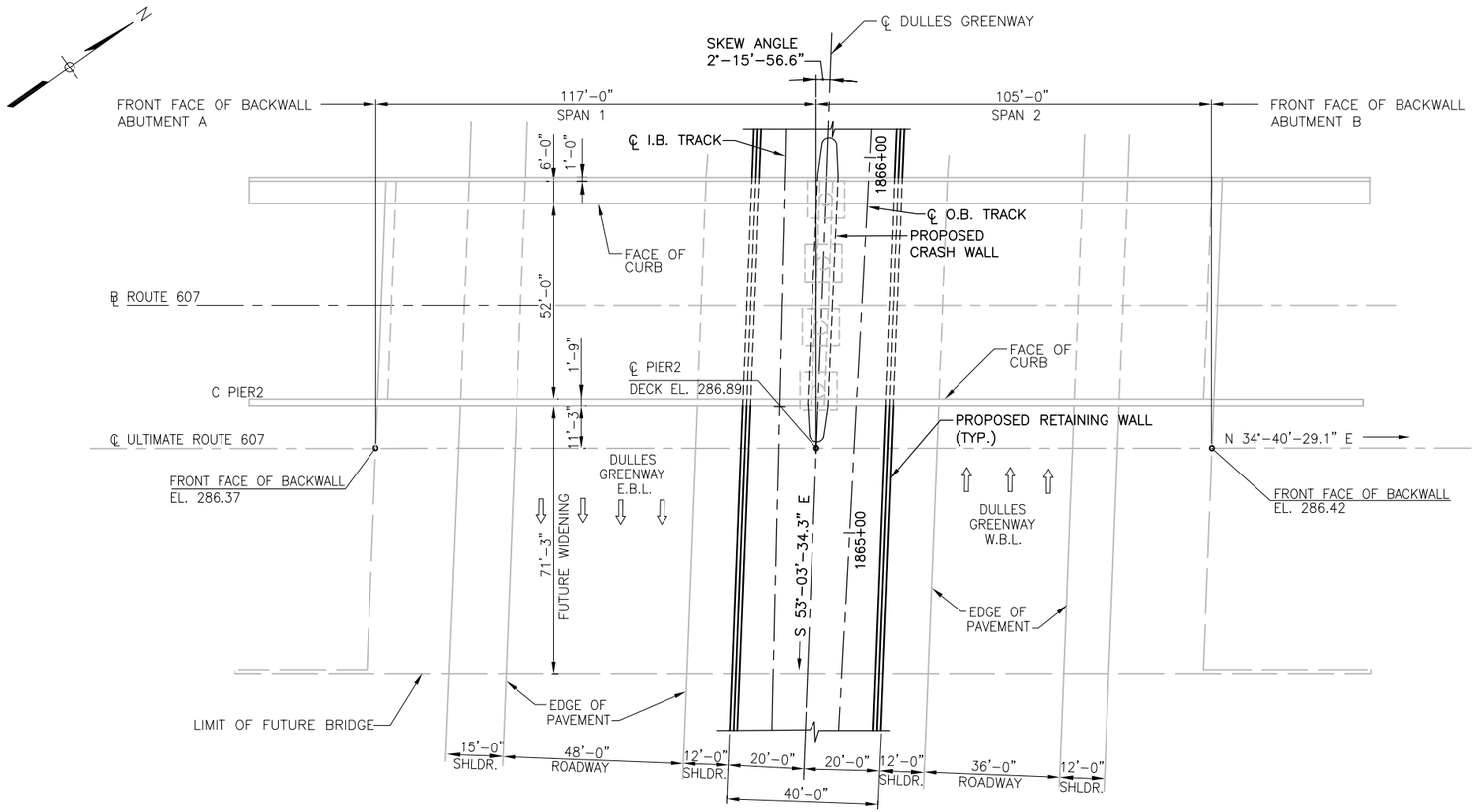


PIER 1 ELEVATION



TYPICAL CROSS SECTION

SCALE: 3/32"=1'-0"



PLAN

NOTES:

1. EXISTING SUPERSTRUCTURE CONSISTS OF CONCRETE DECK ON STEEL PLATE GIRDERS.
2. FOOTINGS FOR THE EXISTING PIER REST ON SOLID ROCK.
3. INFORMATION ON THIS DRAWING HAS BEEN OBTAINED FROM THE AVAILABLE EXISTING BRIDGE DRAWINGS.
4. EXISTING GUIDE RAIL NOT SHOWN FOR CLARITY.
5. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWG. GPN-PP-003.
6. FOR TYPICAL SECTION AT UNDERPASS, SEE DWG. GPN-S-002.
7. SUBSTRUCTURE FOR FUTURE WIDENING OF BRIDGE SHALL BE CONSTRUCTED PRIOR TO CONSTRUCTION OF RAIL.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: V. RATHBURN 10-10-01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: A. JOHNSON 10-10-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: B. PATEL 12-4-02 DATE		
APPROVED: P. ELMAN 5-2002 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

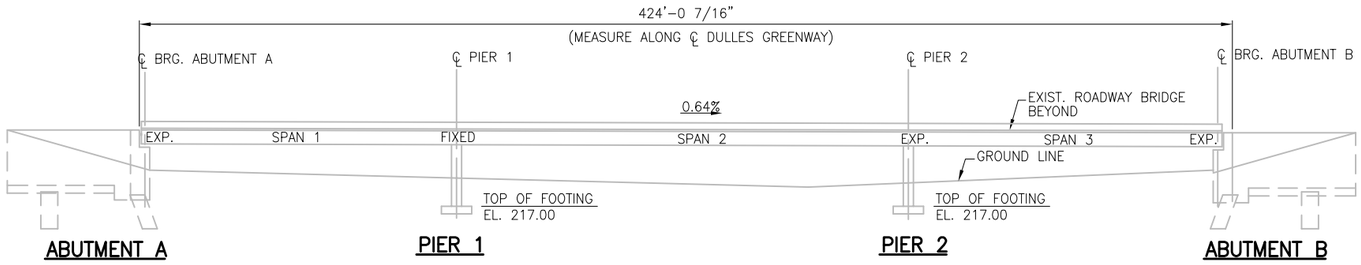
INTERCHANGES
ROUTE 607 OVER
DULLES GREENWAY
PLAN, ELEVATION AND SECTION

SCALE: 1"=20'-0" AND AS NOTED 10 0 10 20

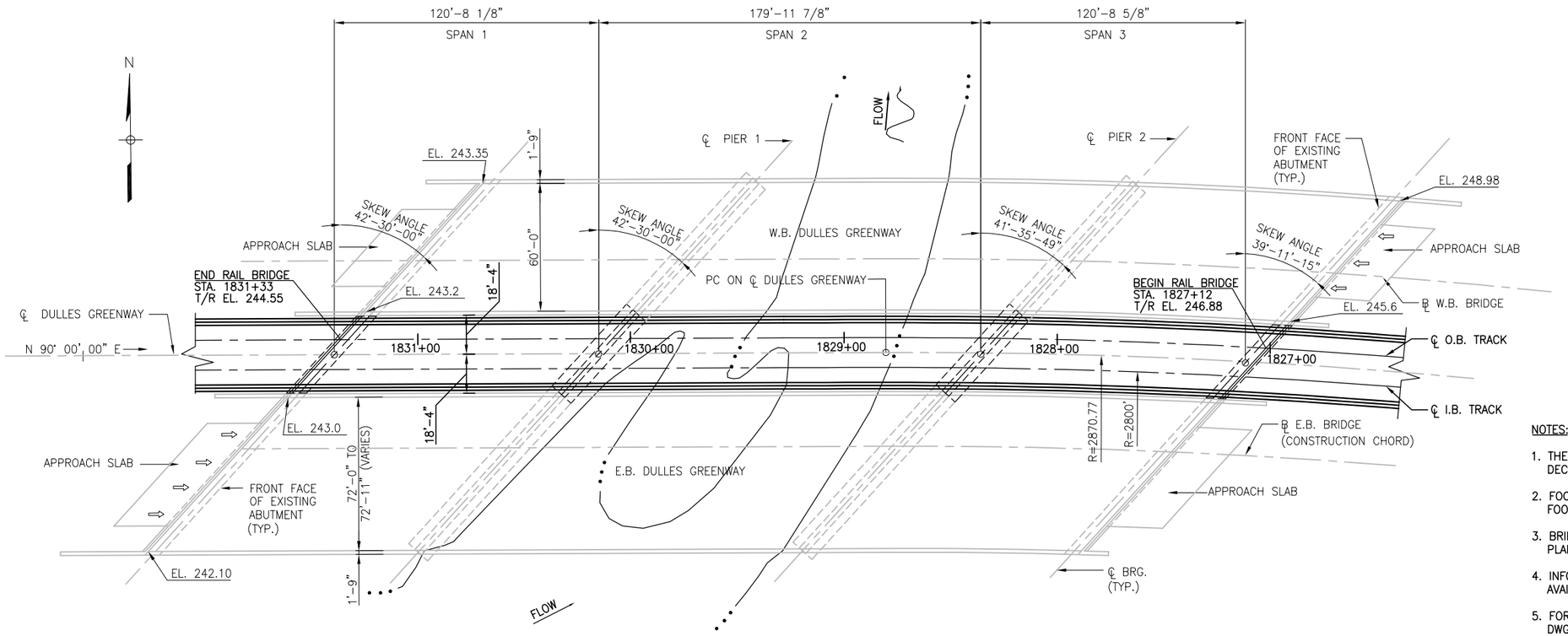
DRAWING NO.: GPN-S-041

318

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ELEVATION – WESTBOUND GREENWAY



PLAN

NOTES:

1. THE EXISTING SUPERSTRUCTURE CONSISTS OF CONCRETE DECK ON STEEL PLATE GIRDERS.
2. FOOTINGS FOR THE EXISTING PIERS REST ON SOLID ROCK. FOOTINGS FOR THE EXISTING ABUTMENTS REST ON H-PILES.
3. BRIDGE NUMBER OF EXISTING BRIDGE IS 6235 & 6243. PLAN NOS. ARE 272-72 & 272-72A.
4. INFORMATION ON THIS DRAWING HAS BEEN OBTAINED FROM THE AVAILABLE EXISTING BRIDGE DRAWINGS.
5. FOR CROSS SECTION OF TYPICAL BALLASTED BRIDGE, SEE DWG. GPN-S-003.
6. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWG. GPN-PP-009.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: V. RATHBURN	10-10-01	
DRAWN: S. MURDAUGH	10-10-01	
CHECKED: B. PATEL	12-04-01	
APPROVED: P. ELMAN	5-2002	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

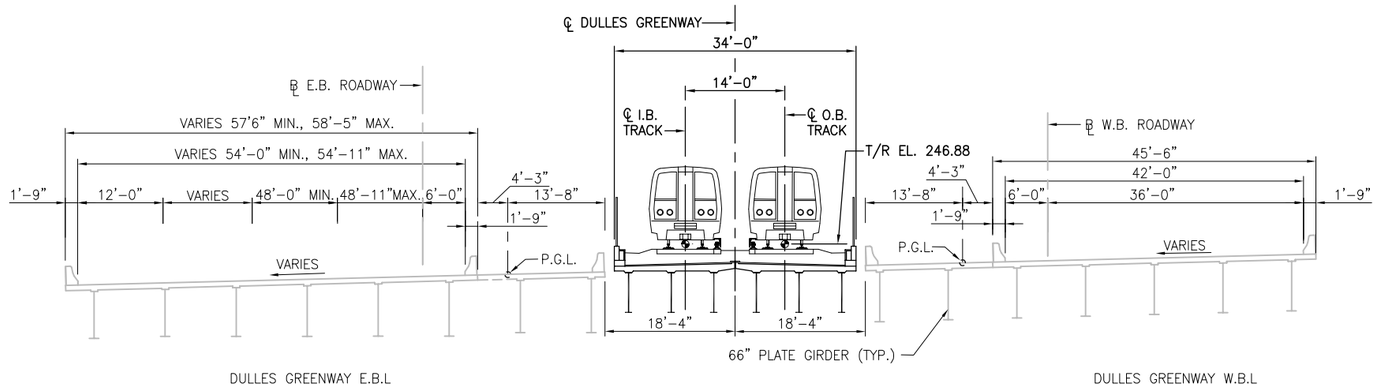
INTERCHANGES
DULLES GREENWAY
OVER BROAD RUN
PLAN AND ELEVATION

SCALE: 1"=30'-0" (15 0 15 30)

DRAWING NO.: GPN-S-039

319

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TYPICAL CROSS SECTION

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: V. RATHBURN 10-10-01 DATE	REFERENCE DRAWINGS: NUMBER / DESCRIPTION	REVISIONS: DATE / BY / DESCRIPTION
DRAWN: S. MURDAUGH 10-10-01 DATE		
CHECKED: B. PATEL 12-04-01 DATE		
APPROVED: P. ELMAN 5-2002 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

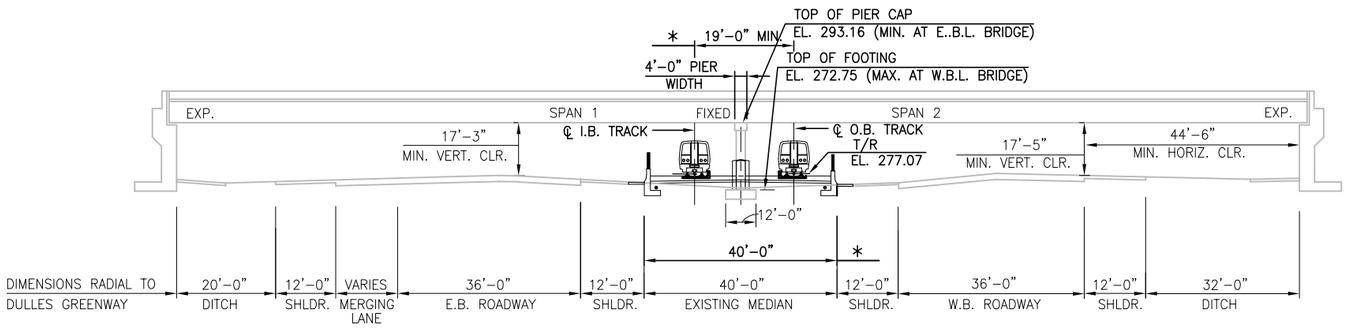
INTERCHANGES
DULLES GREENWAY
OVER BROAD RUN
SECTION

SCALE: 3/32"=1'-0" (4" 0 4" 8" 1')

DRAWING NO.: GPN-S-040

320

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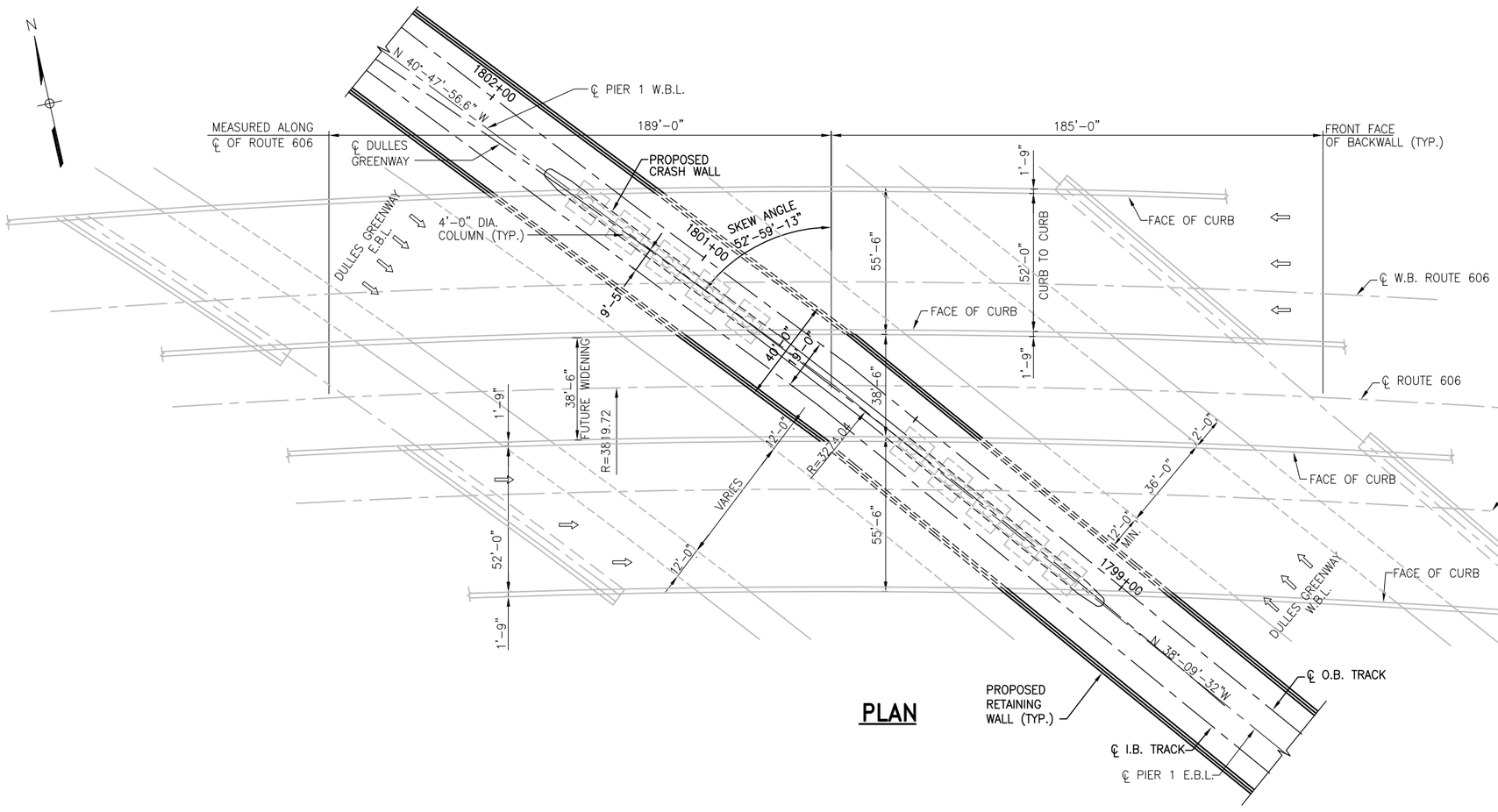
ABUTMENT A PIER 1 ABUTMENT B

* DIMENSION PERPENDICULAR TO CENTERLINE O.B. TRACK

ELEVATION – WESTBOUND ROUTE 606

NOTES:

1. SUPERSTRUCTURE CONSISTS OF CONCRETE DECK ON STEEL PLATE GIRDERS.
2. FOOTINGS FOR THE EXISTING PIERS REST ON SOLID ROCK.
3. INFORMATION ON THIS DRAWING HAS BEEN OBTAINED FROM THE AVAILABLE EXISTING BRIDGE DRAWINGS.
4. EXISTING GUIDERAIL NOT SHOWN FOR CLARITY.
5. FOR BRIDGE CROSS SECTION, SEE DWG. GPN–S–038.
6. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWG. GPN–PP–010.
7. SUBSTRUCTURE FOR FUTURE WIDENING OF BRIDGES SHALL BE CONSTRUCTED PRIOR TO CONSTRUCTION OF RAIL.
8. FOR TYPICAL CROSS SECTION AT UNDERPASS, SEE DWG. GPN–S–002.



PLAN

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: V. RATHBURN 10–10–01 DATE	REFERENCE DRAWINGS		REVISIONS		
DRAWN: S. MURDAUGH 10–10–01 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
CHECKED: B. PATEL 15–05–01 DATE					
APPROVED: P. ELMAN 5–2002 DATE					

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

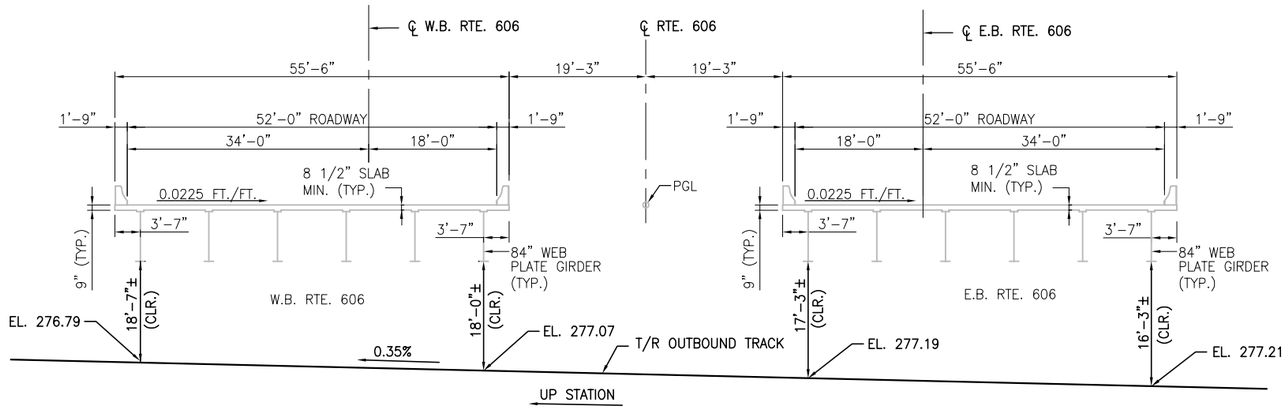
INTERCHANGES
OLD OX ROAD (ROUTE 606) OVER
DULLES GREENWAY
PLAN AND ELEVATION

SCALE: 1"=25'–0" 1 6" 0 1 2

DRAWING NO.: GPN–S–037

321

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TYPICAL CROSS SECTION

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: V. RATHBURN 10-10-01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: S. MURDAUGH 10-10-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: B. PATEL 12-05-01 DATE		
APPROVED: P. ELMAN 5-2002 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

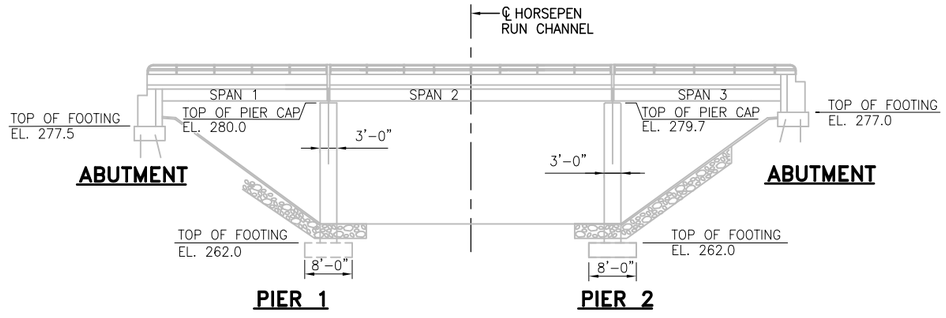
INTERCHANGES
OLD OX ROAD (ROUTE 606) OVER
DULLES GREENWAY
SECTION

SCALE: 3/32"=1'-0" (4" 0 4" 8" 1')

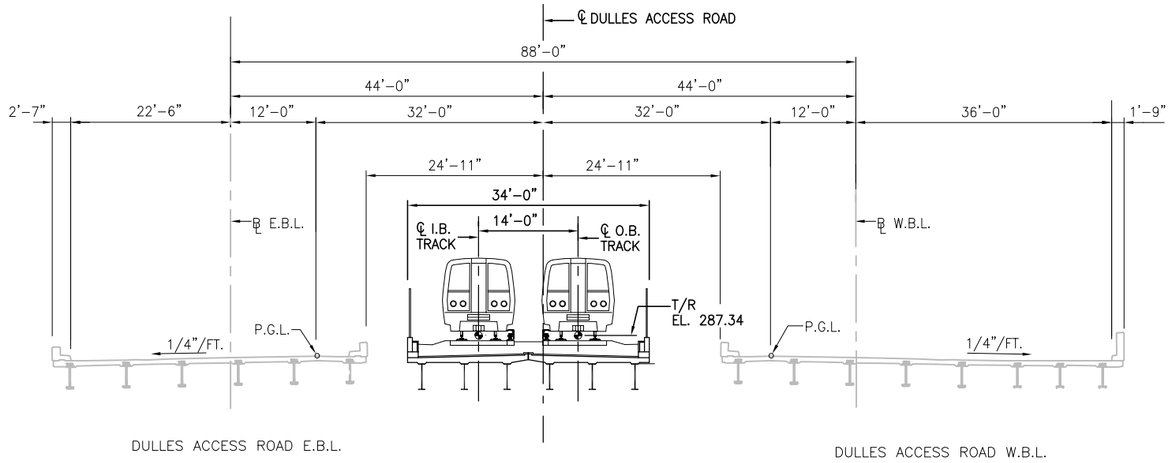
DRAWING NO.: GPN-S-038

322

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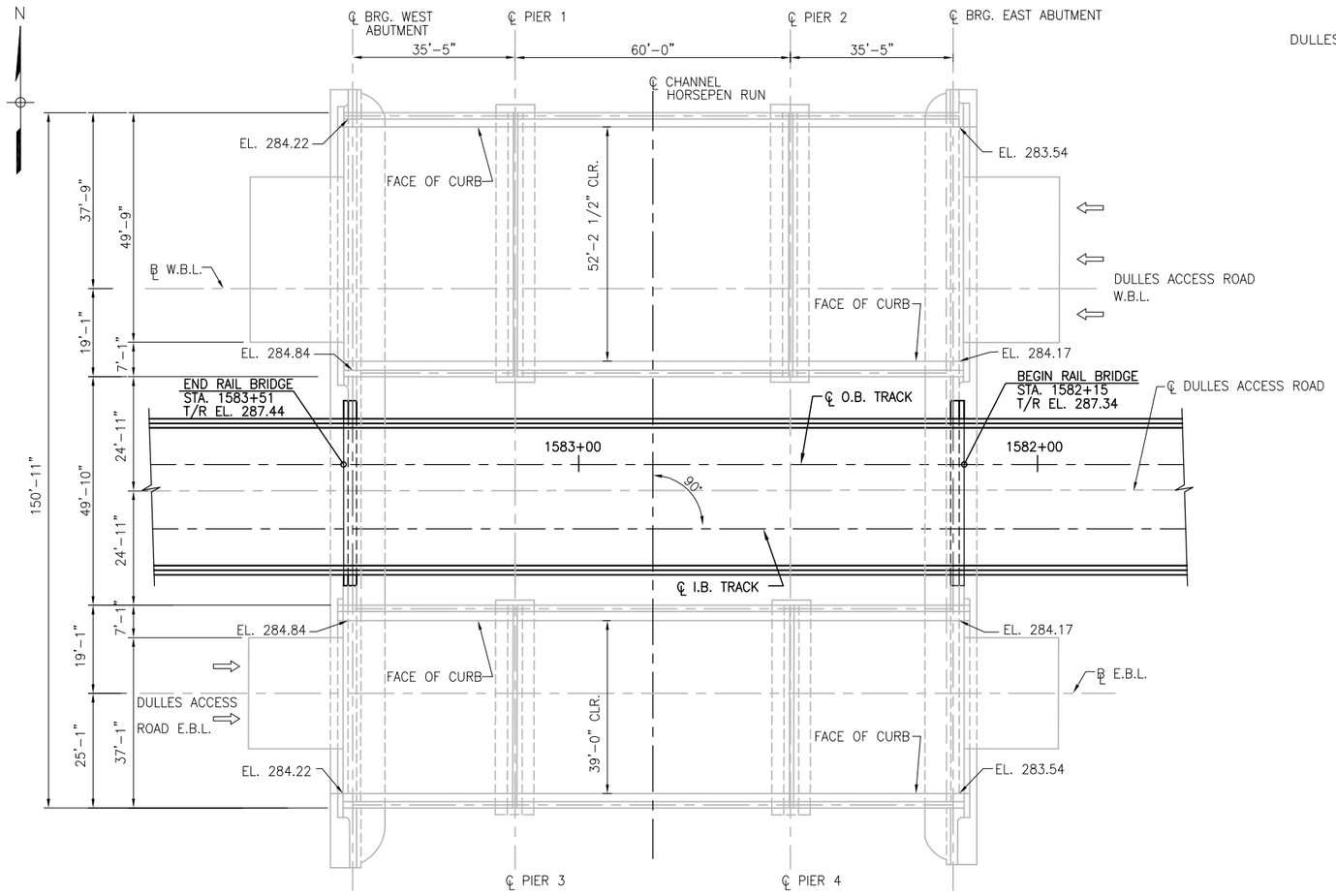


ELEVATION – WESTBOUND ACCESS ROAD



TYPICAL CROSS SECTION

SCALE: 3/32"=1'-0"



PLAN

NOTES:

1. THE EXISTING SUPERSTRUCTURE CONSISTS OF CONCRETE DECK ON STEEL ROLLED BEAMS.
2. FOR CROSS SECTION OF TYPICAL BALLASTED BRIDGE, SEE DWG. GPN–S–003.
3. FOOTINGS FOR THE EXISTING PIERS REST ON SOUND SHALE.
4. PLAN NOS. OF EXISTING BRIDGES ARE 189–20 AND 189–20A..
5. INFORMATION ON THIS DRAWING HAS BEEN OBTAINED FROM THE AVAILABLE EXISTING BRIDGE DRAWINGS.
6. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWGS. GPN–PP–022 AND GPN–PP–023.

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: V. RATHBURN 10–10–01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: S. MURDAUGH 10–10–01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: B. PATEL 12–05–01 DATE		
APPROVED: P. ELMAN 5–2002 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

SUBMITTED — CAPITAL TRANSIT CONSULTANTS — Dana C. Mendes — PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

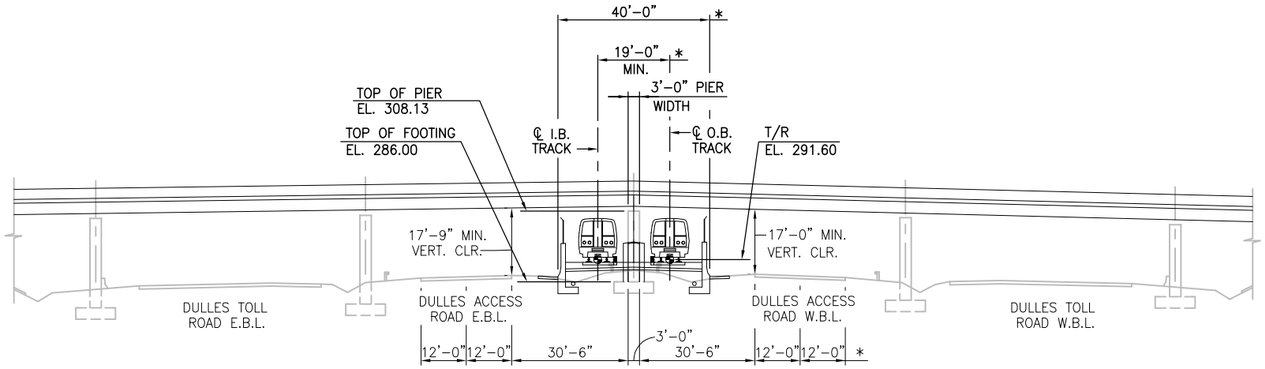
INTERCHANGES
DULLES ACCESS ROAD OVER
HORSEPEN RUN
PLAN, ELEVATION AND SECTION

SCALE: 1/16"=1'–0" AND AS NOTED — 4 0 4 8 12 16 20

DRAWING NO.: GPN–S–036

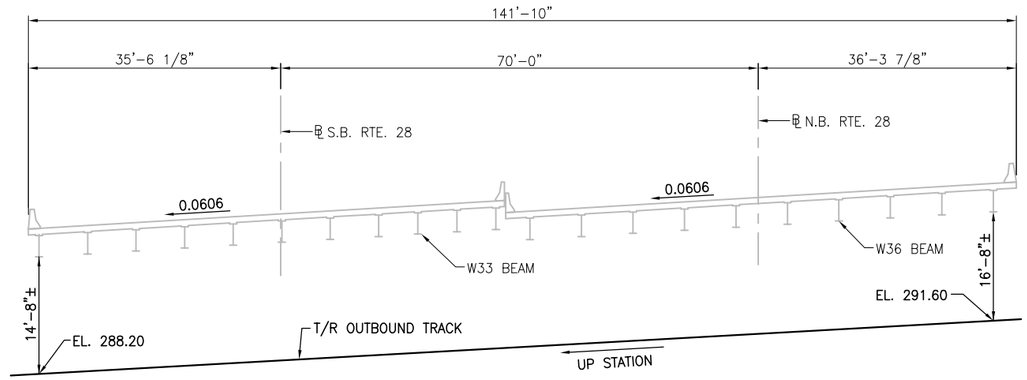
323

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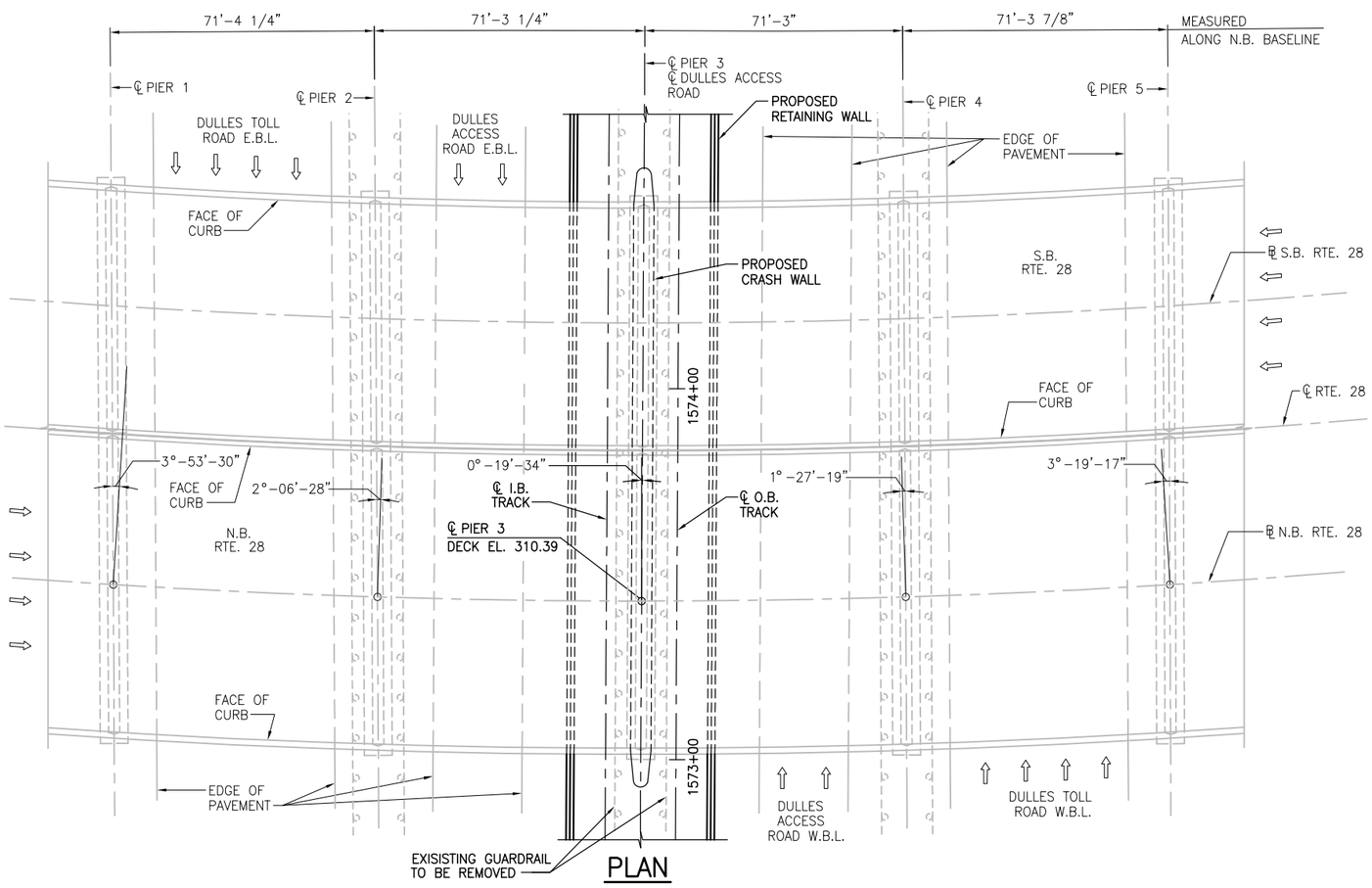
ELEVATION

* DIMENSIONS ARE PERPENDICULAR TO ℄ DULLES ACCESS ROAD



TYPICAL CROSS SECTION

SCALE: 3/32" = 1'-0"



PLAN

NOTES:

1. THE EXISTING SUPERSTRUCTURE CONSISTS OF CONCRETE DECK ON STEEL ROLLED BEAMS.
2. FOOTINGS FOR THE EXISTING PIER REST ON SOLID ROCK.
3. BRIDGE NUMBERS OF EXISTING BRIDGES ARE 1088 AND 1094, PLAN NOS. ARE 189-19 AND 189-19A
4. INFORMATION ON THIS DRAWING HAS BEEN OBTAINED FROM THE AVAILABLE EXISTING BRIDGE DRAWINGS.
5. FOR TYPICAL CROSS SECTION AT UNDERPASS, SEE DWG. GPN-S-002.
6. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWGS. GPN-PP-022 AND GPN-PP-023.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: B. PATEL 10-10-01 DATE	REFERENCE DRAWINGS: NUMBER / DESCRIPTION	REVISIONS: DATE / BY / DESCRIPTION
DRAWN: J. ELLIOTT 10-10-01 DATE		
CHECKED: V. RATHBURN 11-2-01 DATE		
APPROVED: P. ELMAN 5-2002 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

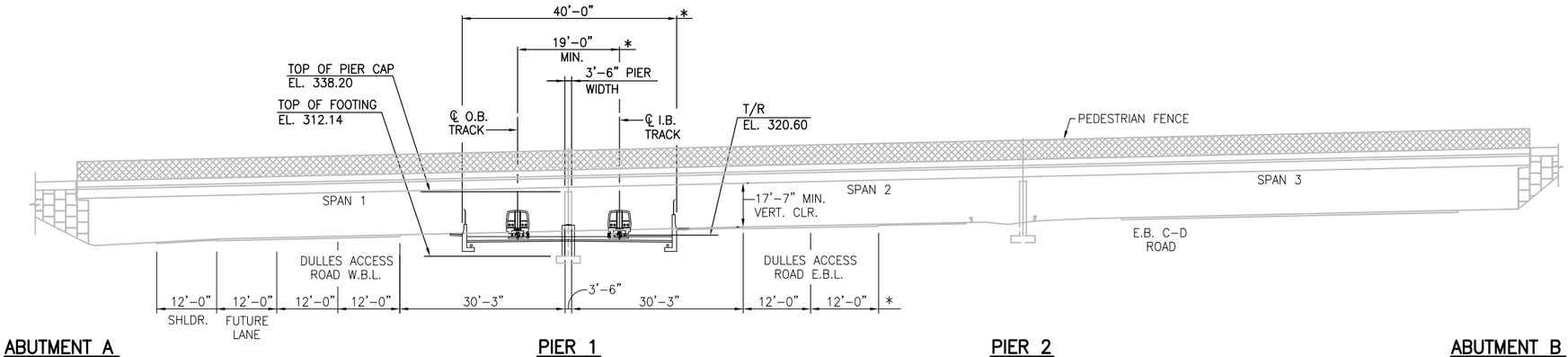
INTERCHANGES
SULLY ROAD (RTE. 28)
OVER DULLES ACCESS ROAD
PLAN, ELEVATION AND SECTION

SCALE: 1"=20'-0" AND AS NOTED (10 0 10 20)

DRAWING NO.: GPN-S-035

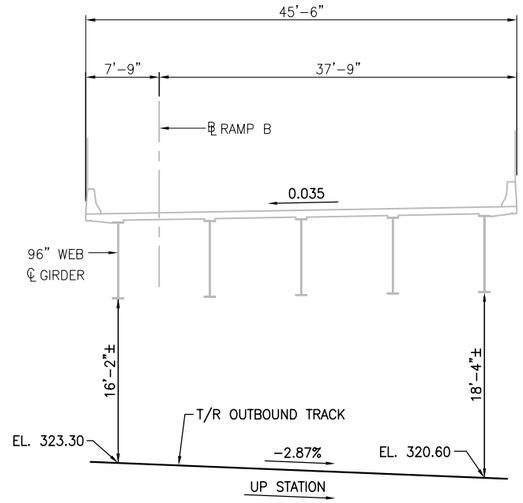
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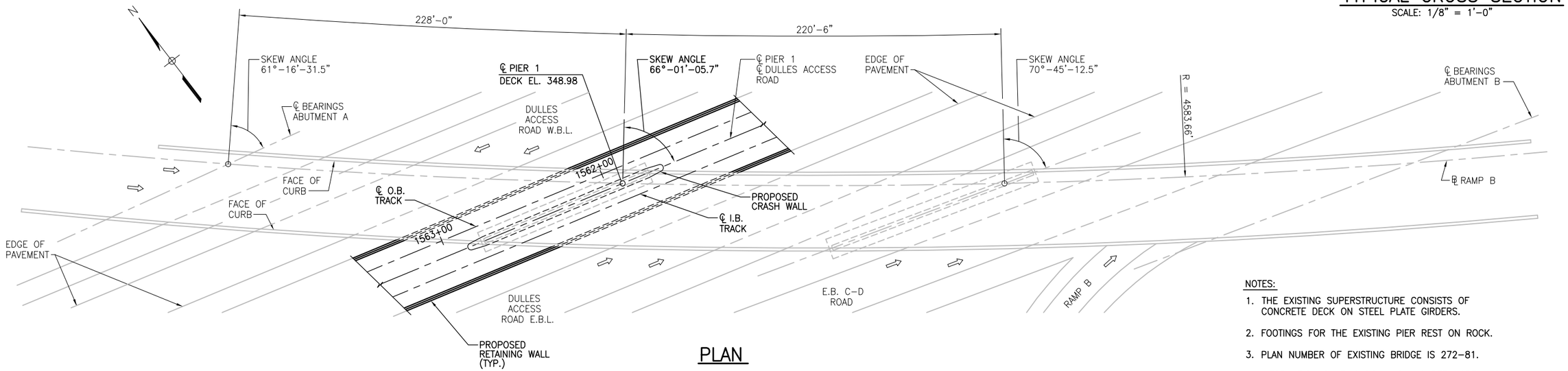
ELEVATION

* DIMENSIONS ARE PERPENDICULAR TO ℄ DULLES ACCESS ROAD



TYPICAL CROSS SECTION

SCALE: 1/8" = 1'-0"



PLAN

NOTES:

1. THE EXISTING SUPERSTRUCTURE CONSISTS OF CONCRETE DECK ON STEEL PLATE GIRDERS.
2. FOOTINGS FOR THE EXISTING PIER REST ON ROCK.
3. PLAN NUMBER OF EXISTING BRIDGE IS 272-81.
4. INFORMATION ON THIS DRAWING HAS BEEN OBTAINED FROM THE AVAILABLE EXISTING BRIDGE DRAWINGS.
5. FOR TYPICAL CROSS SECTION AT UNDERPASS, SEE DWG. GPN-S-002.
6. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWGS. GPN-PP-022 AND GPN-PP-023.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: B. PATEL 10-10-01 DATE
DRAWN: J. ELLIOTT 10-10-01 DATE
CHECKED: V. RATHBURN 11-2-01 DATE
APPROVED: P. ELMAN 5-2002 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

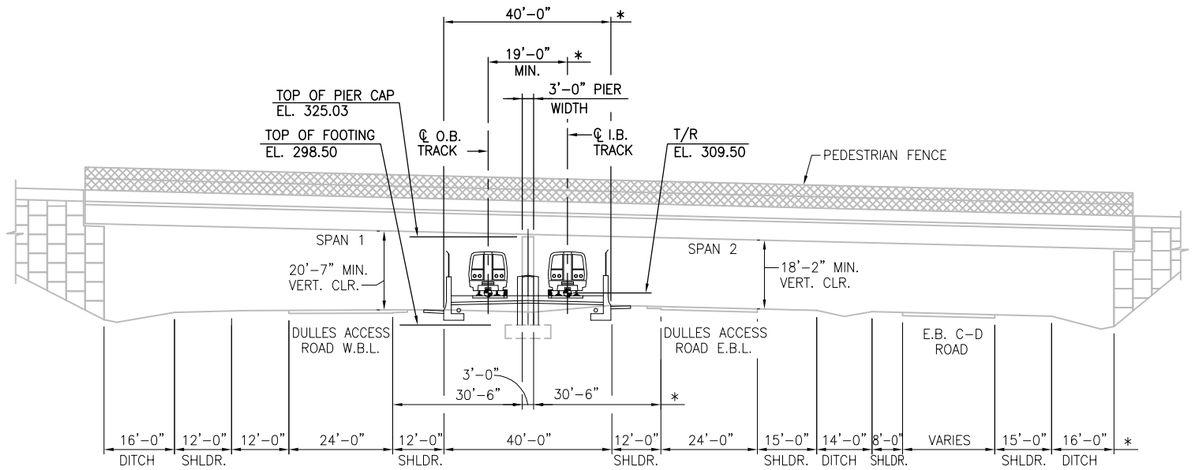
INTERCHANGES
ROUTE 28 INTERCHANGE - RAMP B
OVER DULLES ACCESS ROAD
PLAN, ELEVATION AND SECTION

SCALE: 1"=30'-0" AND AS NOTED 15 0 15 30

DRAWING NO.: GPN-S-034

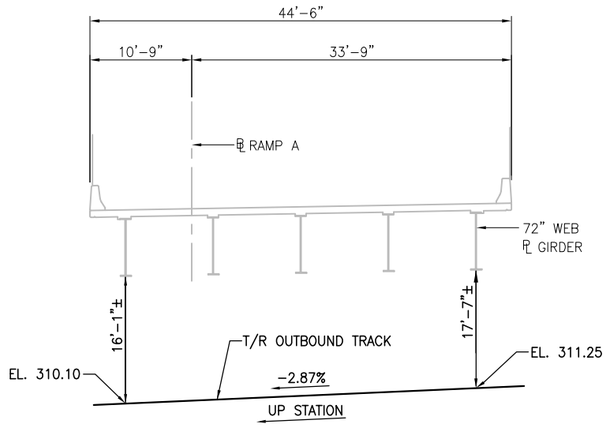
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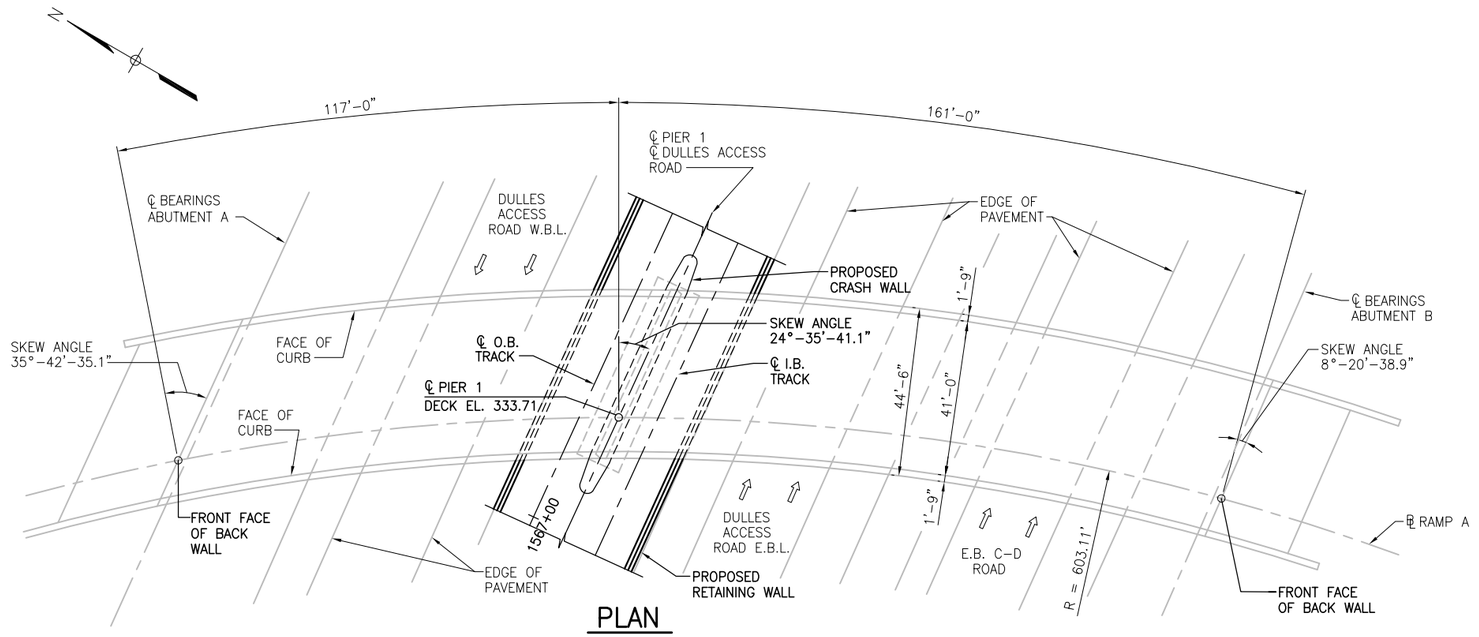
ELEVATION

* DIMENSIONS ARE PERPENDICULAR TO ℄ DULLES ACCESS ROAD.



TYPICAL CROSS SECTION

SCALE: 1/8" = 1'-0"



PLAN

NOTES:

1. THE EXISTING SUPERSTRUCTURE CONSISTS OF CONCRETE DECK ON STEEL PLATE GIRDERS.
2. FOOTINGS FOR THE EXISTING PIER REST ON SOLID ROCK.
3. PLAN NUMBER OF EXISTING BRIDGE IS 272-83.
4. INFORMATION ON THIS DRAWING HAS BEEN OBTAINED FROM THE AVAILABLE EXISTING BRIDGE DRAWINGS.
5. FOR TYPICAL CROSS SECTION AT UNDERPASS, SEE DWG. GPN-S-002.
6. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWGS. GPN-PP-022 AND GPN-PP-023.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: B. PATEL 10-10-01 DATE
DRAWN: J. ELLIOTT 10-10-01 DATE
CHECKED: V. RATHBURN 11-2-01 DATE
APPROVED: P. ELMAN 5-2002 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

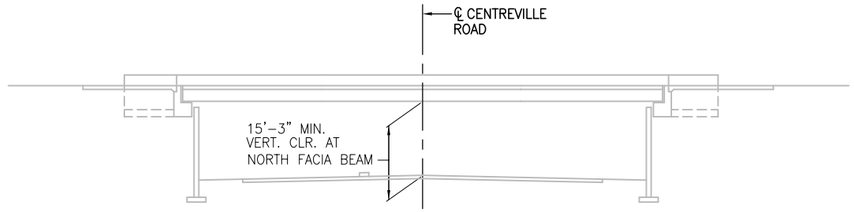
INTERCHANGES
ROUTE 28 INTERCHANGE - RAMP A
OVER DULLES ACCESS ROAD
PLAN, ELEVATION AND SECTION

SCALE: 1"=20'-0" AND AS NOTED 10 0 10 20

DRAWING NO.: GPN-S-033

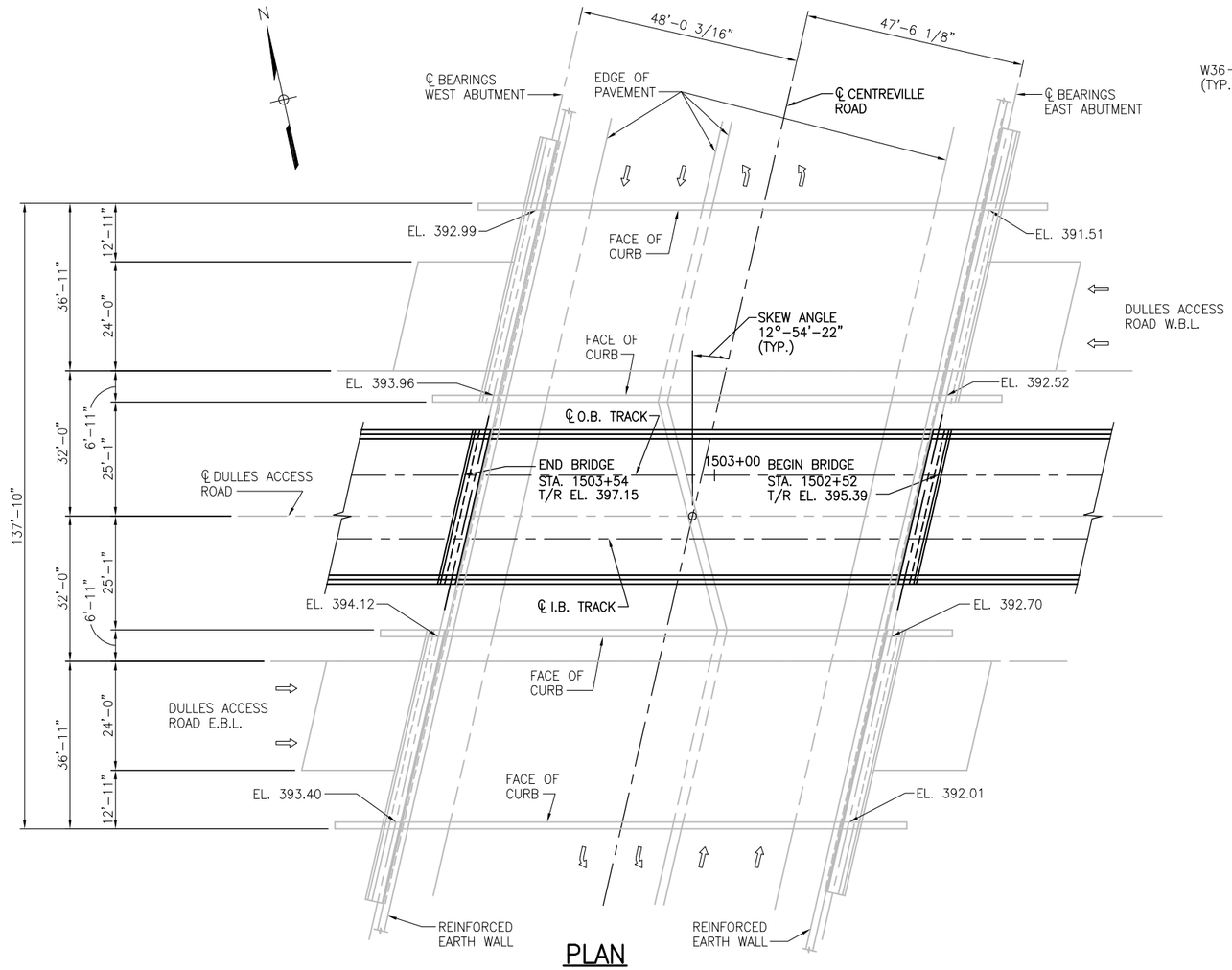
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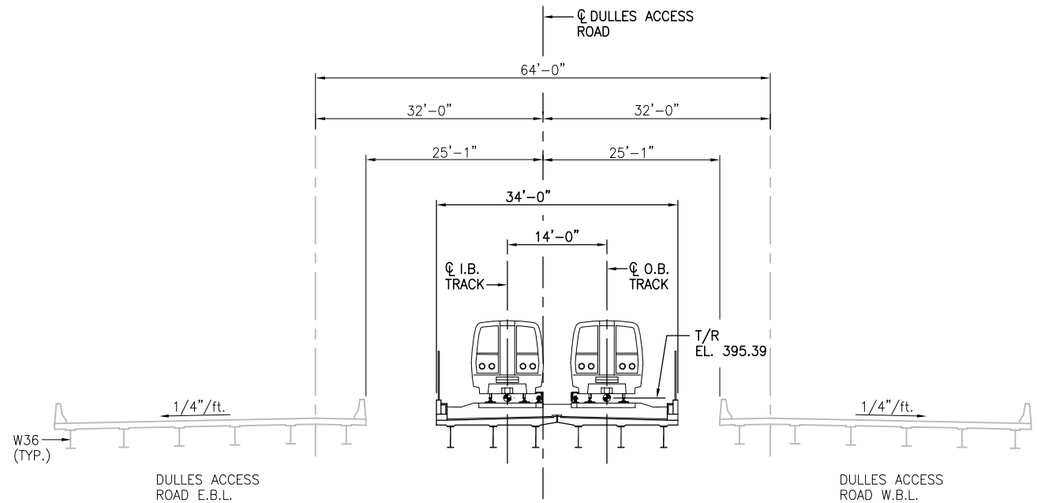


ABUTMENT ABUTMENT

ELEVATION – WESTBOUND ACCESS ROAD



PLAN



TYPICAL CROSS SECTION

SCALE: 3/32" = 1'–0"

NOTES:

1. THE EXISTING SUPERSTRUCTURE CONSISTS OF CONCRETE DECK ON STEEL ROLLED BEAMS.
2. FOR CROSS SECTION OF TYPICAL BALLASTED BRIDGE, SEE DWG. GPN–S–003.
3. BRIDGE NUMBERS OF EXISTING BRIDGES ARE 2189 AND 2192, PLAN NO. IS 189–23.
4. INFORMATION ON THIS DRAWING HAS BEEN OBTAINED FROM THE AVAILABLE EXISTING BRIDGE DRAWINGS.
5. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWG. GPN–PP–025.

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED:	B. PATEL	7–6–01
DRAWN:	J. ELLIOTT	7–6–01
CHECKED:	V. RATHBURN	11–2–01
APPROVED:	P. ELMAN	5–2002

DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

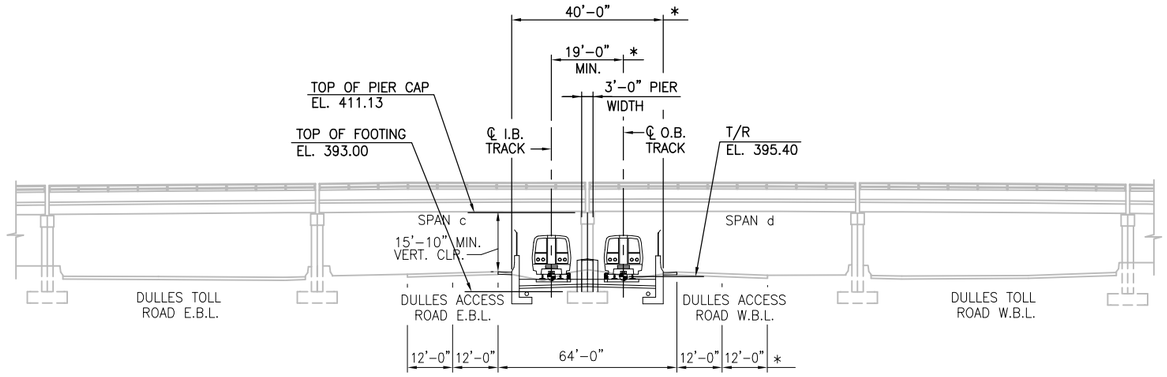
INTERCHANGES
DULLES ACCESS ROAD OVER
CENTREVILLE ROAD (RTE. 657)
PLAN, ELEVATION AND SECTION

SCALE: 1/16"=1'–0" AND AS NOTED 4 0 4 8 12 16 20

DRAWING NO.: GPN–S–032

327

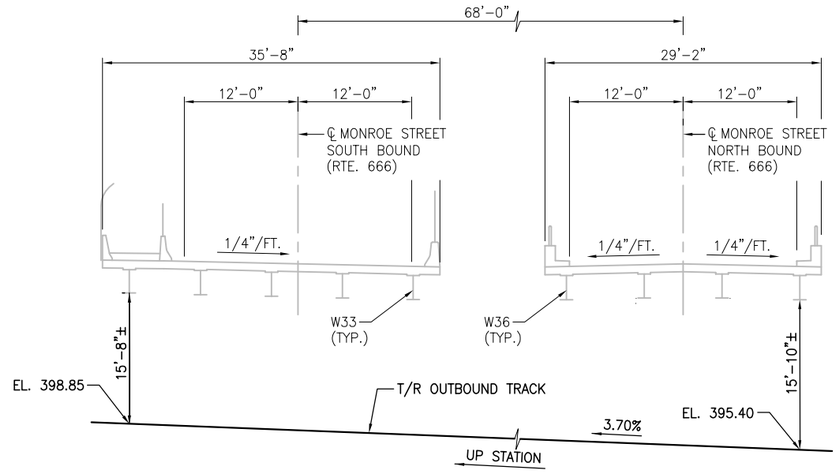
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PIER 1 PIER 2 PIER 3 PIER 4 PIER 5

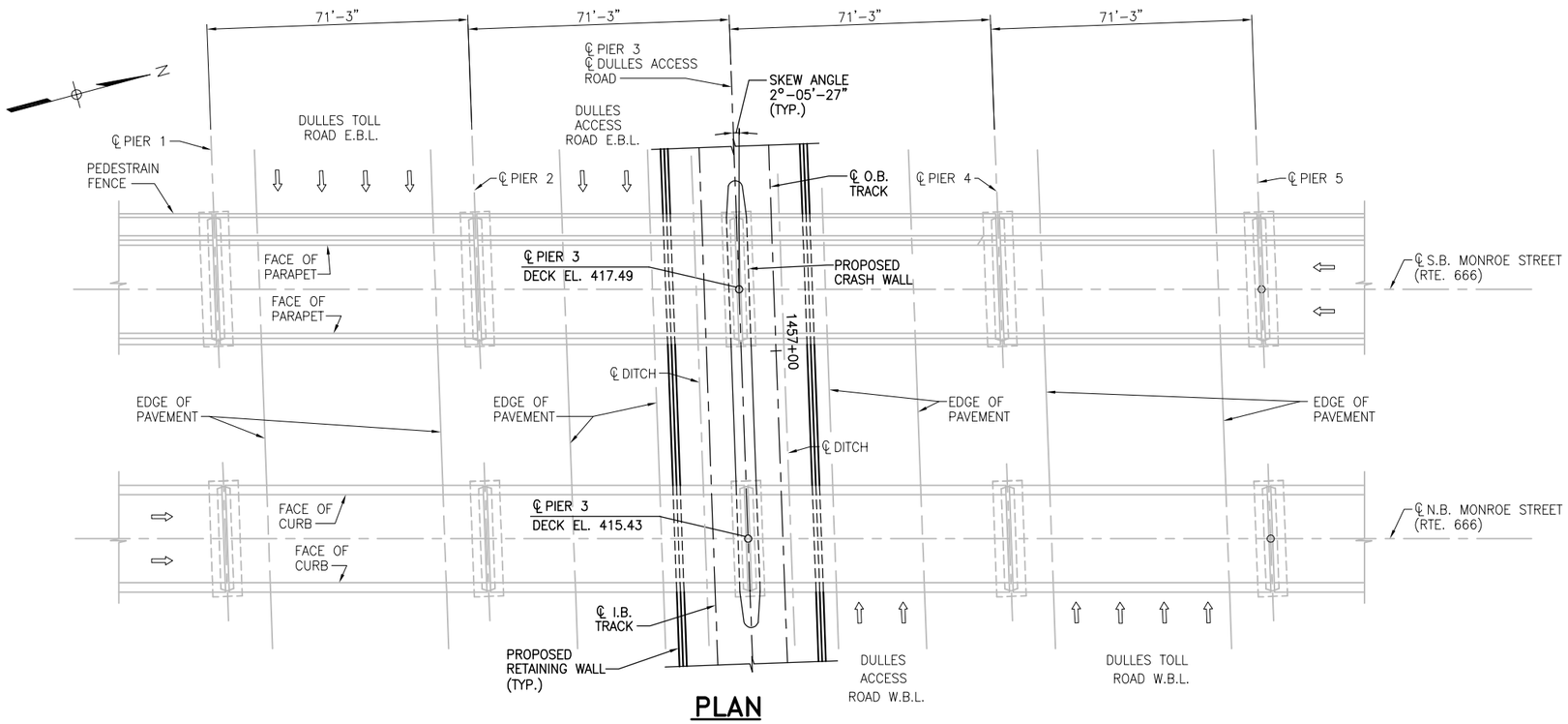
ELEVATION – NORTHBOUND MONROE STREET

* DIMENSIONS ARE PERPENDICULAR TO ℄ DULLES ACCESS ROAD



TYPICAL CROSS SECTION

SCALE: 1/8" = 1'-0"



PLAN

NOTES:

1. THE EXISTING SUPERSTRUCTURE CONSISTS OF CONCRETE DECK ON STEEL ROLLED BEAMS.
2. FOOTINGS FOR THE EXISTING PIERS REST ON ROCK.
3. BRIDGE NUMBER OF N.B. BRIDGE IS 6234, PLAN NO. IS 189-24. PLAN NUMBER OF S.B. BRIDGE IS 268-50.
4. INFORMATION ON THIS DRAWING HAS BEEN OBTAINED FROM THE AVAILABLE EXISTING BRIDGE DRAWINGS.
5. FOR TYPICAL CROSS SECTION AT UNDERPASS, SEE DWG. GPN-S-002.
6. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWG. GPN-PP-027.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: B. PATEL	10-10-01 DATE	
DRAWN: J. ELLIOTT	10-10-01 DATE	
CHECKED: V. RATHBURN	11-2-01 DATE	
APPROVED: P. ELMAN	5-2002 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

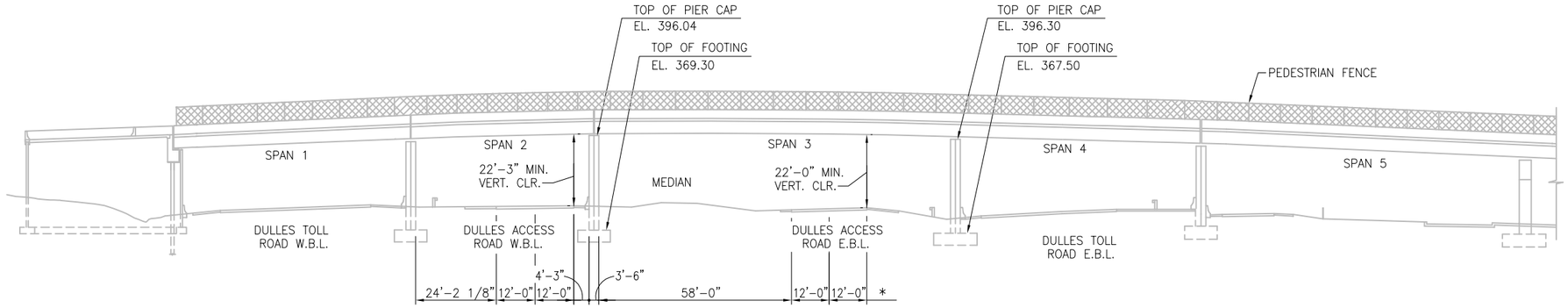
INTERCHANGES
MONROE STREET (RTE. 666)
OVER DULLES ACCESS ROAD
PLAN, ELEVATION AND SECTION

SCALE: 1"=20'-0" AND AS NOTED (10 0 10 20)

DRAWING NO.: GPN-S-031

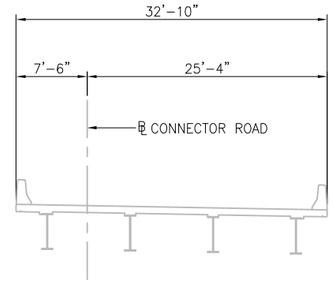
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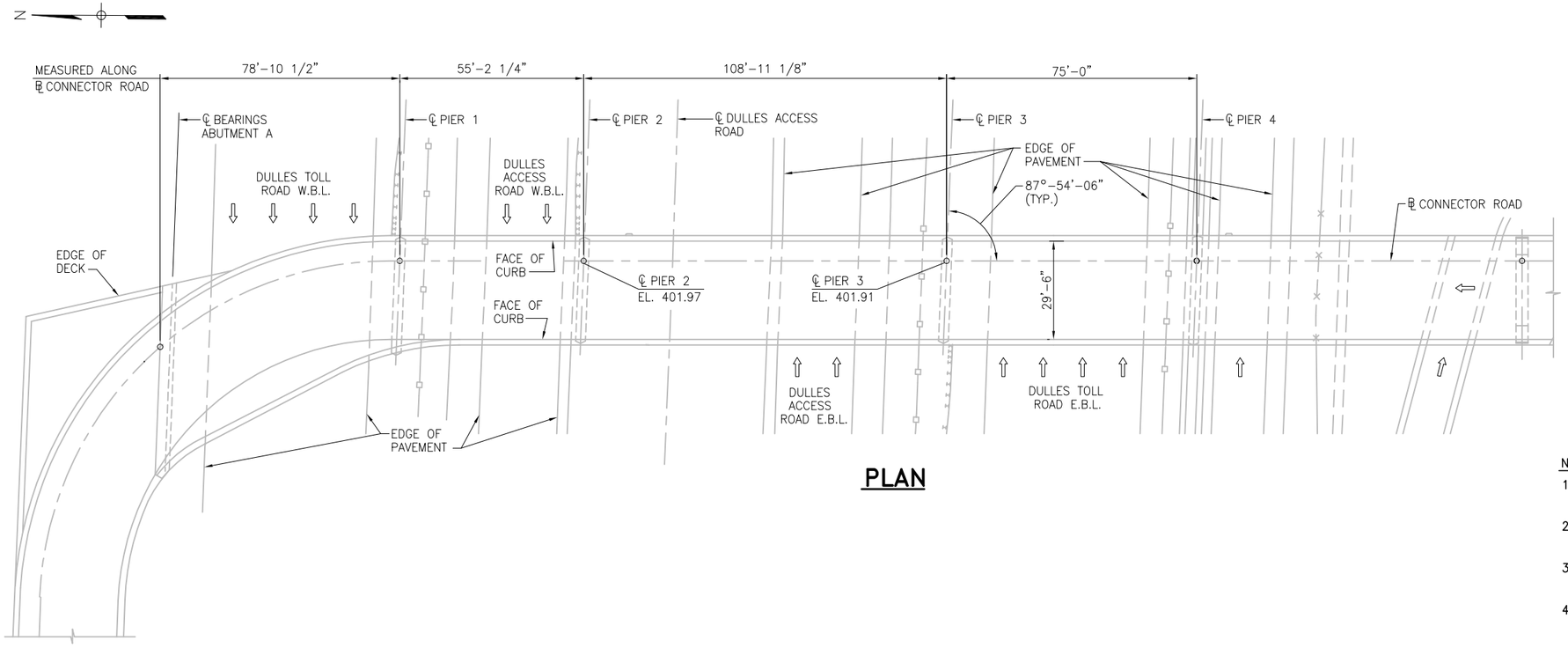
ELEVATION

* DIMENSIONS ARE PERPENDICULAR TO ℄ DULLES ACCESS ROAD



TYPICAL CROSS SECTION

SCALE: 1/8" = 1'-0"



PLAN

NOTES:

1. THE EXISTING SUPERSTRUCTURE CONSISTS OF CONCRETE DECK ON STEEL PLATE GIRDERS.
2. FOOTINGS FOR THE EXISTING PIER REST ON COMPACTED SOIL.
3. BRIDGE NUMBER OF EXISTING BRIDGE IS 6232, PLAN NO. IS 189-06.
4. INFORMATION ON THIS DRAWING HAS BEEN OBTAINED FROM THE AVAILABLE EXISTING BRIDGE DRAWINGS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: B. PATEL	10-10-01 DATE	
DRAWN: J. ELLIOTT	10-10-01 DATE	
CHECKED: V. RATHBURN	12-5-01 DATE	
APPROVED: P. ELMAN	5-2002 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

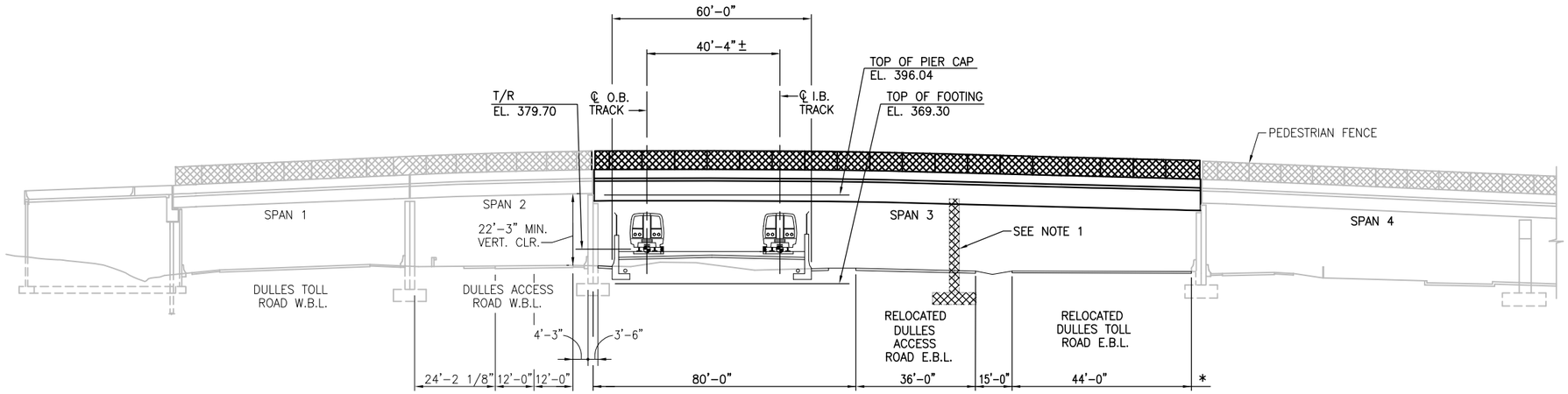
INTERCHANGES
HERNDON - MONROE PARK AND RIDE
OVER DULLES ACCESS ROAD
PLAN, ELEVATION AND SECTION - EXISTING

SCALE: 1"=20'-0" AND AS NOTED 10 0 10 20

DRAWING NO.: GPN-S-029

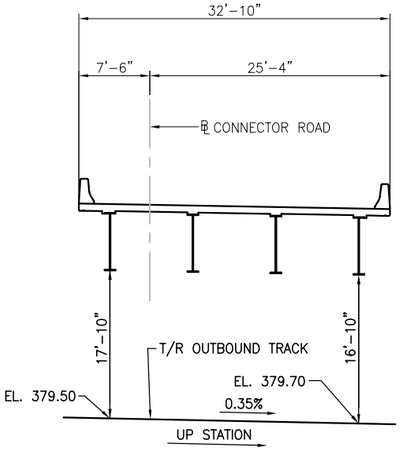
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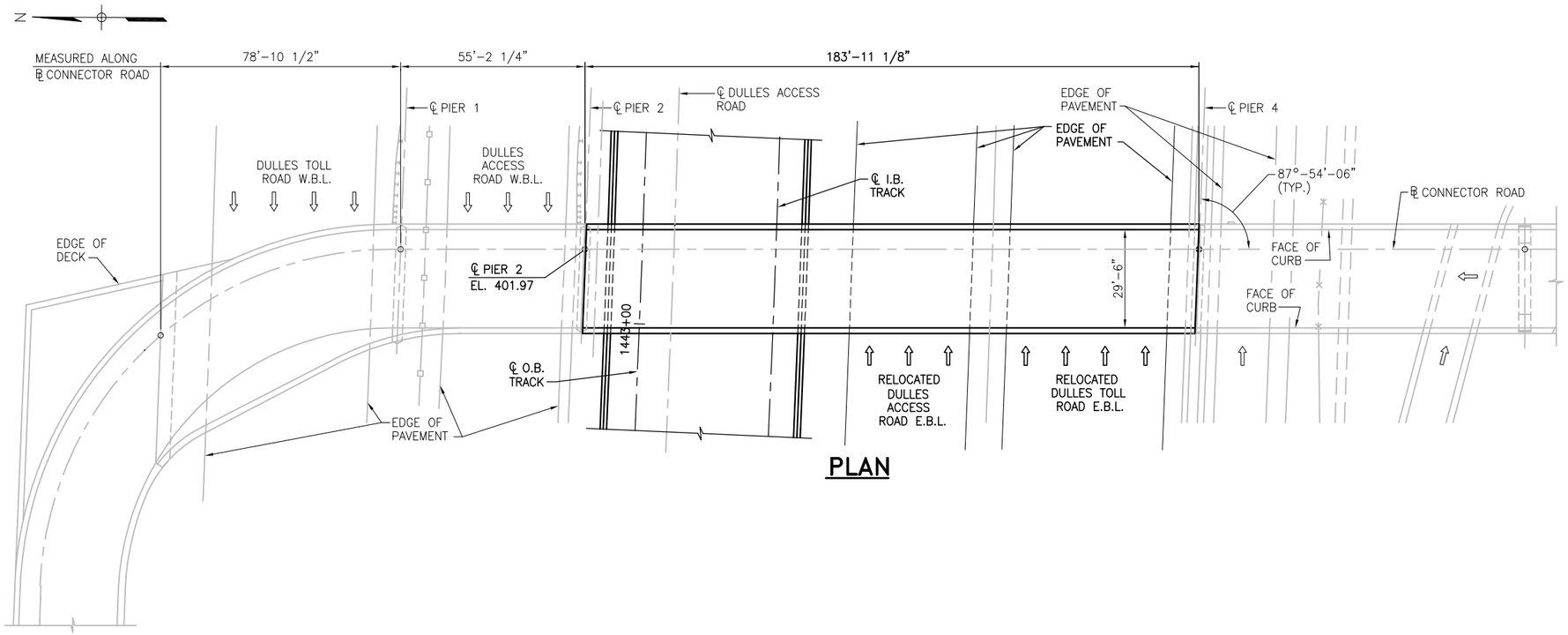
ELEVATION

* DIMENSIONS ARE PERPENDICULAR TO ℄ DULLES ACCESS ROAD



TYPICAL CROSS SECTION

SCALE: 1/8" = 1'-0"



PLAN

NOTES:

1. PIER 3 TO BE REMOVED IN ORDER TO ACCOMMODATE THE RAIL STRUCTURE AND FUTURE WIDENING OF DULLES ACCESS ROAD.
2. PIERS 2 AND 4 TO BE STRENGTHENED AND REHABILITATED TO ACCOMMODATE THE BEARINGS FROM SPAN 3. PROPOSED SUPERSTRUCTURE DEPTH OF SPAN 3 WILL BE GREATER THAN THE EXISTING DEPTH.
3. FOR TYPICAL CROSS SECTION AT UNDERPASS, SEE DWG. GPN-S-002.
4. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWG. GPN-PP-028.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: B. PATEL 10-10-01	REFERENCE DRAWINGS	REVISIONS
DRAWN: J. ELLIOTT 10-10-01	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: V. RATHBURN 12-05-01		
APPROVED: P. ELMAN 5-2002		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

Diana C. Mendes

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

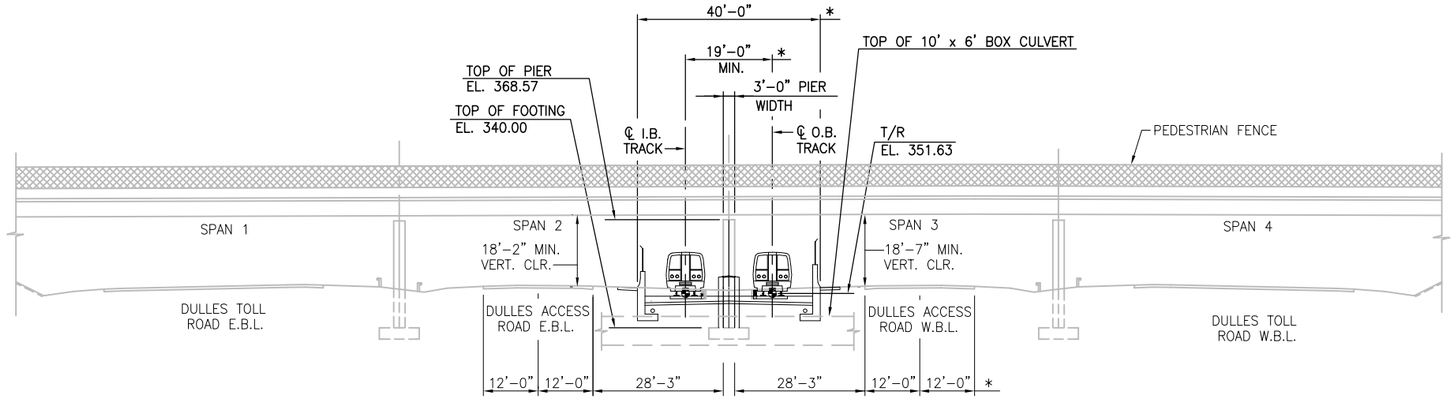
INTERCHANGES
HERNDON – MONROE PARK AND RIDE
OVER DULLES ACCESS ROAD
PLAN, ELEVATION AND SECTION – PROPOSED

SCALE: 1"=20'-0" AND AS NOTED (10 0 10 20)

DRAWING NO.: GPN-S-030

330

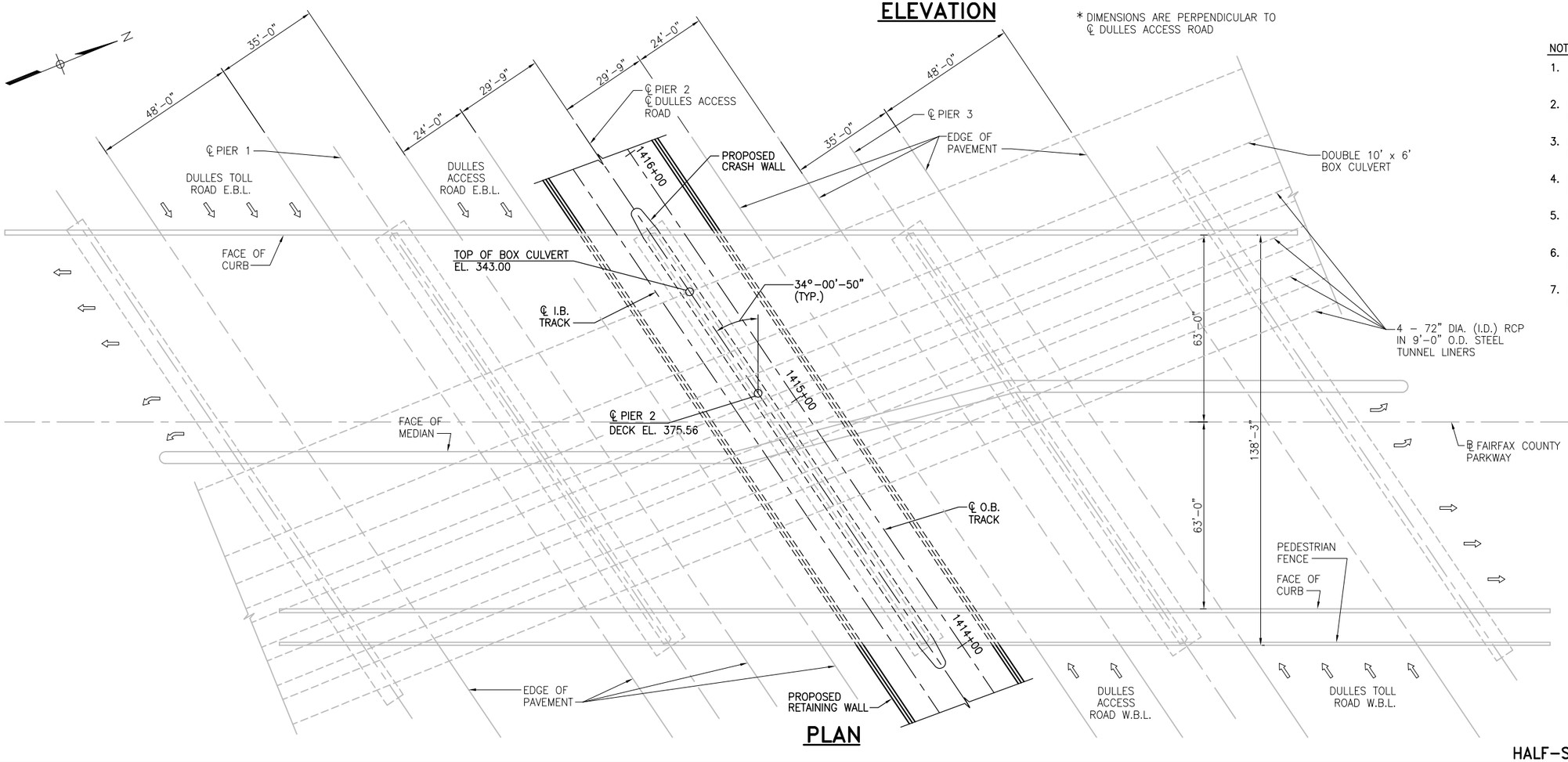
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ABUTMENT A — PIER 1 — PIER 2 — PIER 3 — ABUTMENT B

ELEVATION

* DIMENSIONS ARE PERPENDICULAR TO ℄ DULLES ACCESS ROAD



PLAN

NOTES:

1. THE EXISTING SUPERSTRUCTURE CONSISTS OF CONCRETE DECK ON STEEL PLATE GIRDERS.
2. FOOTINGS FOR THE EXISTING PIER REST ON SOLID ROCK.
3. BRIDGE NUMBER OF EXISTING BRIDGE IS 6058, PLAN NO. IS 265-86.
4. INFORMATION ON THIS DRAWING HAS BEEN OBTAINED FROM THE AVAILABLE EXISTING BRIDGE DRAWINGS.
5. FOR TYPICAL CROSS SECTION OF OVERPASS, SEE DWG. GPN-S-028.
6. FOR TYPICAL CROSS SECTION OF UNDERPASS, SEE DWG. GPN-S-002.
7. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWG. GPN-PP-029.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: B. PATEL 10-10-01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: J. ELLIOTT 10-10-01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: V. RATHBURN 12-5-01 DATE		
APPROVED: P. ELMAN 5-2002 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

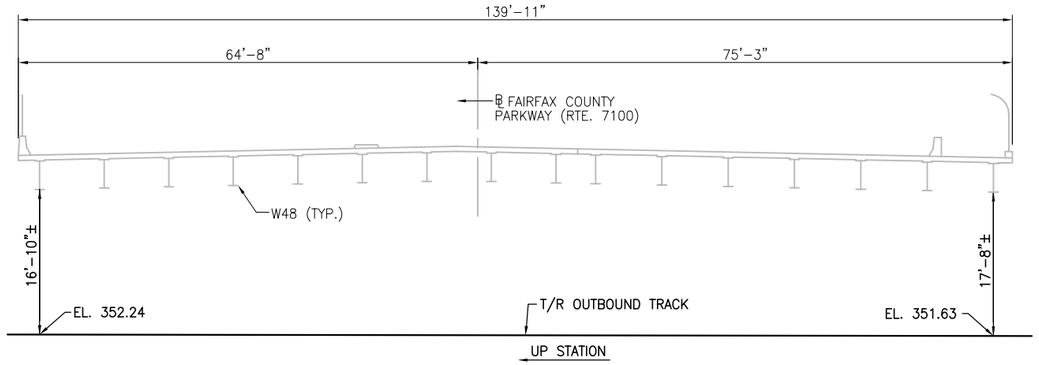
INTERCHANGES
FAIRFAX COUNTY PARKWAY (RTE. 7100)
OVER DULLES ACCESS ROAD
PLAN AND ELEVATION

SCALE: 1"=20'-0" (10 0 10 20)

DRAWING NO.: GPN-S-027

331

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TYPICAL CROSS SECTION

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DESIGNED: B. PATEL 10-10-01 DATE
DRAWN: J. ELLIOTT 10-10-01 DATE
CHECKED: V. RATHBURN 12-5-01 DATE
APPROVED: P. ELMAN 5-2002 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

SUBMITTED

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

Diana C Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

HALF-SIZE DRAWING

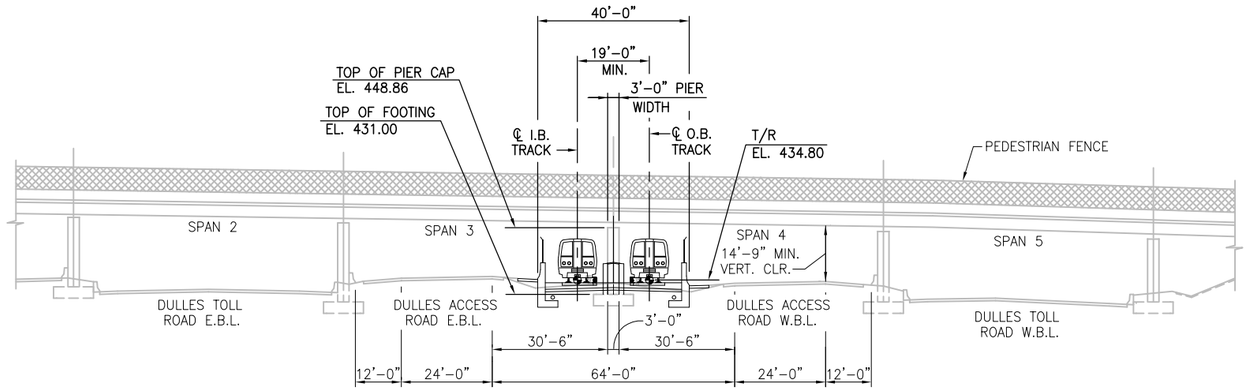
CONTRACT NO.:

INTERCHANGES
FAIRFAX COUNTY PARKWAY (RTE. 7100)
OVER DULLES ACCESS ROAD
SECTION

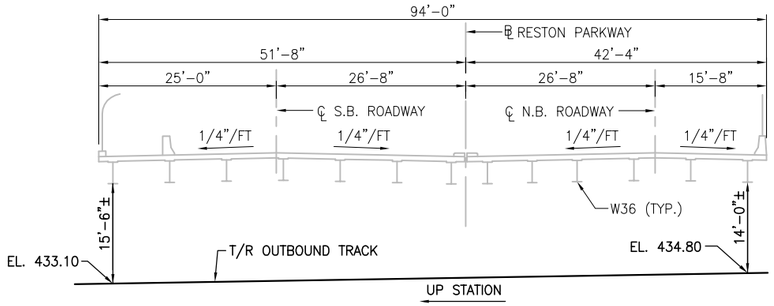
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DRAWING NO.: GPN-S-028

332

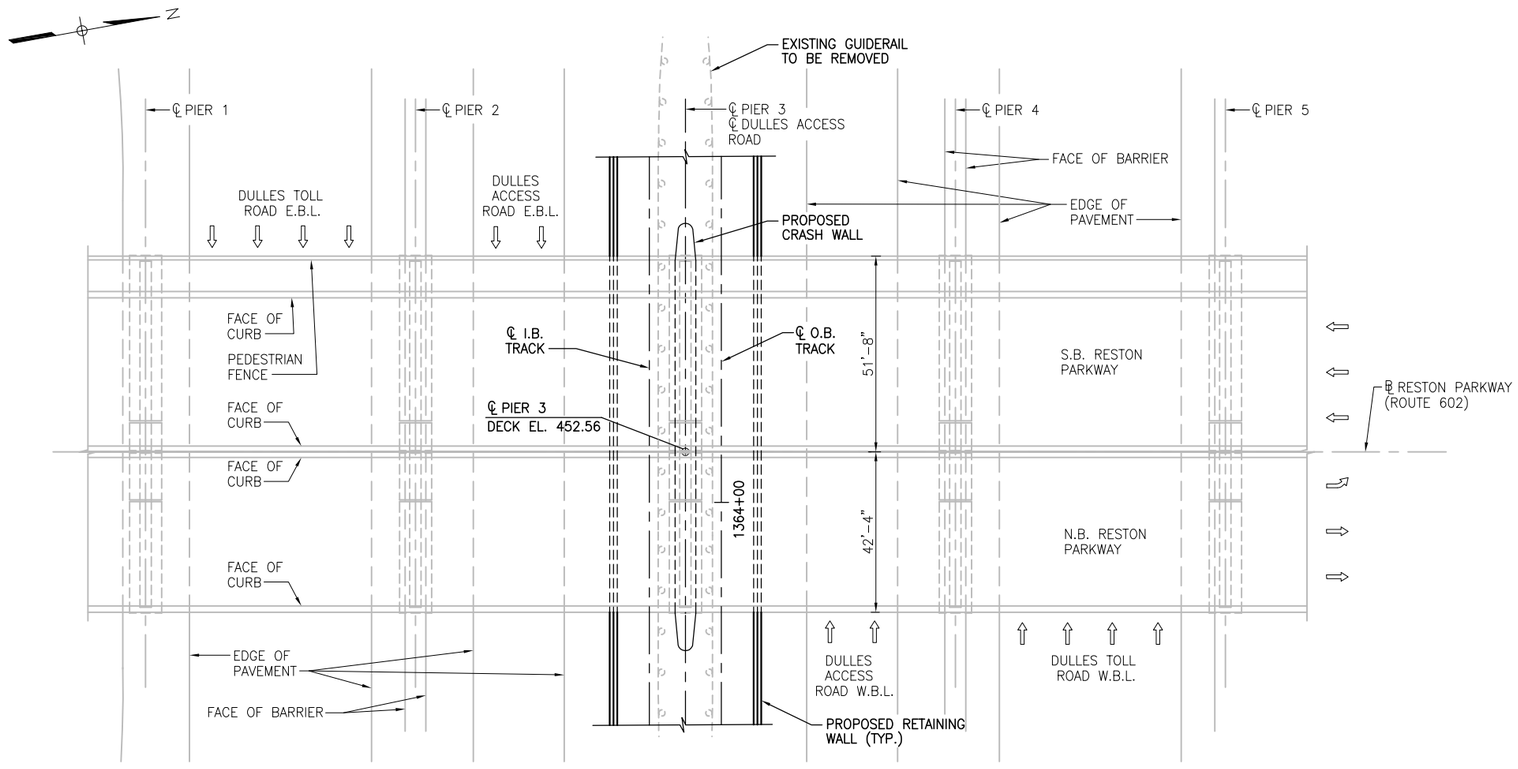


ELEVATION



TYPICAL CROSS SECTION

SCALE: 3/32" = 1'-0"



PLAN

NOTES:

1. THE EXISTING SUPERSTRUCTURE CONSISTS OF CONCRETE DECK ON STEEL ROLLED BEAMS.
2. FOOTINGS FOR THE EXISTING PIER REST ON SOLID ROCK.
3. BRIDGE NUMBERS OF EXISTING BRIDGES ARE 6235 AND 6243, PLAN NOS. ARE 189-25 AND 250-97.
4. INFORMATION ON THIS DRAWING HAS BEEN OBTAINED FROM THE AVAILABLE EXISTING BRIDGE DRAWINGS.
5. FOR TYPICAL CROSS SECTION AT UNDERPASS, SEE DWG. GPN-S-002.
6. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWG. GPN-PP-030.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: B. PATEL 10-10-01 DATE
DRAWN: J. ELLIOTT 10-10-01 DATE
CHECKED: V. RATHBURN 11-06-01 DATE
APPROVED: P. ELMAN 5-2002 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

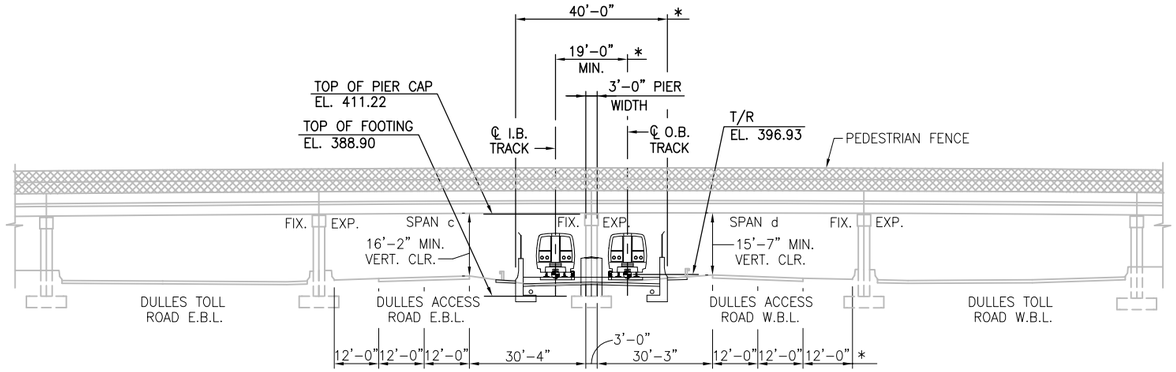
SUBMITTED — CAPITAL TRANSIT CONSULTANTS
Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

INTERCHANGES
RESTON PARKWAY (RTE. 602)
OVER DULLES ACCESS ROAD
PLAN, ELEVATION AND SECTION

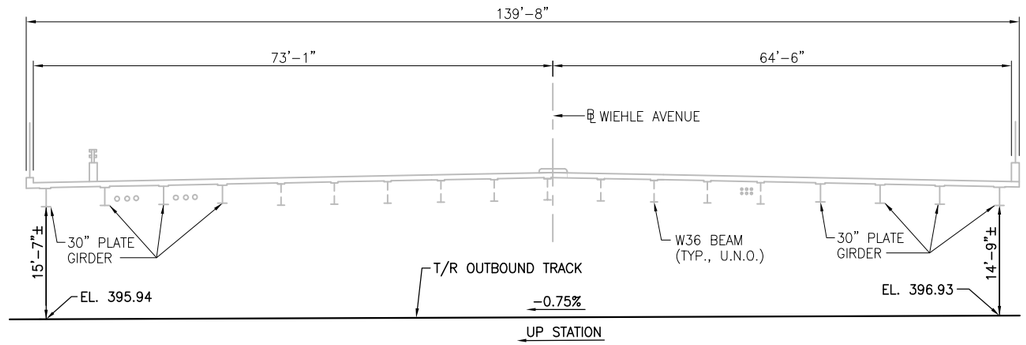
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333

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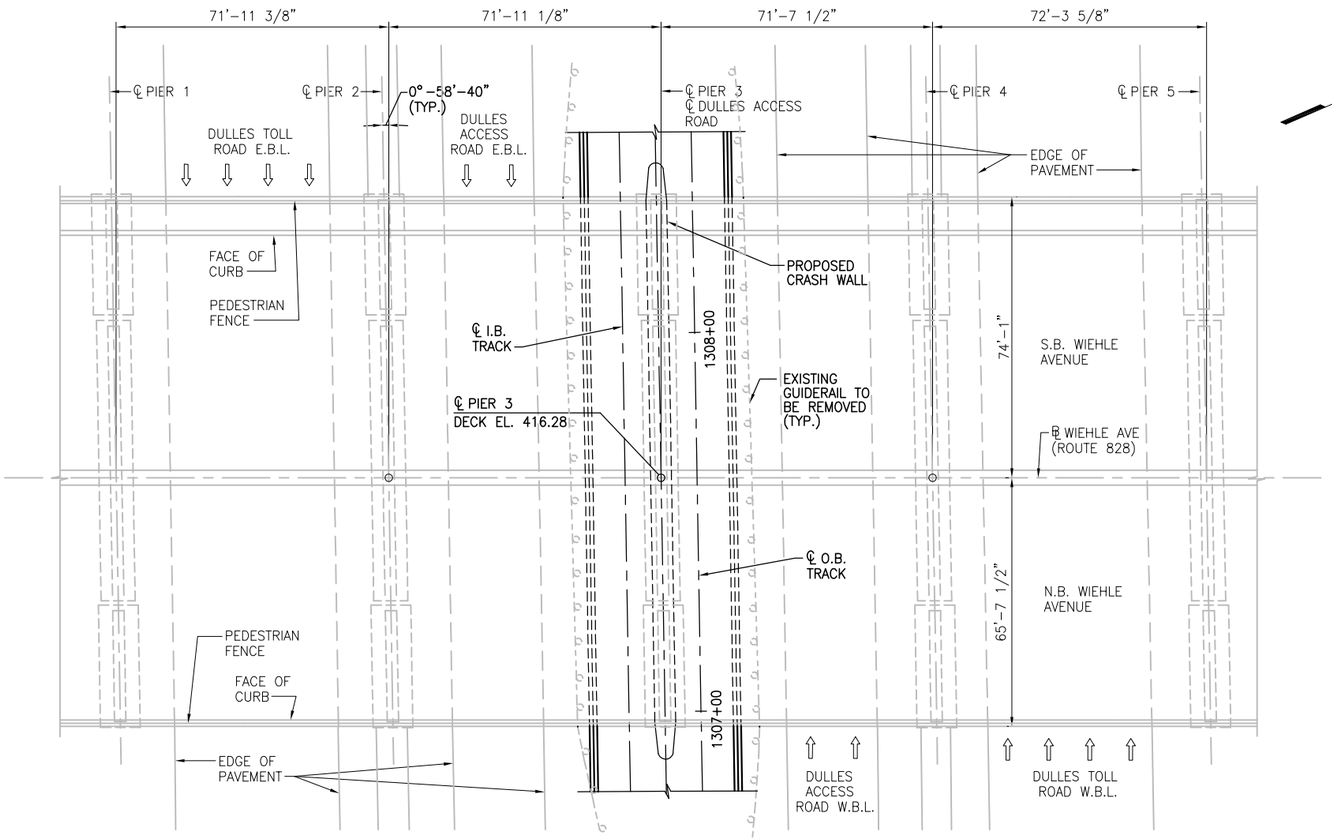
ELEVATION

*DIMENSIONS ARE PERPENDICULAR TO ℄ DULLES ACCESS ROAD



TYPICAL CROSS SECTION

SCALE: 3/32" = 1'-0"



PLAN

NOTES:

1. THE EXISTING SUPERSTRUCTURE CONSISTS OF CONCRETE DECK ON STEEL BEAMS.
2. FOOTINGS FOR THE EXISTING PIER REST ON COMPACTED SOIL.
3. BRIDGE NUMBER OF EXISTING BRIDGE IS 6365, PLAN NO. IS 254-30.
4. INFORMATION ON THIS DRAWING HAS BEEN OBTAINED FROM THE AVAILABLE EXISTING BRIDGE DRAWINGS.
5. FOR TYPICAL CROSS SECTION AT UNDERPASS, SEE DWG. GPN-S-002.
6. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWG. GPN-PP-032.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: B. PATEL 10-10-01 DATE
DRAWN: J. ELLIOTT 10-10-01 DATE
CHECKED: V. RATHBURN 11-07-01 DATE
APPROVED: P. ELMAN 5-2002 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

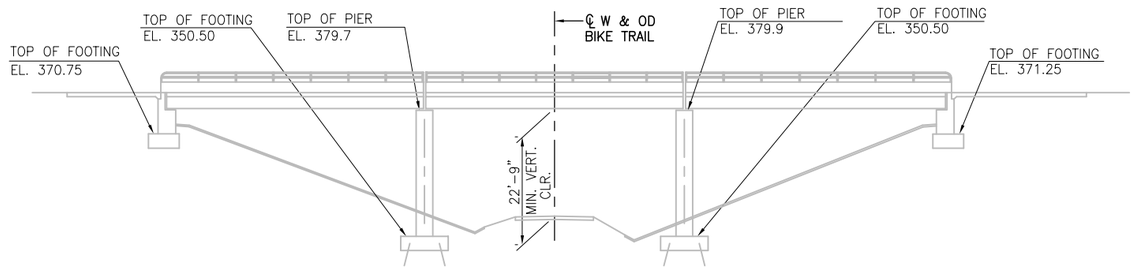
INTERCHANGES
WIEHLE AVENUE (RTE. 828)
OVER DULLES ACCESS ROAD
PLAN, ELEVATION AND SECTION

SCALE: 1"=20'-0" AND AS NOTED 10 0 10 20

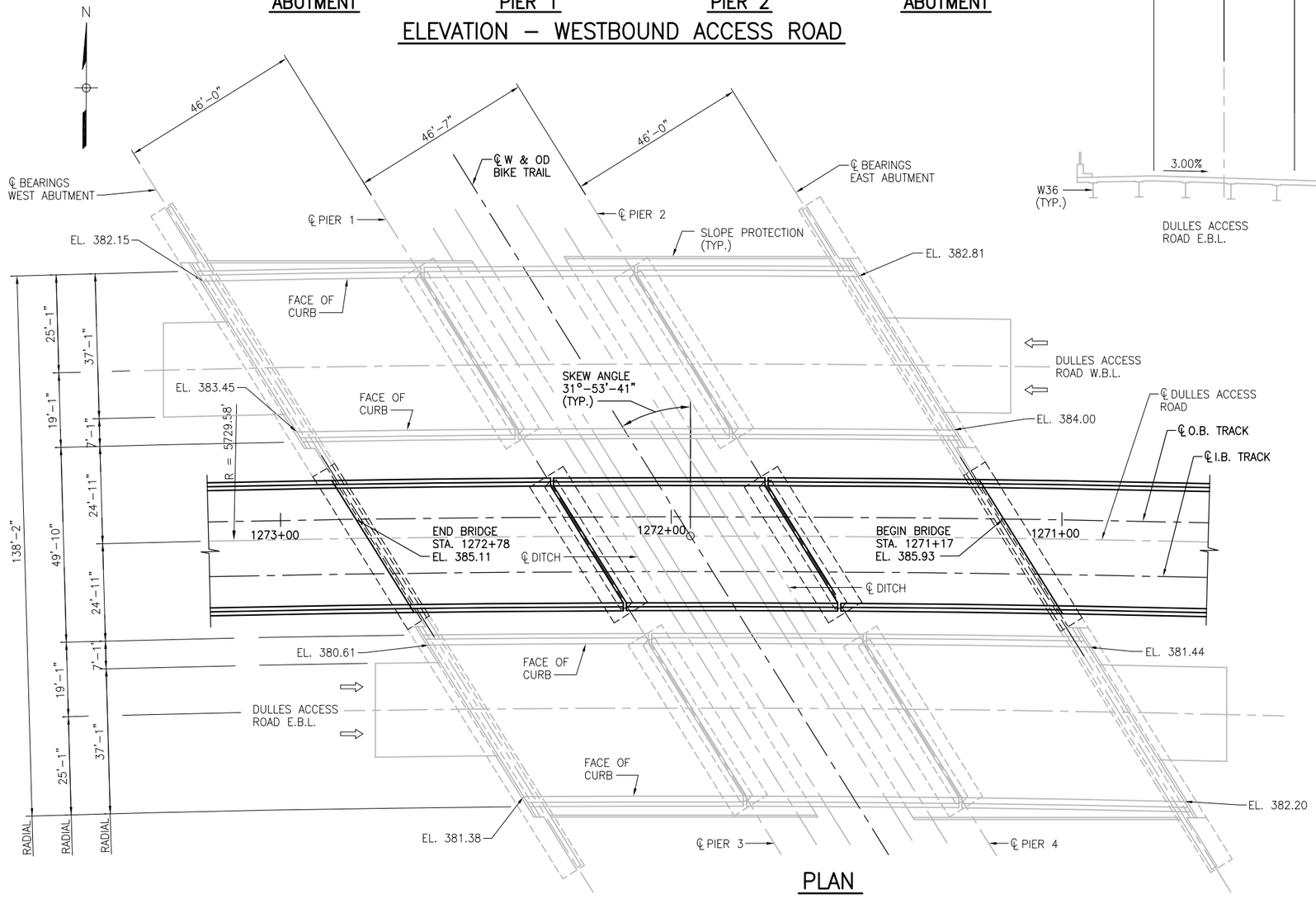
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334

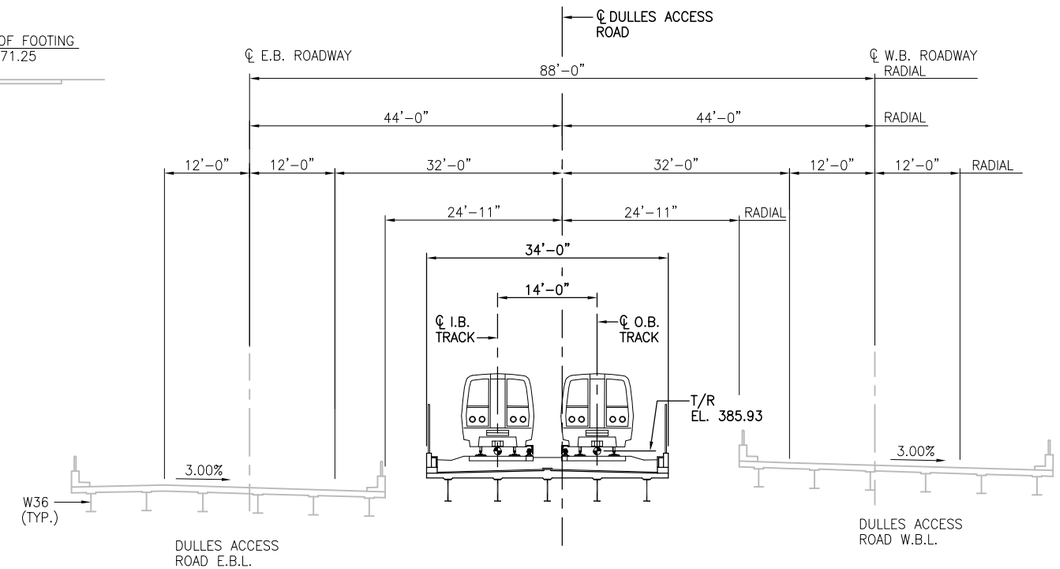
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ELEVATION – WESTBOUND ACCESS ROAD



PLAN



TYPICAL CROSS SECTION

SCALE: 3/32" = 1'-0"

NOTES:

1. THE EXISTING SUPERSTRUCTURE CONSISTS OF CONCRETE DECK ON STEEL ROLLED BEAMS.
2. FOR CROSS SECTION OF TYPICAL BALLASTED BRIDGE, SEE DWG. GPN–S–003.
3. FOOTINGS FOR THE EXISTING PIERS REST ON PILES.
4. BRIDGE NUMBERS OF EXISTING BRIDGES ARE 2202 AND 2022, PLAN NO. IS 189–03.
5. INFORMATION ON THIS DRAWING HAS BEEN OBTAINED FROM THE AVAILABLE EXISTING BRIDGE DRAWINGS.
6. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWG. GPN–PP–034.

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: B. PATEL	10–10–01 DATE	
DRAWN: J. ELLIOTT	10–10–01 DATE	
CHECKED: V. RATHBURN	11–10–01 DATE	
APPROVED: P. ELMAN	5–2002 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

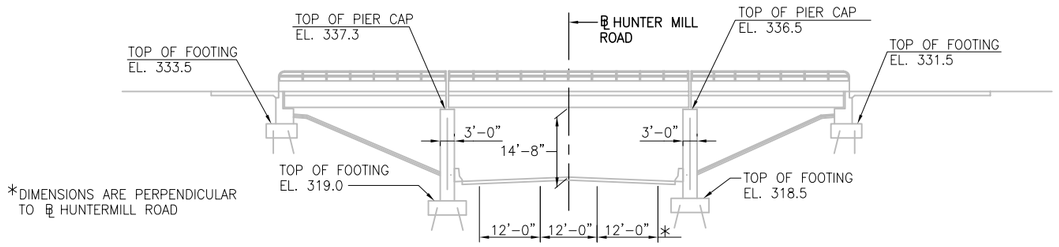
INTERCHANGES
DULLES ACCESS ROAD OVER
W & OD BIKE TRAIL
PLAN, ELEVATION AND SECTION

SCALE: 1/16"=1'–0" AND AS NOTED 4 0 4 8 12 16 20

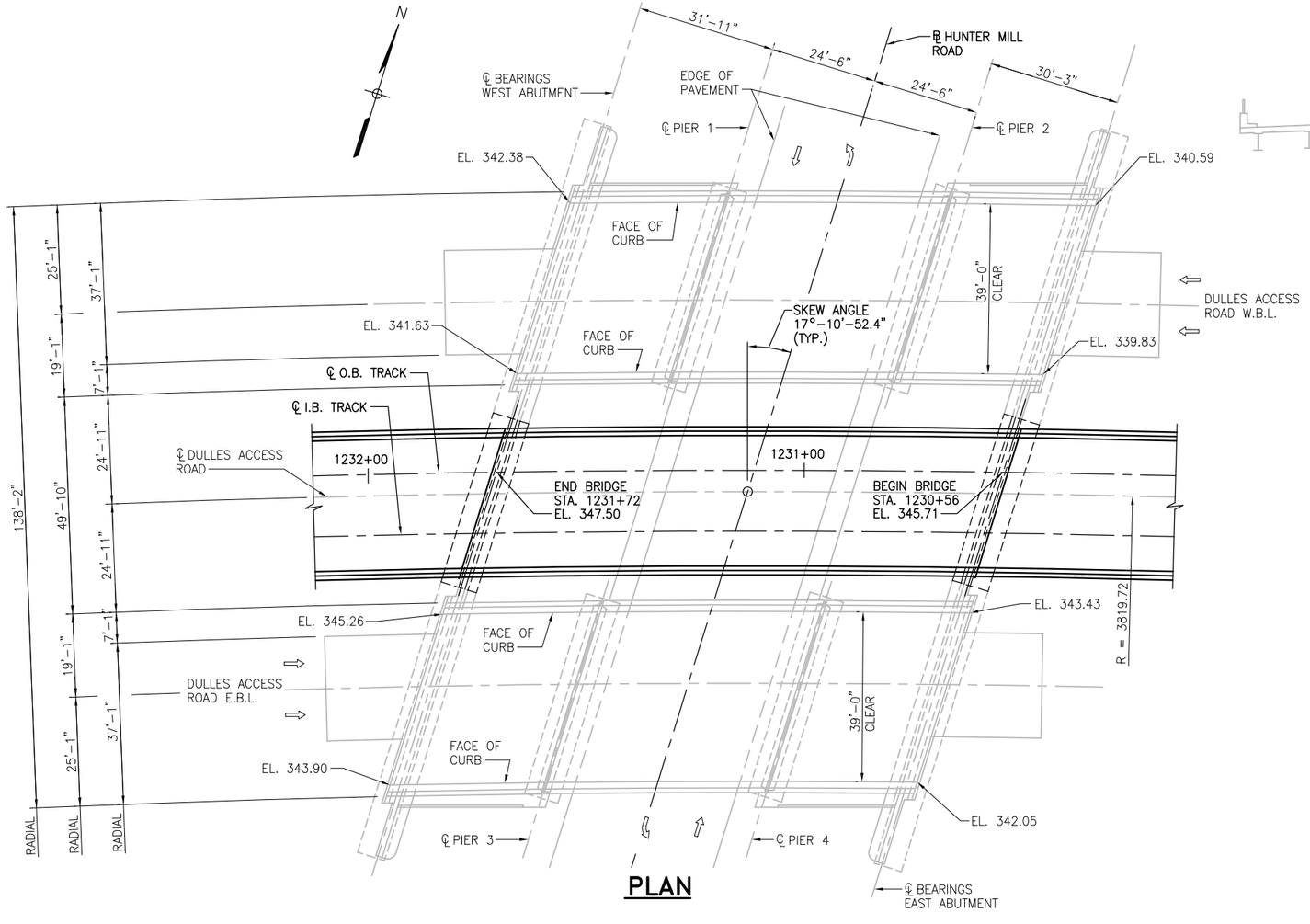
DRAWING NO.: GPN–S–024

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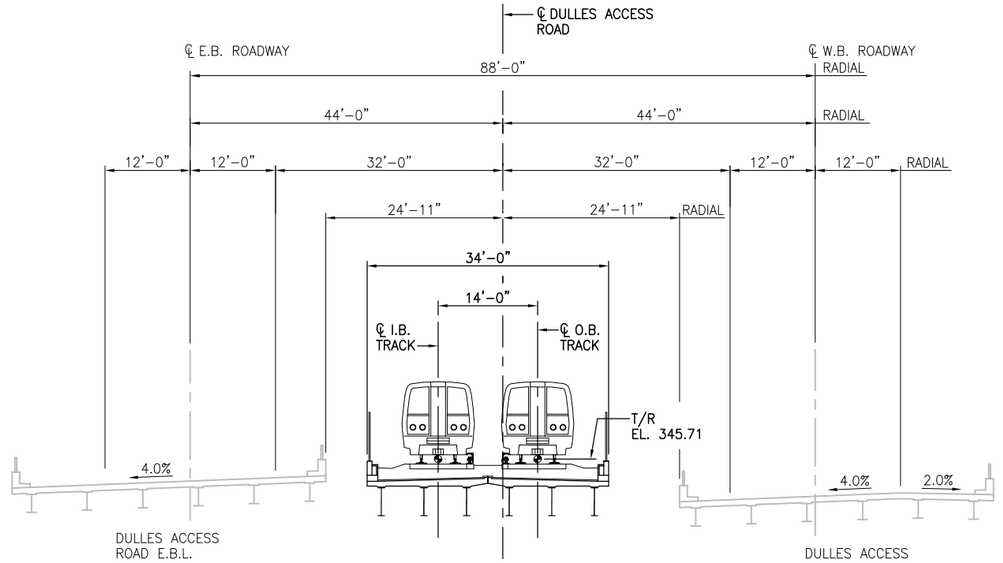
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ELEVATION – WESTBOUND ACCESS ROAD



PLAN



TYPICAL CROSS SECTION

SCALE: 3/32"=1'-0"

NOTES:

1. THE EXISTING SUPERSTRUCTURE CONSISTS OF CONCRETE DECK ON STEEL ROLLED BEAMS.
2. FOR CROSS SECTION OF TYPICAL BALLASTED BRIDGE, SEE DWG. GPN–S–003.
3. FOOTINGS FOR THE EXISTING PIERS AND ABUTMENTS REST ON PILES.
4. BRIDGE NUMBERS OF EXISTING BRIDGES ARE 2049 AND 2191, PLAN NO. IS 189–04.
5. INFORMATION ON THIS DRAWING HAS BEEN OBTAINED FROM THE AVAILABLE EXISTING BRIDGE DRAWINGS.
6. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWG. GPN–PP–035.

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: B. PATEL	10–10–01 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: J. ELLIOTT	10–10–01 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: V. RATHBURN	11–7–01 DATE		
APPROVED: P. ELMAN	5–2002 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

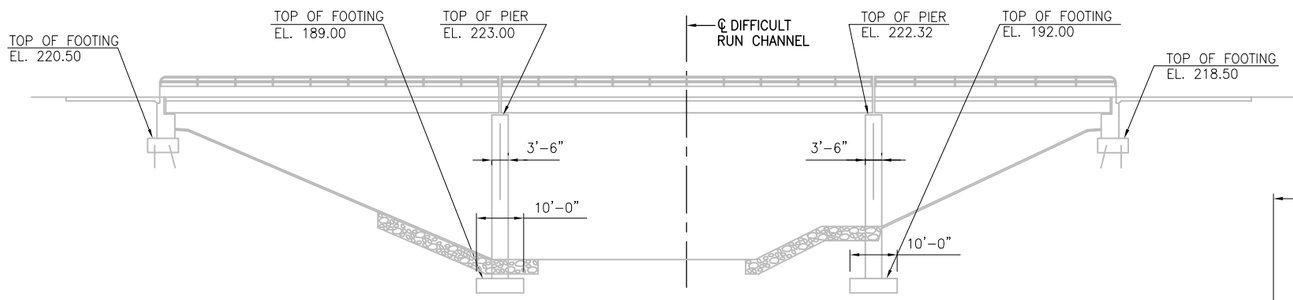
INTERCHANGES
DULLES ACCESS ROAD OVER
HUNTER MILL ROAD (RTE. 674)
PLAN, ELEVATION AND SECTION

SCALE: 1/16"=1'-0" AND AS NOTED 4 0 4 8 12 16 20

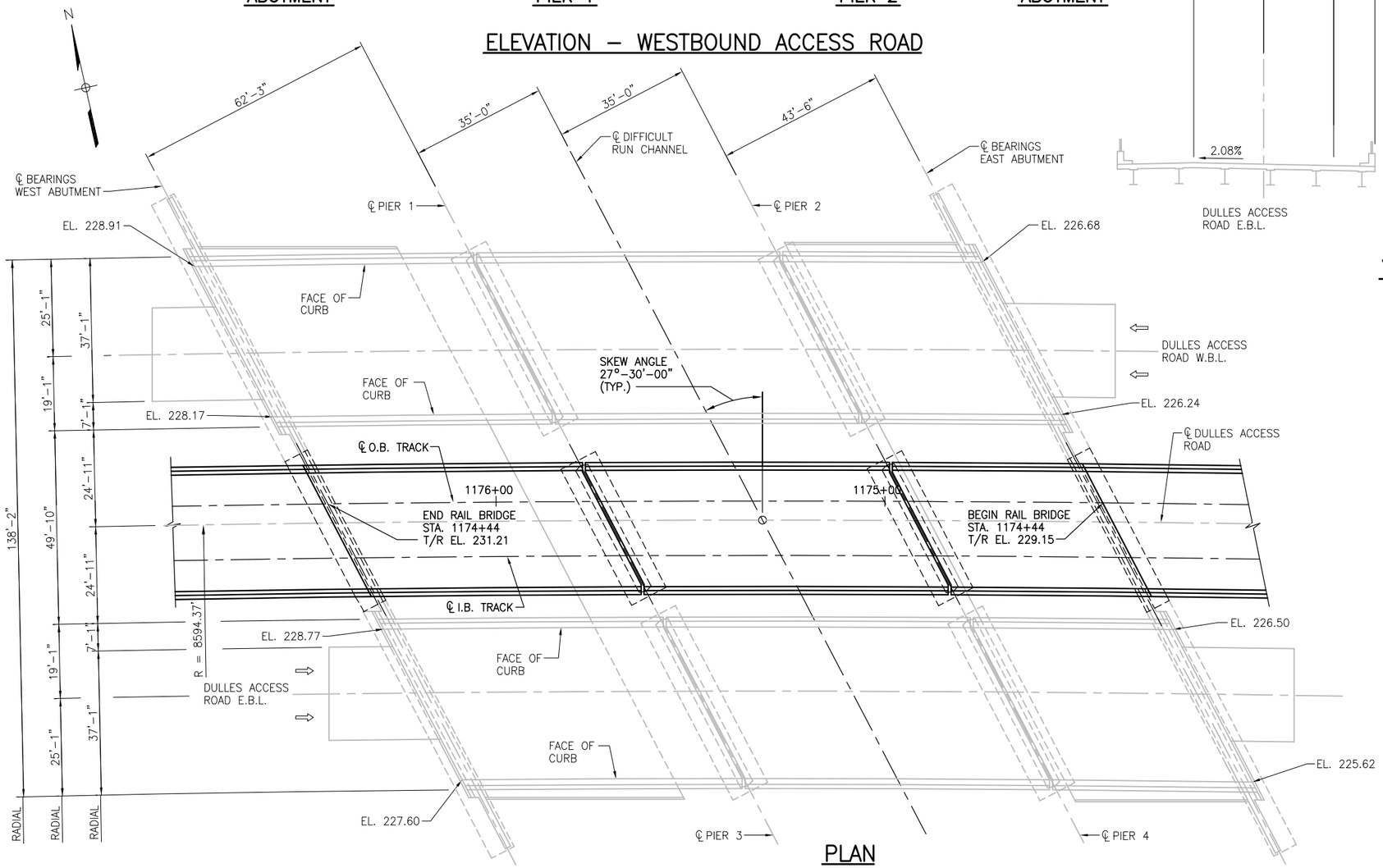
DRAWING NO.: GPN–S–023

336

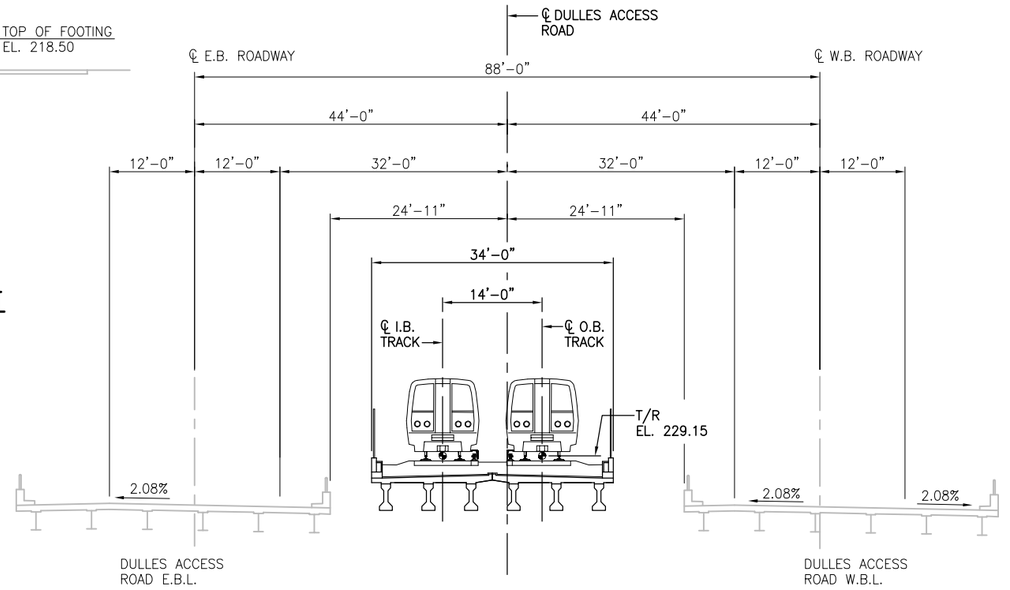
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ELEVATION – WESTBOUND ACCESS ROAD



PLAN



TYPICAL CROSS SECTION

SCALE: 3/32" = 1'-0"

NOTES:

1. THE EXISTING SUPERSTRUCTURE CONSISTS OF CONCRETE DECK ON STEEL ROLLED BEAMS.
2. FOR CROSS SECTION OF TYPICAL BALLASTED BRIDGE, SEE DWG. GPN–S–003.
3. FOOTINGS FOR THE EXISTING PIERS REST ON COMPACTED SOIL.
4. BRIDGE NUMBER OF EXISTING BRIDGES ARE 2086 AND 2090, PLAN NO. IS 189–05.
5. INFORMATION ON THIS DRAWING HAS BEEN OBTAINED FROM THE AVAILABLE EXISTING BRIDGE DRAWINGS.
6. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWGS. GPN–PP–037 AND GPN–PP–038.

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: B. PATEL	10–10–01 DATE	
DRAWN: J. ELLIOTT	10–10–01 DATE	
CHECKED: V. RATHBURN	11–7–01 DATE	
APPROVED: P. ELMAN	5–2002 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

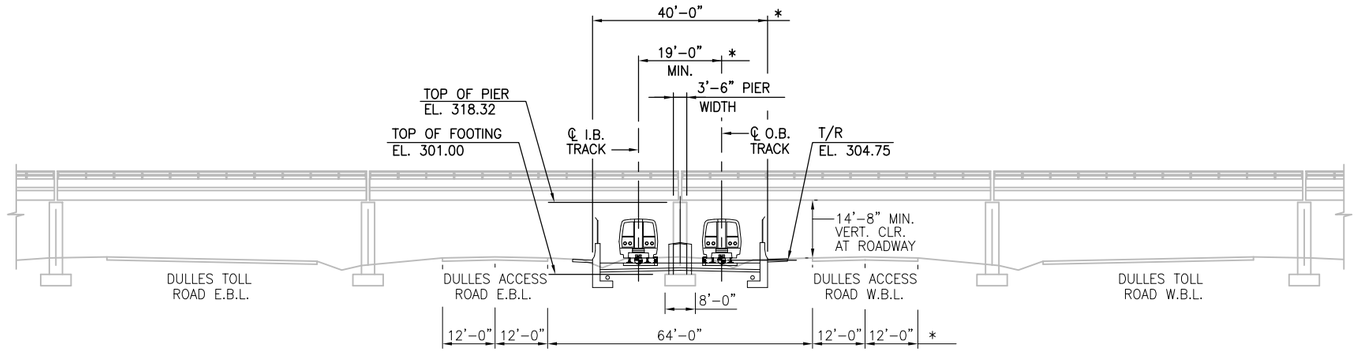
INTERCHANGES
DULLES ACCESS ROAD OVER
DIFFICULT RUN
PLAN, ELEVATION AND SECTION

SCALE: 1/16"=1'–0" AND AS NOTED 4 0 4 8 12 16 20

DRAWING NO.: GPN–S–022

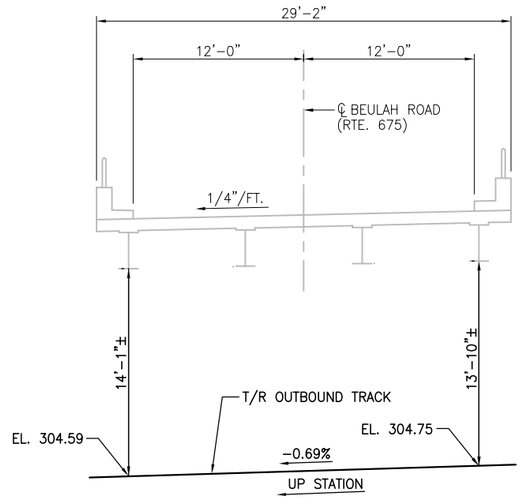
337

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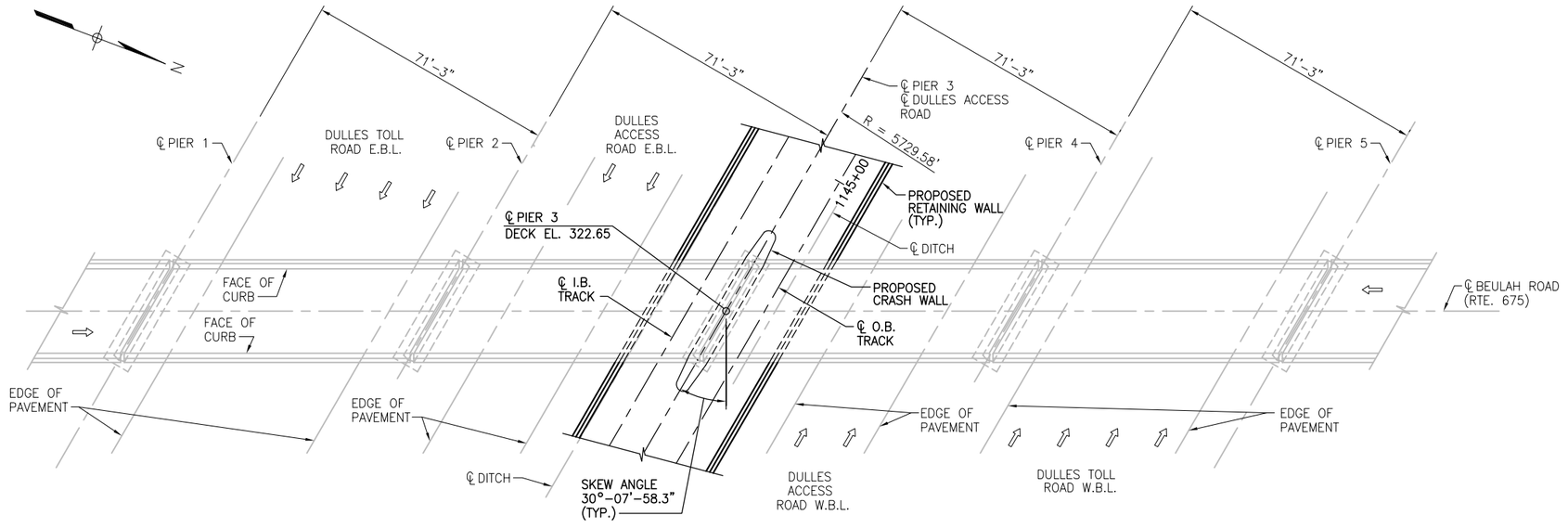
* DIMENSIONS ARE PERPENDICULAR TO ℄ DULLES ACCESS ROAD

ELEVATION



TYPICAL CROSS SECTION

SCALE: 3/16" = 1'-0"



PLAN

NOTES:

1. THE EXISTING SUPERSTRUCTURE CONSISTS OF CONCRETE DECK ON STEEL ROLLED BEAMS.
2. FOOTINGS FOR THE EXISTING PIER REST ON COMPACTED SOIL.
3. BRIDGE NUMBER OF EXISTING BRIDGE IS 6232, PLAN NO. IS 189-06.
4. INFORMATION ON THIS DRAWING HAS BEEN OBTAINED FROM THE AVAILABLE EXISTING BRIDGE DRAWINGS.
5. FOR TYPICAL CROSS SECTION AT UNDERPASS, SEE DWG. GPN-S-002.
6. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWGS. GPN-PP-039 AND GPN-PP-040.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: B. PATEL 10-10-01 DATE
DRAWN: J. ELLIOTT 10-10-01 DATE
CHECKED: V. RATHBURN 11-7-01 DATE
APPROVED: P. ELMAN 5-2002 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

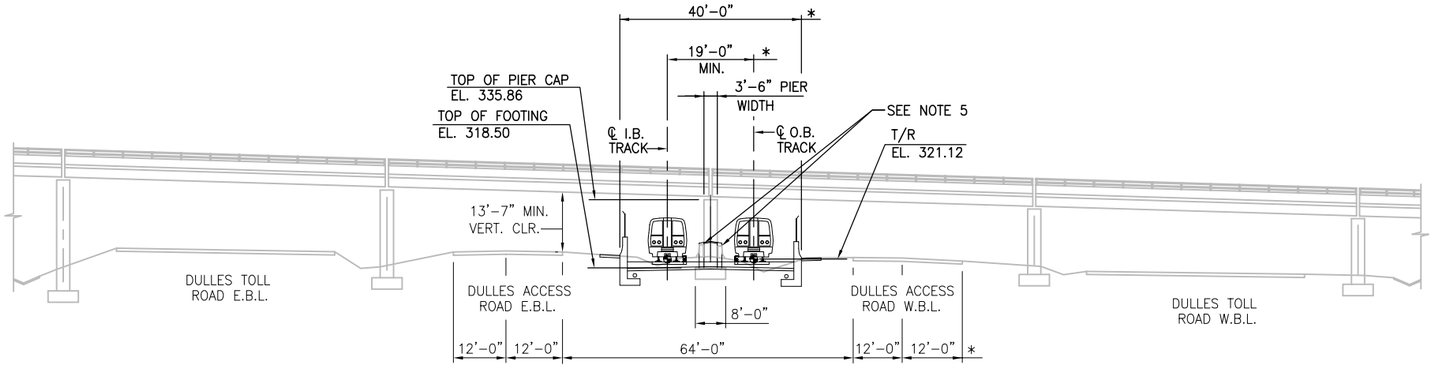
CAPITAL TRANSIT CONSULTANTS
SUBMITTED
Diana C Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

INTERCHANGES
BEULAH ROAD (RTE. 675)
OVER DULLES ACCESS ROAD
PLAN, ELEVATION AND SECTION

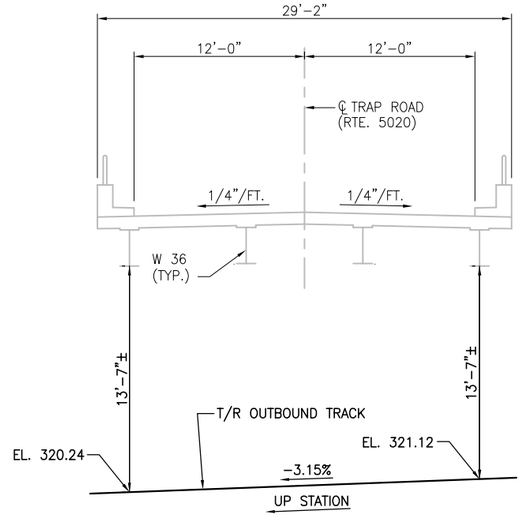
SCALE: 1"=20'-0" AND AS NOTED 10 0 10 20
DRAWING NO.: GPN-S-021
338

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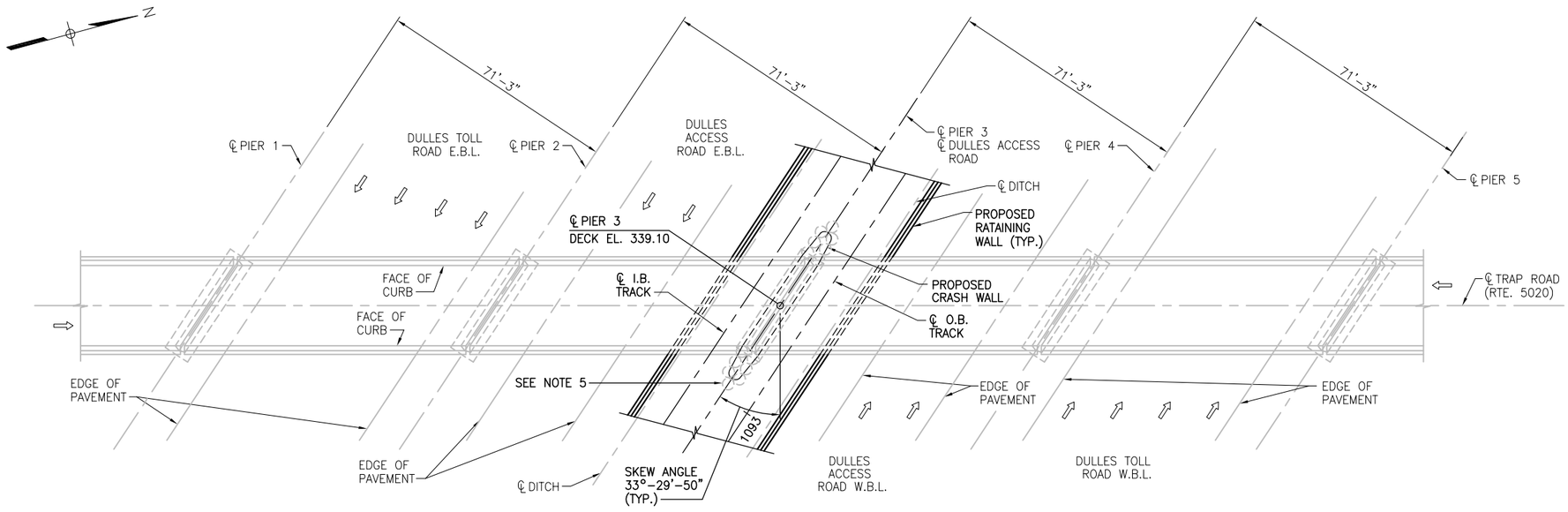
*DIMENSIONS ARE PERPENDICULAR TO ℄ DULLES ACCESS ROAD

ELEVATION



TYPICAL CROSS SECTION

SCALE: 3/16" = 1'-0"



PLAN

NOTES:

1. THE EXISTING SUPERSTRUCTURE CONSISTS OF CONCRETE DECK ON STEEL ROLLED BEAMS.
2. FOOTINGS FOR THE EXISTING PIER REST ON COMPACTED SOIL.
3. BRIDGE NUMBER OF EXISTING BRIDGE IS 6233, PLAN NO. IS 189-07.
4. INFORMATION ON THIS DRAWING HAS BEEN OBTAINED FROM THE AVAILABLE EXISTING BRIDGE DRAWINGS.
5. EXISTING CRASH BARRIER AND CRASH CUSHIONS TO BE REMOVED.
6. FOR TYPICAL CROSS SECTION AT UNDERPASS, SEE DWG. GPN-S-002.
7. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWG. GPN-PP-042.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: B. PATEL	10-10-01 DATE	
DRAWN: J. ELLIOTT	10-10-01 DATE	
CHECKED: V. RATHBURN	11-7-01 DATE	
APPROVED: P. ELMAN	5-2002 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

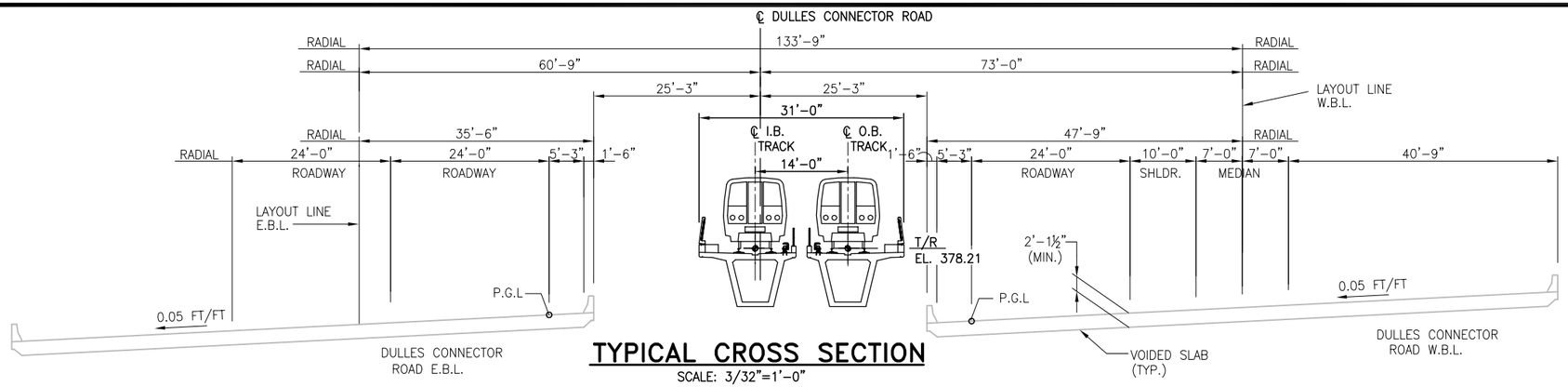
INTERCHANGES
TRAP ROAD (RTE. 5020)
OVER DULLES ACCESS ROAD
PLAN, ELEVATION AND SECTION

SCALE: 1"=20'-0" AND AS NOTED 10 0 10 20

DRAWING NO.: GPN-S-020

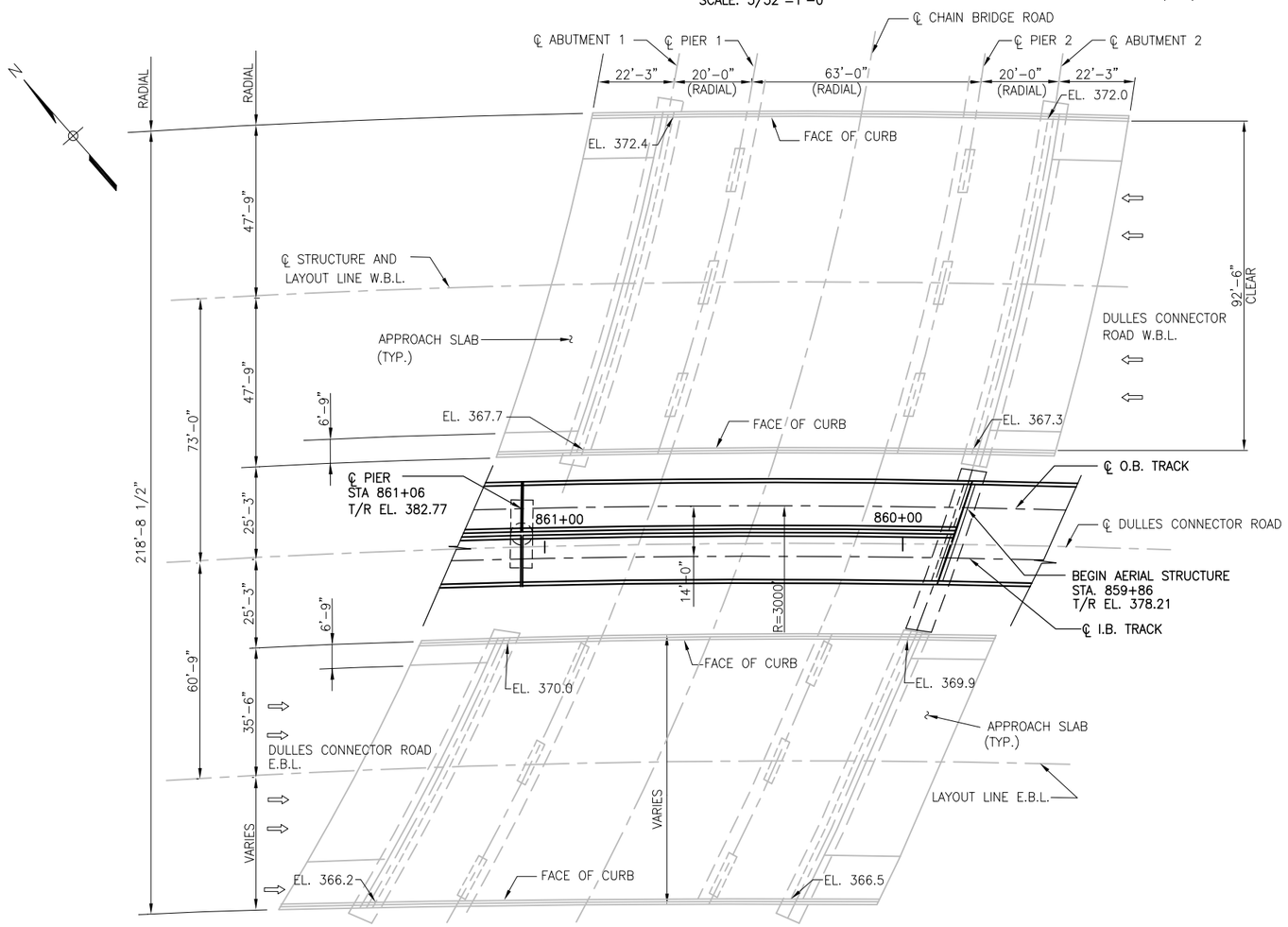
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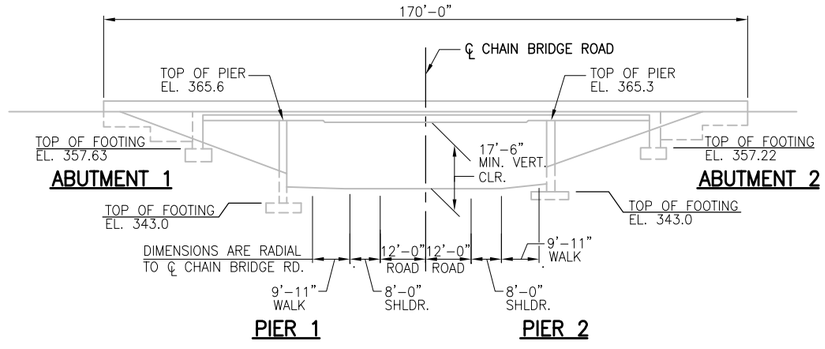


TYPICAL CROSS SECTION

SCALE: 3/32"=1'–0"



PLAN



ELEVATION – WEST BOUND CONNECTOR ROAD

NOTES:

1. THE EXISTING SUPERSTRUCTURE CONSISTS OF VOIDED CONCRETE SLAB.
2. FOOTINGS FOR THE EXISTING PIERS AND ABUTMENTS REST ON COMPACT SOIL.
3. BRIDGE NUMBER OF EXISTING BRIDGES ARE 2017 AND 2018. PLAN NO. IS 272–27.
4. INFORMATION ON THIS DRAWING HAS BEEN OBTAINED FROM THE AVAILABLE EXISTING BRIDGE DRAWINGS.
5. FOR CROSS SECTION OF TYPICAL AERIAL STRUCTURE, SEE DWG. GPN–S–006.
6. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWGS. GPN–PP–056 AND GPN–PP–057.

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: V.RATHBURN 10–10–01 DATE
DRAWN: S. MURDAUGH 10–10–01 DATE
CHECKED: B. PATEL 12–10–02 DATE
APPROVED: P. ELMAN 5–2002 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

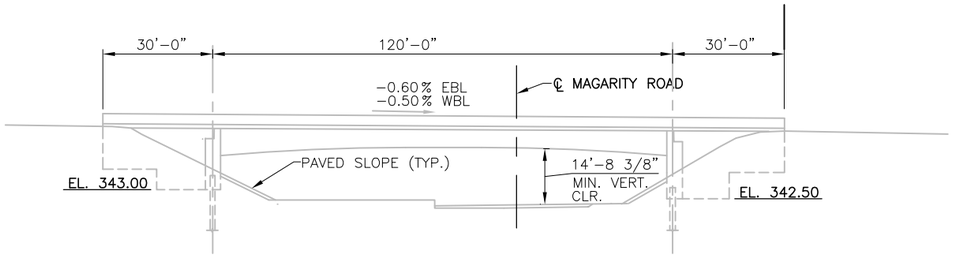
CAPITAL TRANSIT CONSULTANTS
SUBMITTED
Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

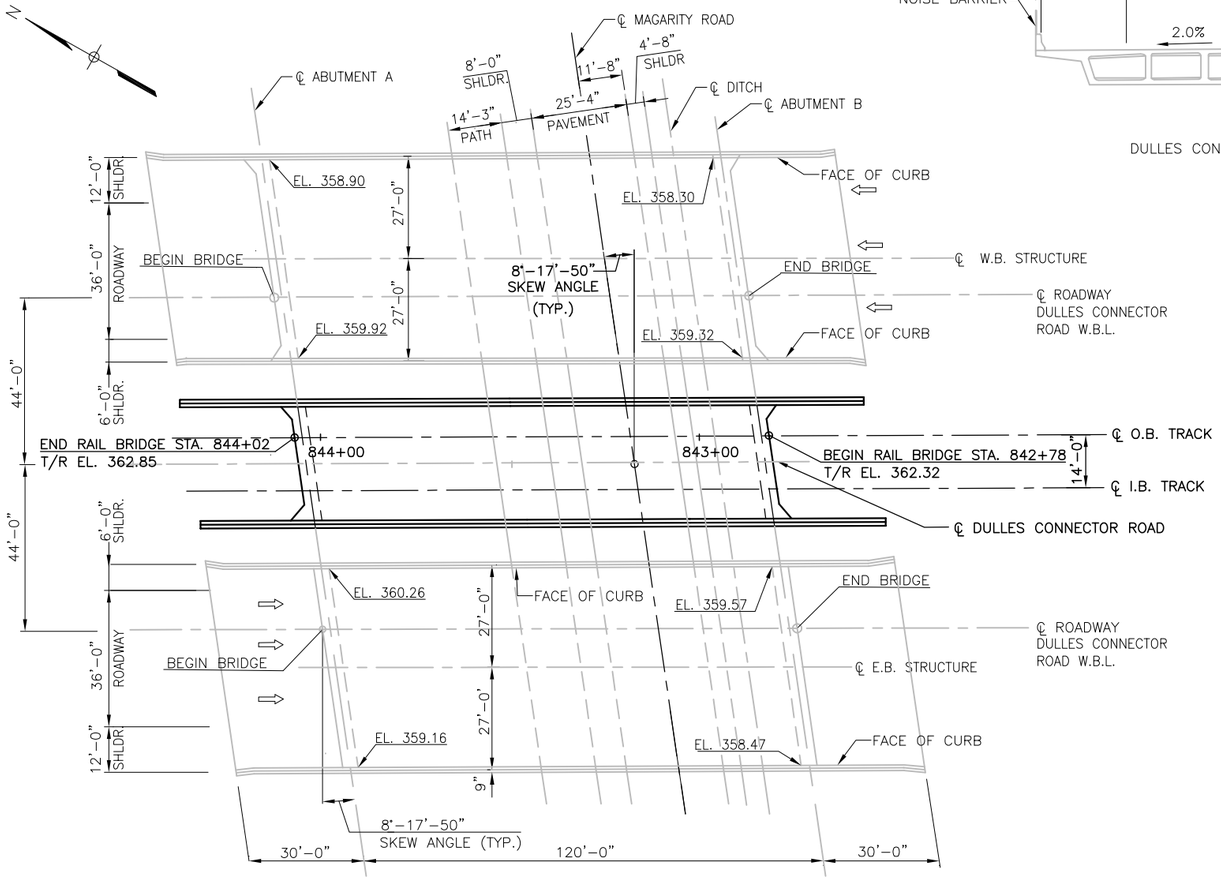
INTERCHANGES
DULLES CONNECTOR ROAD
OVER CHAINBRIDGE ROAD
PLAN, ELEVATION AND SECTION

SCALE: 1"=20'–0" AND AS NOTED
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DRAWING NO.: GPN–S–019
340

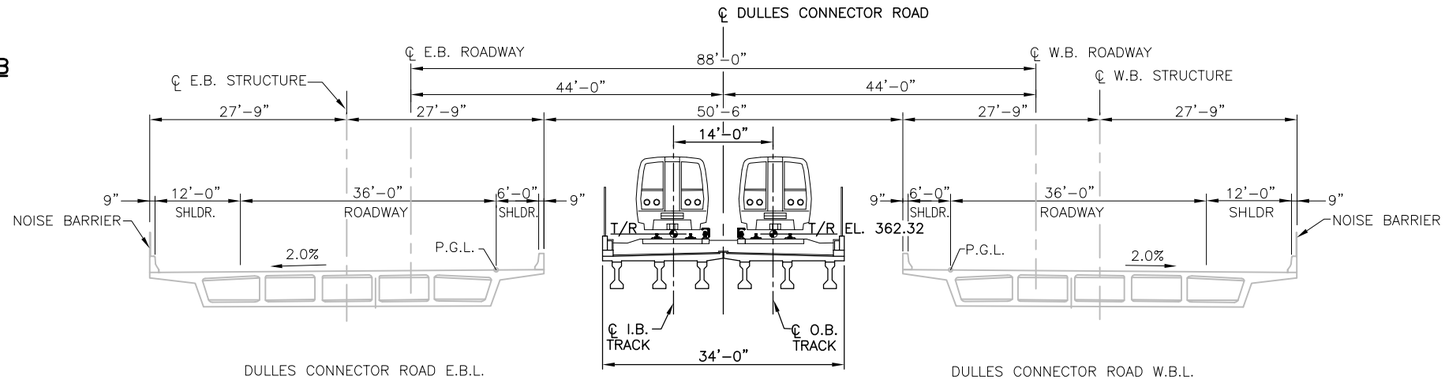
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ELEVATION–WESTBOUND CONNECTOR ROAD



PLAN



TYPICAL CROSS SECTION

SCALE: 3/32"=1'-0"

NOTES:

1. THE EXISTING SUPERSTRUCTURE CONSISTS OF CONCRETE HAUNCHED BOX GIRDERS.
2. ABUTMENTS FOR THE EXISTING STRUCTURE ARE SUPPORTED ON STEEL H–PILES.
3. BRIDGE NUMBERS OF EXISTING BRIDGES ARE 2015 AND 2016, PLAN NO. IS 275–08.
4. INFORMATION ON THIS DRAWING HAS BEEN OBTAINED FROM THE EXISTING BRIDGE DRAWINGS.
5. FOR CROSS SECTION OF TYPICAL BALLASTED BRIDGE, SEE DWG. GPN–S–003.
6. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWG. GPN–PP–058.

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: V. RATHBURN	10–10–01	DATE
DRAWN: S. MURDAUGH	10–10–01	DATE
CHECKED: B. PATEL	12–10–01	DATE
APPROVED: P. ELMAN	5–2002	DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

Diana C Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

INTERCHANGES
DULLES CONNECTOR ROAD
OVER MAGARITY ROAD
PLAN, ELEVATION AND SECTION

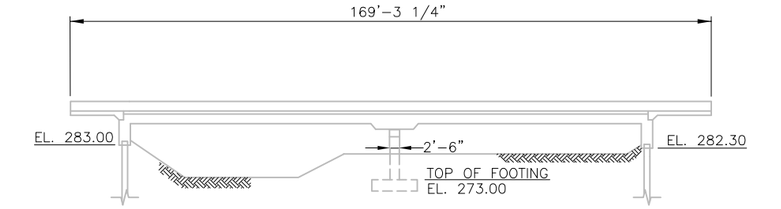
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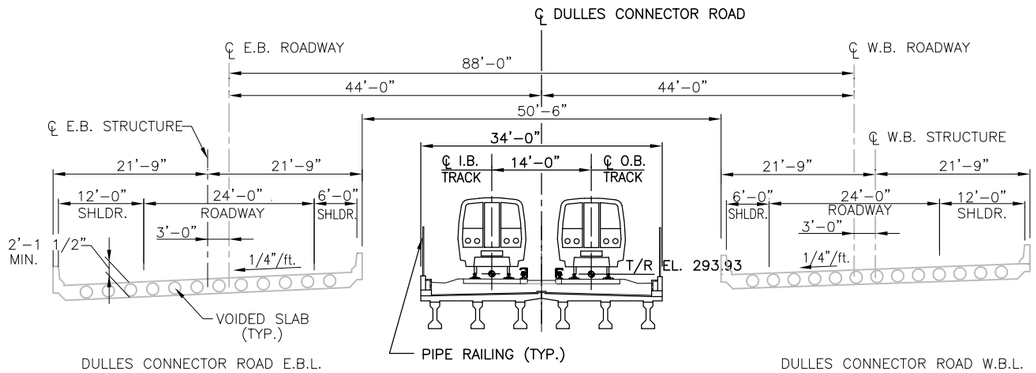
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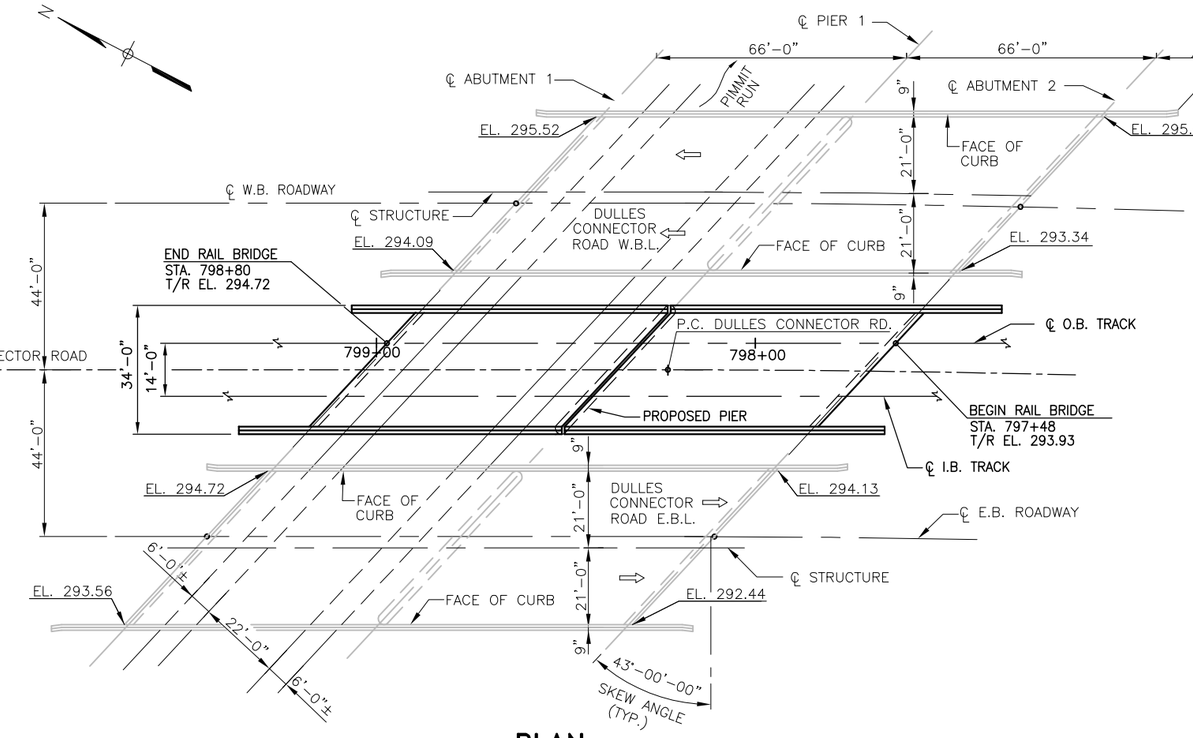


ELEVATION–WESTBOUND CONNECTOR ROAD



TYPICAL CROSS SECTION

SCALE: 3/32=1'-0"



PLAN

NOTES:

1. THE EXISTING SUPERSTRUCTURE CONSISTS OF TWO SPAN CONTINUOUS VOIDED SLAB.
2. FOOTINGS FOR THE PIERS REST ON COMPACTED SOIL.
3. BRIDGE NUMBERS OF EXISTING BRIDGE ARE 2003 AND 2005, PLAN NO. IS 272–25.
4. INFORMATION ON THIS DRAWING HAS BEEN OBTAINED FROM THE AVAILABLE EXISTING BRIDGE DRAWINGS.
5. FOR CROSS SECTION OF TYPICAL BALLASTED BRIDGE, SEE DWG. GPN–S–003.
6. FOR PLAN AND PROFILE OF PROPODED RAIL, SEE DWG. GPN–PP–060.

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: V. RATHBURN 10–10–01 DATE	REFERENCE DRAWINGS: NUMBER / DESCRIPTION	REVISIONS: DATE / BY / DESCRIPTION
DRAWN: A. JOHNSON 10–10–01 DATE		
CHECKED: B. PATEL 12–10–01 DATE		
APPROVED: P. ELMAN 5–2002 DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

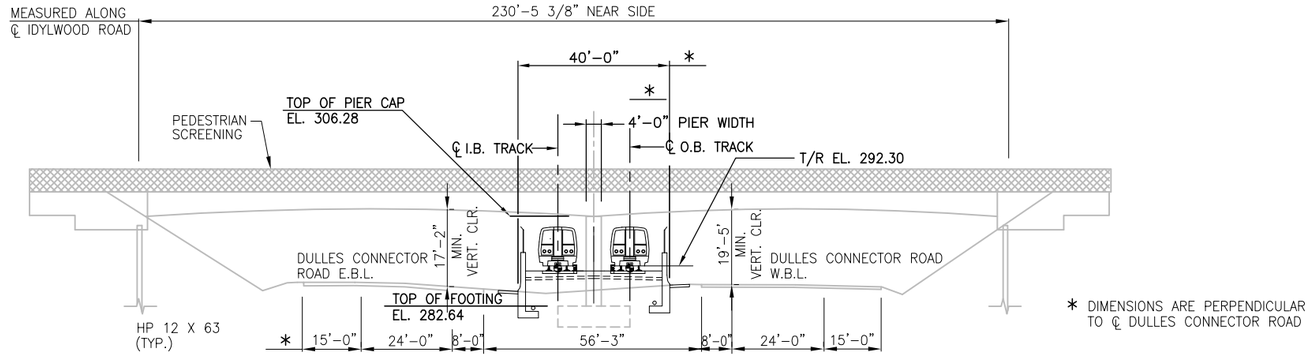
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DULLES CONNECTOR ROAD
OVER PIMMIT RUN
PLAN ELEVATION AND SECTION

SCALE: 1"=20'–0" AND AS NOTED (10 0 10 20)

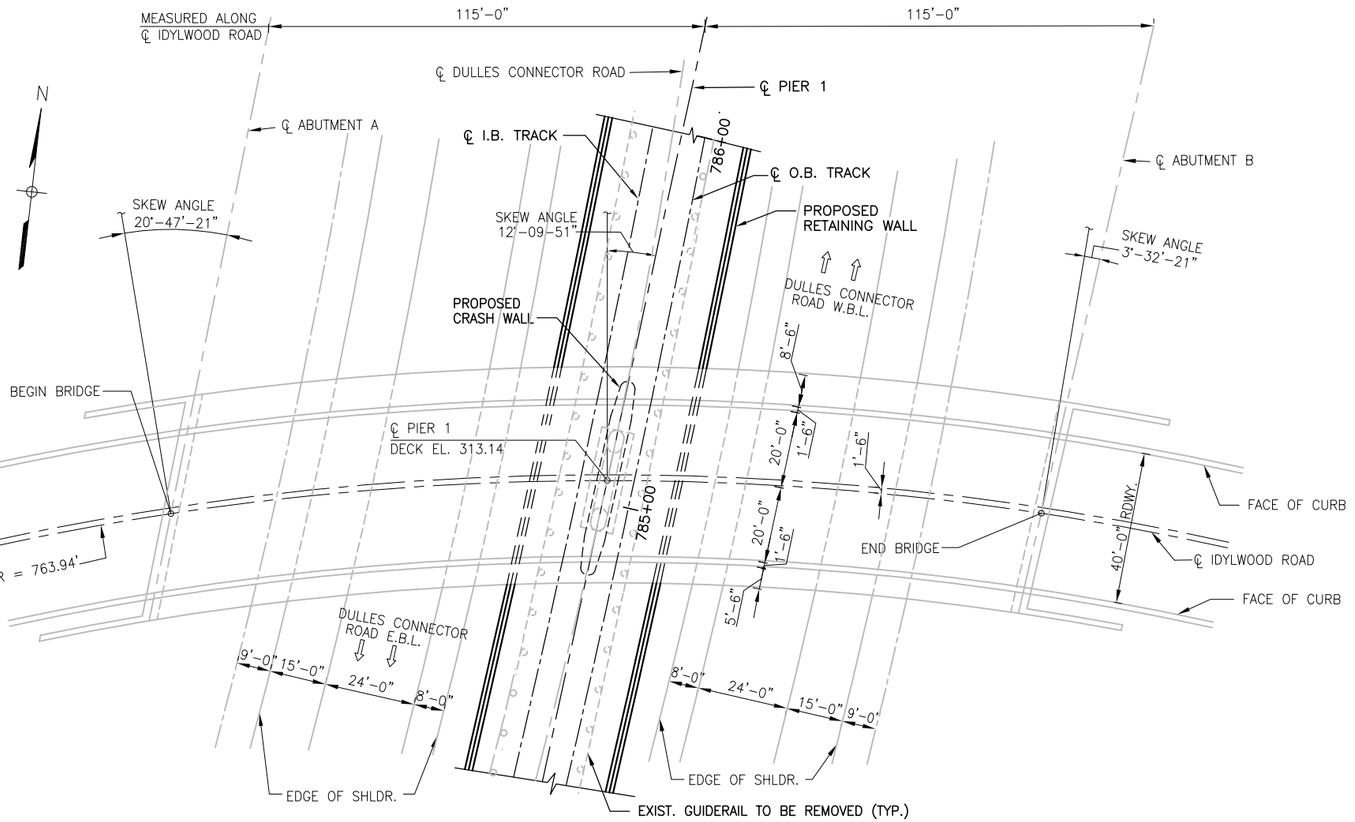
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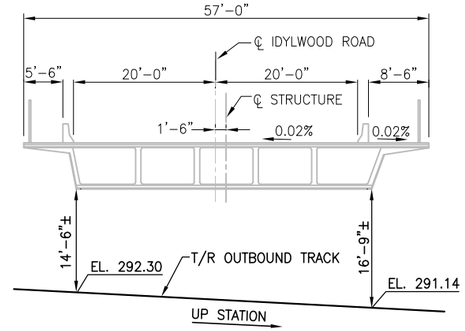
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ELEVATION



PLAN



TYPICAL CROSS SECTION

SCALE: 3/32" = 1'-0"

NOTES:

1. THE EXISTING SUPERSTUCTURE CONSISTS OF CONCRETE HAUNCHED BOX GIRDERS.
2. FOOTINGS FOR THE EXISTING PIER REST ON STEEL PILES.
3. BRIDGE NUMBER OF EXISTING BRIDGE IS 6404. PLAN NO. 272-26.
4. INFORMATION ON THIS DRAWING HAS BEEN OBTAINED FROM THE AVAILABLE EXISTING BRIDGE DRAWINGS.
5. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWG. GPN-PP-060.
6. FOR TYPICAL CROSS SECTION AT UNDERPASS, SEE DWG. GPN-S-002.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: V. RATHBURN	10-10-01 DATE
DRAWN: S. MURDAUGH	10-10-01 DATE
CHECKED: B. PATEL	12-13-01 DATE
APPROVED: P. ELMAN	5-2002 DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

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SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

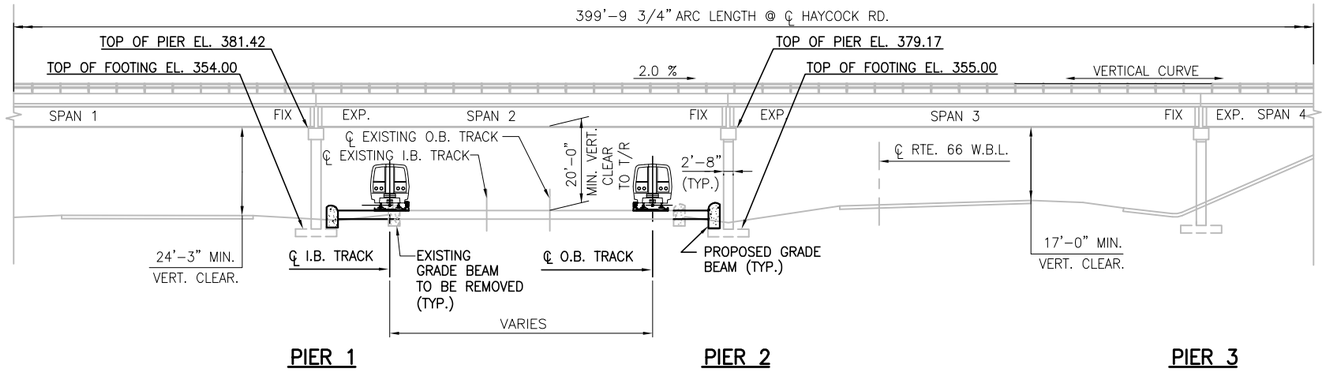
INTERCHANGES
IDYLWOOD ROAD
OVER DULLES CONNECTOR ROAD
PLAN, ELEVATION, AND SECTION

SCALE: 1"=20'-0" AND AS NOTED (10 0 10 20)

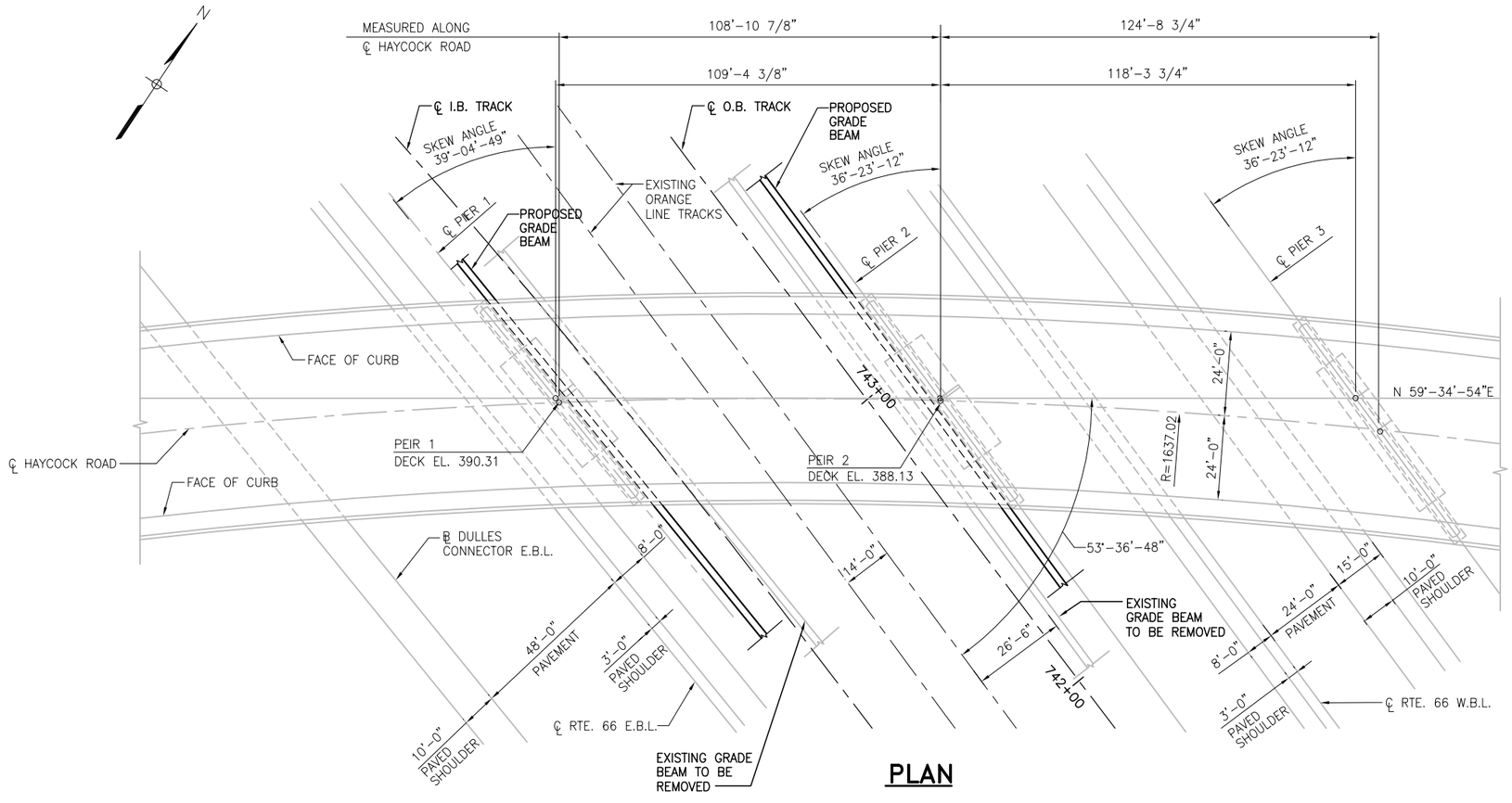
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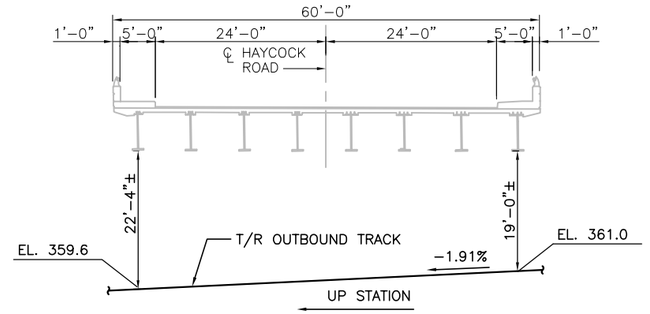
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ELEVATION



PLAN



TYPICAL CROSS SECTION

SCALE: 3/32"=1'-0"

NOTES:

1. THE EXISTING SUPERSTRUCTURE CONSISTS OF CONCRETE DECK ON STEEL PLATE GIRDERS.
2. FOOTINGS FOR THE EXISTING PIER AND ABUTMENTS REST ON COMPACTED SOIL.
3. BRIDGE NUMBER OF EXISTING BRIDGE IS 6388. PLAN NO. IS 173-23.
4. INFORMATION ON THIS DRAWING HAS BEEN OBTAINED FROM THE AVAILABLE EXISTING BRIDGE DRAWINGS
5. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWG. GPN-PP-064.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: V. RATHBURN	10-10-01 DATE	
DRAWN: S. MURDAUGH	10-10-01 DATE	
CHECKED: B. PATEL	12-13-01 DATE	
APPROVED: P. ELMAN	5-2002 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

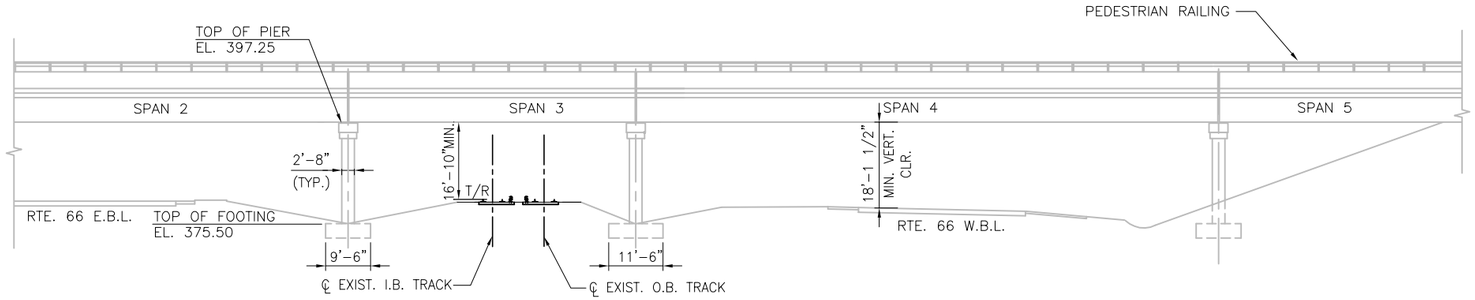
INTERCHANGES
HAYCOCK ROAD OVER ROUTE 66
PLAN, ELEVATION AND SECTION

SCALE: 1"=20'-0" AND AS NOTED (10 0 10 20)

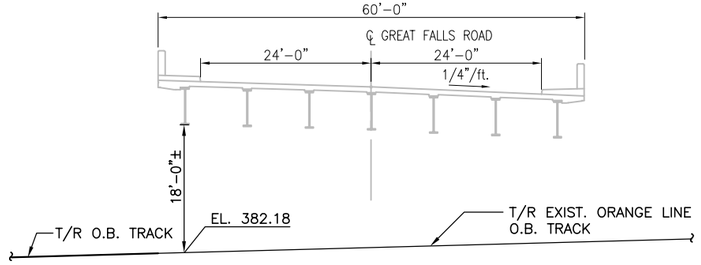
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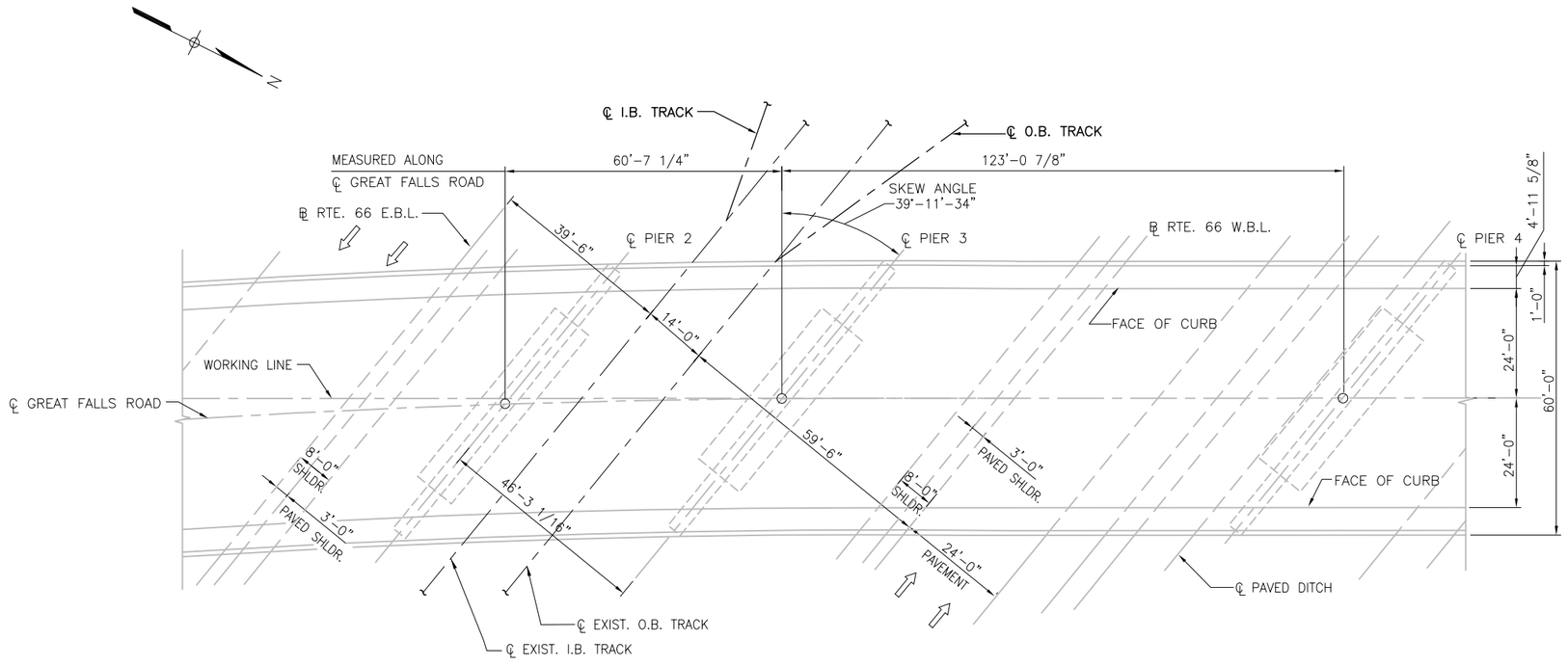


ELEVATION



CROSS SECTION AT SPAN 3

SCALE: 3/32"=1'-0"



PLAN

NOTES:

1. THE EXISTING SUPERSTRUCTURE CONSISTS OF CONCRETE DECK ON STEEL PLATE GIRDERS.
2. FOOTINGS FOR THE EXISTING PIER REST ON COMPACTED SOIL.
3. BRIDGE NUMBER OF EXISTING BRIDGE IS 6387, PLAN NO. IS 198-22.
4. INFORMATION ON THIS DRAWING HAS BEEN OBTAINED FROM THE AVAILABLE EXISTING BRIDGE DRAWINGS.
5. FOR PLAN AND PROFILE OF PROPOSED RAIL, SEE DWG. GPN-PP-064.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: V. RATHBURN	10-10-01 DATE	
DRAWN: A. JOHNSON	10-10-01 DATE	
CHECKED: B. PATEL	12-13-01 DATE	
APPROVED: P. ELMAN	5-2002 DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

INTERCHANGES
GREAT FALLS ROAD OVER ROUTE 66
PLAN, ELEVATION AND SECTION

SCALE: 1/16"=1'-0" AND AS NOTED 4 0 4 8 12 16 20

DRAWING NO.: GPN-S-014

345

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FEDERAL TRANSIT ADMINISTRATION • VIRGINIA DEPARTMENT OF RAIL AND PUBLIC TRANSPORTATION

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY • in cooperation with the FEDERAL AVIATION ADMINISTRATION

Dulles Corridor Rapid Transit Project
Final Environmental Impact Statement and Section 4(f) Evaluation






Volume V- General Plans: Facilities

- Index and Legend
- Route 772
- Route 606
- Dulles Airport
- Route 28
- Herndon-Monroe
- Reston Parkway
- Wiehle Avenue
- Tysons West
- Tysons Central 7
- Tysons Central 123
- Tysons East
- Full Yard and Shop
- WFC Yard and Shop

Dulles Corridor Rapid Transit Project

Home

INDEX OF DRAWINGS

SHEET NO.	DRAWING NO.	DESCRIPTION – ALIGNMENT – OPTION
		INDEX & LEGEND
001	GPN–A–001	INDEX OF DRAWINGS, SHEET 1
002	GPN–A–002	INDEX OF DRAWINGS, SHEET 2
003	GPN–G–002	SYMBOLS, SERVICE ROOM SCHEDULE & ABBREVIATIONS
		ROUTE 772
004	GPN–A–100–R772	SITE PLAN
005	GPN–A–101–R772	SITE PLAN – LPA PHASE I SURFACE PARKING
006	GPN–A–102–R772	PARTIAL SITE PLAN – NORTH
007	GPN–A–103–R772	PARTIAL SITE PLAN – SOUTH
008	GPN–A–104–R772	NORTH AND SOUTH ENTRY PLANS
009	GPN–A–200–R772	MEZZANINE PLAN
010	GPN–A–201–R772	PLATFORM PLAN
011	GPN–A–300–R772	SITE SECTION / ENTRY PLANS
012	GPN–A–301–R772	LONGITUDINAL SECTION
013	GPN–A–302–R772	TRANSVERSE SECTIONS
014	GPN–A–303–R772	ELEVATIONS
015	GPN–A–400–R772	NORTH PARKING GARAGE GROUND LEVEL AND TYPICAL PLANS
016	GPN–A–401–R772	NORTH PARKING GARAGE BUILDING SECTIONS
017	GPN–A–402–R772	SOUTH PARKING GARAGE GROUND LEVEL AND TYPICAL PLANS
018	GPN–A–403–R772	SOUTH PARKING GARAGE BUILDING SECTIONS
		ROUTE 606
019	GPN–A–100–R606	SITE PLAN
020	GPN–A–200–R606	MEZZANINE PLAN
021	GNN–A–201–R606	PLATFORM PLAN
022	GPN–A–300–R606	SITE SECTION / ENTRY PLANS
023	GPN–A–301–R606	LONGITUDINAL SECTION
024	GPN–A–302–R606	TRANSVERSE SECTIONS
025	GPN–A–303–R606	ELEVATIONS
026	GPN–A–400–R606	PARKING GARAGE – GROUND LEVEL PLAN
027	GPN–A–401–R606	PARKING GARAGE – TYPICAL LEVEL PLAN
028	GPN–A–402–R606	PARKING GARAGE – SECTIONS
		DULLES AIRPORT
029	GPN–A–100–DA	SITE PLAN
030	GPN–A–101–DA	GROUND LEVEL PLAN
031	GPN–A–200–DA	MEZZANINE PLAN
032	GPN–A–201–DA	MEZZANINE SERVICE ROOM PLANS
033	GPN–A–202–DA	PLATFORM PLAN
034	GPN–A–300–DA	SITE SECTIN
035	GPN–A–301–DA	LONGITUDINAL SECTION A
036	GPN–A–302–DA	TRANSVERSE SECTIONS B & C
037	GPN–A–303–DA	TRANSVERSE SECTION D
038	GPN–A–304–DA	TRANSVERSE SECTIONS F & G

SHEET NO.	DRAWING NO.	DESCRIPTION – ALIGNMENT – OPTION
		ROUTE 28
039	GPN–A–100–R28	SITE PLAN
040	GPN–A–101–R28	NORTH ENTRY PLAN
041	GPN–A–102–R28	SOUTH ENTRY PLAN
042	GPN–A–200–R28	MEZZANINE PLAN
043	GPN–A–201–R28	PLATFORM PLAN
044	GPN–A–300–R28	SITE SECTION / ENTRY PLANS
045	GPN–A–301–R28	LONGITUDINAL SECTION
046	GPN–A–302–R28	TRANSVERSE SECTIONS
047	GPN–A–303–R28	ELEVATIONS
048	GPN–A–400–R28	PARKING GARAGE GROUND AND TYPICAL LEVEL PLAN
049	GPN–A–401–R28	PARKING GARAGE BUILDING SECTIONS
		HERNDON – MONROE
050	GPN–A–100–HM	SITE PLAN
051	GPN–A–101–HM	NORTH STATION ENTRY PLAN
052	GPN–A–200–HM	MEZZANINE PLAN
053	GPN–A–201–HM	PLATFORM PLAN
054	GPN–A–300–HM	SITE SECTION / ENTRY PLANS
055	GNN–A–301–HM	LONGITUDINAL SECTION
056	GPN–A–302–HM	TRANSVERSE SECTIONS
057	GPN–A–303–HM	ELEVATIONS
058	GPN–A–400–HM	PARKING GARAGE GROUND LEVEL PLAN
059	GPN–A–401–HM	PARKING GARAGE TYPICAL LEVEL PLAN
060	GPN–A–402–HM	PARKING GARAGE BUILDING SECTIONS
		RESTON PARKWAY
061	GPN–A–100–RP	SITE PLAN
062	GPN–A–101–RP	NORTH ENTRY PLAN
063	GPN–A–102–RP	SOUTH ENTRY PLAN
064	GPN–A–200–RP	MEZZANINE PLAN
065	GPN–A–201–RP	PLATFORM PLAN
066	GNN–A–300–RP	SITE SECTION / ENTRY PLANS
067	GPN–A–301–RP	LONGITUDINAL SECTION
068	GPN–A–302–RP	TRANSVERSE SECTIONS
069	GPN–A–303–RP	ELEVATIONS
		WIEHLE AVENUE
070	GPN–A–100–WA	SITE PLAN
071	GPN–A–101–WA	ENLARGED NORTH SITE PLAN
072	GPN–A–102–WA	ENLARGED SOUTH SITE PLAN
073	GPN–A–103–WA	NORTH AND SOUTH ENTRY PLANS
074	GPN–A–200–WA	MEZZANINE PLAN
075	GPN–A–201–WA	PLATFORM PLAN
076	GPN–A–202–WA	ENTRY PLANS
077	GPN–A–300–WA	SITE SECTION
078	GPN–A–301–WA	LONGITUDINAL SECTION

SHEET NO.	DRAWING NO.	DESCRIPTION – ALIGNMENT – OPTION
		WIEHLE AVENUE (CONTINUED)
079	GPN–A–302–WA	TRANSVERSE SECTIONS
080	GPN–A–303–WA	ELEVATIONS
081	GPN–A–400–WA	PARKING GARAGE PLANS
082	GPN A–401–WA	PARKING GARAGE SECTIONS
		TYSONS WEST
083	GPN–A–100–TW	SITE PLAN
084	GPN–A–101–TW	ENLARGED SITE PLAN
085	GPN–A–102–TW	NORTH & SOUTH ENTRY PLANS
086	GPN–A–200–TW	MEZZANINE PLAN
087	GPN–A–201–TW	PLATFORM PLAN
088	GPN–A–300–TW	SITE SECTION / STATION ENTRY PLANS
089	GNN–A–301–TW	TRANSVERSE SECTIONS
090	GPN–A–302–TW	LONGITUDINAL SECTION
091	GPN–A–303–TW	ELEVATIONS
		TYSONS CENTRAL 7
092	GPN–A–100–T7	SITE PLAN
093	GPN–A–101–T7	GROUND LEVEL PLAN
094	GPN–A–102–T7	NORTH & SOUTH ENTRY GROUND LEVEL PLAN
095	GPN–A–200–T7	MEZZANINE PLANS
096	GPN–A–201–T7	PLATFORM PLANS
097	GPN–A–202–T7	ENTRY PLANS & SERVICE ROOMS
098	GPN–A–300–T7	CROSS SECTION
099	GPN–A–301–T7	LONGITUDINAL SECTIONS
100	GPN–A–302–T7	TRANSVERSE SECTIONS
		TYSONS CENTRAL 123
101	GPN–A–100–TC123	SITE PLAN
102	GPN–A–101–TC123	NORTH ENTRY PLAN
103	GPN–A–102–TC123	SOUTH ENTRY PLAN
104	GPN–A–200–TC123	MEZZANINE PLAN
105	GPN–A–201–TC123	PLATFORM PLAN
106	GPN–A–202–TC123	GROUND LEVEL PLAN
107	GPN–A–300–TC123	SITE SECTION
108	GPN–A–301–TC123	LONGITUDINAL SECTION
109	GPN–A–302–TC123	TRANSVERSE SECTIONS

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: HAK 06–01–04 DATE
DRAWN: MJK 06–02–04 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS
SUBMITTED
Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

FACILITIES
INDEX OF DRAWINGS
SHEET 1 OF 2

SCALE: NONE
DRAWING NO.: GPN–A–001
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INDEX OF DRAWINGS

SHEET NO.	DRAWING NO.	DESCRIPTION – ALIGNMENT – OPTION
		TYSONS EAST
110	GPN–A–100–TE	SITE PLAN
111	GPN–A–101–TE	STATION ENLARGED SITE PLANS
112	GPN–A–200–TE	MEZZANINE PLAN
113	GPN–A–201–TE	PLATFORM PLAN
114	GPN–A–202–TE	GROUND PLAN
115	GPN–A–300–TE	SITE SECTION / STATION ENTRY PLANS
116	GPN–A–301–TE	LONGITUDINAL SECTIONS
117	GPN–A–302–TE	TRANSVERSE SECTIONS
118	GPN–A–303–TE	ELEVATIONS
		FULL YARD AND SHOP
119	GPN–A–100–LY	SITE PLAN
120	GPN–A–200–LY	GROUND FLOOR PLAN, OPERATIONS AND FIELD BASE BUILDING
121	GPN–A–201–LY	SECOND FLOOR PLAN, OPERATIONS AND FIELD BASE BUILDING
122	GPN–A–202–LY	GROUND FLOOR PLAN, RAIL AND INSPECTION BUILDING
123	GPN–A–203–LY	SECOND FLOOR PLAN, RAIL SERVICE AND INSPECTION BUILDING
124	GPN–A–300–LY	SCHEMATIC BUILDING SECTIONS, RAIL SERVICE AND INSPECTION BUILDING
		WFC YARD AND SHOP
125	GPN–A–100–WFC	YARD AND SHOP EXPANSION SITE PLAN
126	GPN–A–200–WFC	YARD AND SHOP EXPANSION SITE SECTION AND PLAN
127	GPN–A–201–WFC	YARD AND SHOP EXPANSION FIRST FLOOR PLAN
128	GPN–A–202–WFC	YARD AND SHOP EXPANSION BASEMENT PLAN

SHEET NO.	DRAWING NO.	DESCRIPTION – ALIGNMENT – OPTION

SHEET NO.	DRAWING NO.	DESCRIPTION – ALIGNMENT – OPTION

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: HAK 06–01–04 DATE
DRAWN: MJK 06–02–04 DATE
CHECKED: _____ DATE
APPROVED: _____ DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

FACILITIES
INDEX OF DRAWINGS
SHEET 2 OF 2

SCALE: NONE

DRAWING NO.: GPN–A–002

002

O:\002_dulles\FEIS GenPlans 06-04\Facilities\Index Sheets\Dulles_Facilities_Drawing_Index_GPN-A-001 TO 002.dwg, GPN-A-002, 07/29/04 10:52:18 AM, Kolenam

SITE ELEMENTS

HARDSCAPED AREAS

N

NORTH ARROW

VEHICULAR CIRCULATION

PROPOSED PAVING BY PROJECT

AREA OF WET LANDS

PLANTED AREA

ABBREVIATIONS

APPROX.	APPROXIMATE
ATC.	AUTOMATIC TRAIN CONTROL
BLDG.	BUILDING
BRT.	BUS RAPID TRANSIT
CONC.	CONCRETE
CMNT.	RAIL CAR MAINTENANCE
DISP.	DISPENSER
DN.	DOWN
DWG.	DRAWING
EL.	ELEVATION
ELEV.	ELEVATOR
ESC.	ESCALATOR
EX., EXIST.	EXISTING
EQUIP	EQUIPMENT
FA.	FRESH AIR INTAKE
F/VS.	FRESH AIR AND VENTILATION SHAFT
FMNT.	FIELD MAINTENANCE
LPA	LOCALLY PREFERRED ALTERNATIVE
MEZZ.	MEZZANINE
NO.	NUMBER
N.I.C.	NOT IN CONTRACT
PED.	PEDESTRIAN
PLNT.	PLANT MAINTENANCE
PROP.	PROPOSED
RD.	ROAD
RM.	ROOM
RTRA.	RAIL TRANSPORTATION
SF.	SQUARE FEET
SMNT.	SYSTEMS MAINTENANCE
S.S.	STAINLESS STEEL
STA.	STATION
SWM.	STORM WATER MANAGEMENT
SYST.	SYSTEM
T/R.	TOP OF RAIL
TPSS.	TRACTION POWER SUB-STATION
TYP.	TYPICAL
UPE.	UNDER PLATFORM EXHAUST
VDOT.	VIRGINIA DEPARTMENT OF TRANSPORTATION
V.F.B.	VERTICAL FORM BOARD
VS.	VENT SHAFT
W/	WITH

STATION ELEMENTS

FARE VENDOR

PHONE BOOTHS WITH SYSTEM MAP

BENCH

BUS TRANSFER DISP.

PLATFORM GRANITE EDGE W/ LIGHTS

DETECTABLE WARNING TILE

PAVER TILE

WINDSCREEN WITH BENCH

SERVICE ROOM SCHEDULE:

1. MECHANICAL ROOM
2. A.C. SWITHBOARD ROOM
3. BATTERY ROOM
4. COMMUNICATIONS ROOM
5. TRAIN CONTROL ROOM
6. LUNCH ROOM
7. TELEPHONE ROOM
8. FIRE EQUIPMENT CABINET
9. CLEANER'S ROOM
10. CLEANER'S ROOM WITH EJECTOR
11. WOMEN'S WASHROOM
12. MEN'S WASHROOM
13. WATER SERVICE ROOM
14. D.C. TIE BREAKER ROOM
15. BUS DRIVER'S WASHROOM
16. TERMINAL SUPERVISOR'S/DISPATCHER ROOM
17. TRAIN OPERATOR'S ROOM (W/ POTABLE WATER)
18. TRAIN OPERATOR'S WASHROOM (2)
19. MAINTENANCE ROOM
20. TRAIN OPERATOR'S LOCKER ROOM
21. TRANSFORMER ROOM
22. ELEVATOR MACHINE ROOM
23. SEWAGE EJECTOR ROOM
24. CART STORAGE ROOM
25. ELECTRICAL CABINET ROOM
26. POLICE SERVICE ROOM
27. EMERGENCY EVACUATION CART STORAGE ROOM
28. AREA OF RESCUE ASSISTANCE
29. TRACTION POWER SUB-STATION
30. EMERGENCY EGRESS STAIR
31. FAN ROOM
32. ESCALATOR CONTROL ROOM
33. TRACTION POWER CABLE ROOM
34. ELECTRICAL ROOM
35. YARD STORAGE ROOM
36. BUS SUPERVISOR ROOM
37. ELECTRICAL CABLE ROOM

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: N. IBIEBELE 3-15-02 DATE
DRAWN: N. IBIEBELE 3-15-02 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

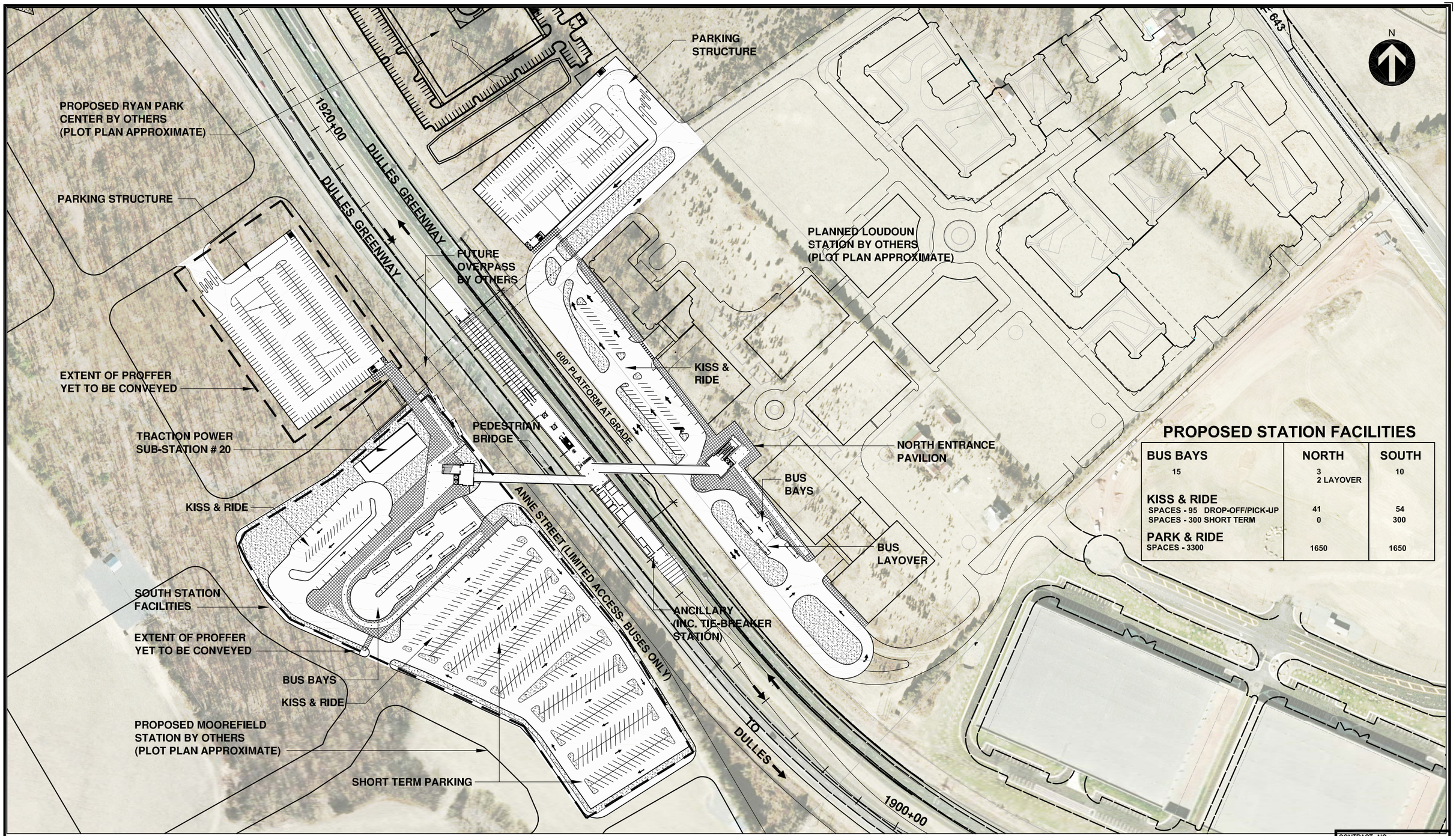
SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS

SCALE: NONE

DRAWING NO.: GPN-G-002

003

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PROPOSED STATION FACILITIES

	NORTH	SOUTH
BUS BAYS		
15	3 2 LAYOVER	10
KISS & RIDE		
SPACES - 95 DROP-OFF/PICK-UP	41	54
SPACES - 300 SHORT TERM	0	300
PARK & RIDE		
SPACES - 3300	1650	1650

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: HAK 12-03 DATE
DRAWN: GP 12-03 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

Diana C Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

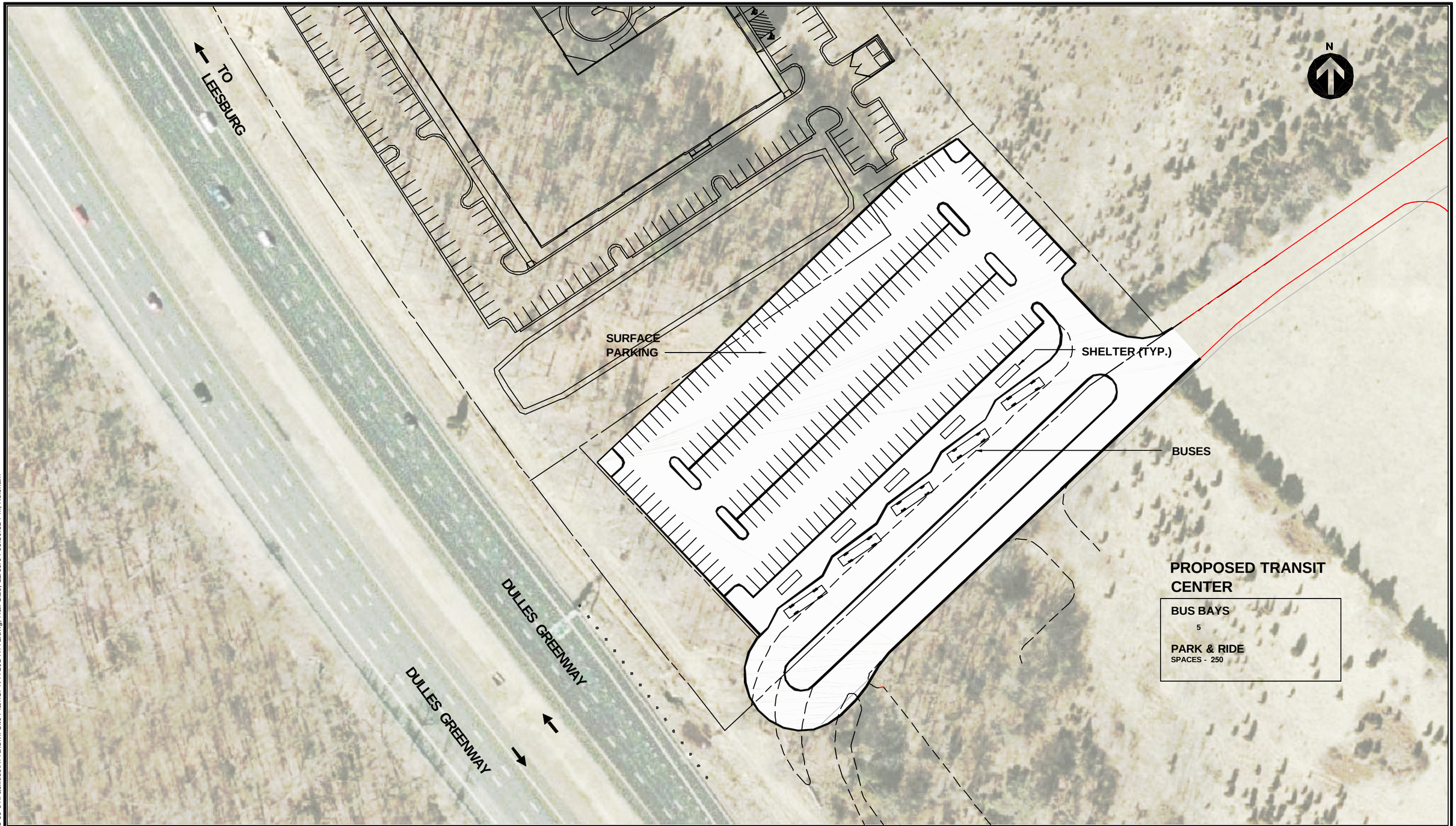
SITE PLAN
ROUTE 772 STATION

SCALE: 1"=100' (50 0 50 100)

DRAWING NO.: GPN-A-100-R772

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HALF-SIZE DRAWING

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CHECKED:		
APPROVED:		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED — PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

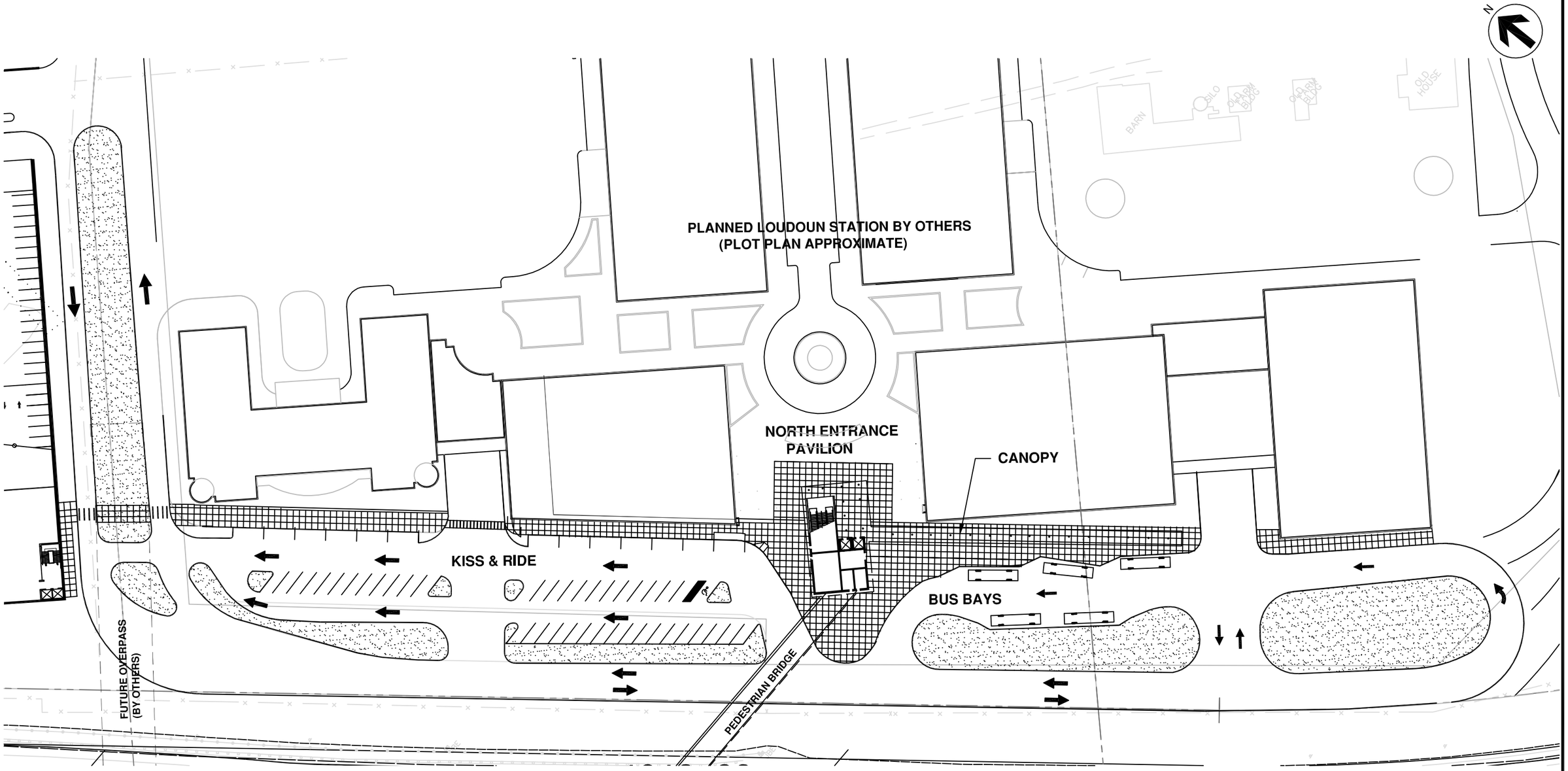
SITE PLAN
ROUTE 772 TRANSIT CENTER
SURFACE PARKING

SCALE: 1"=40' (20 0 20 40)

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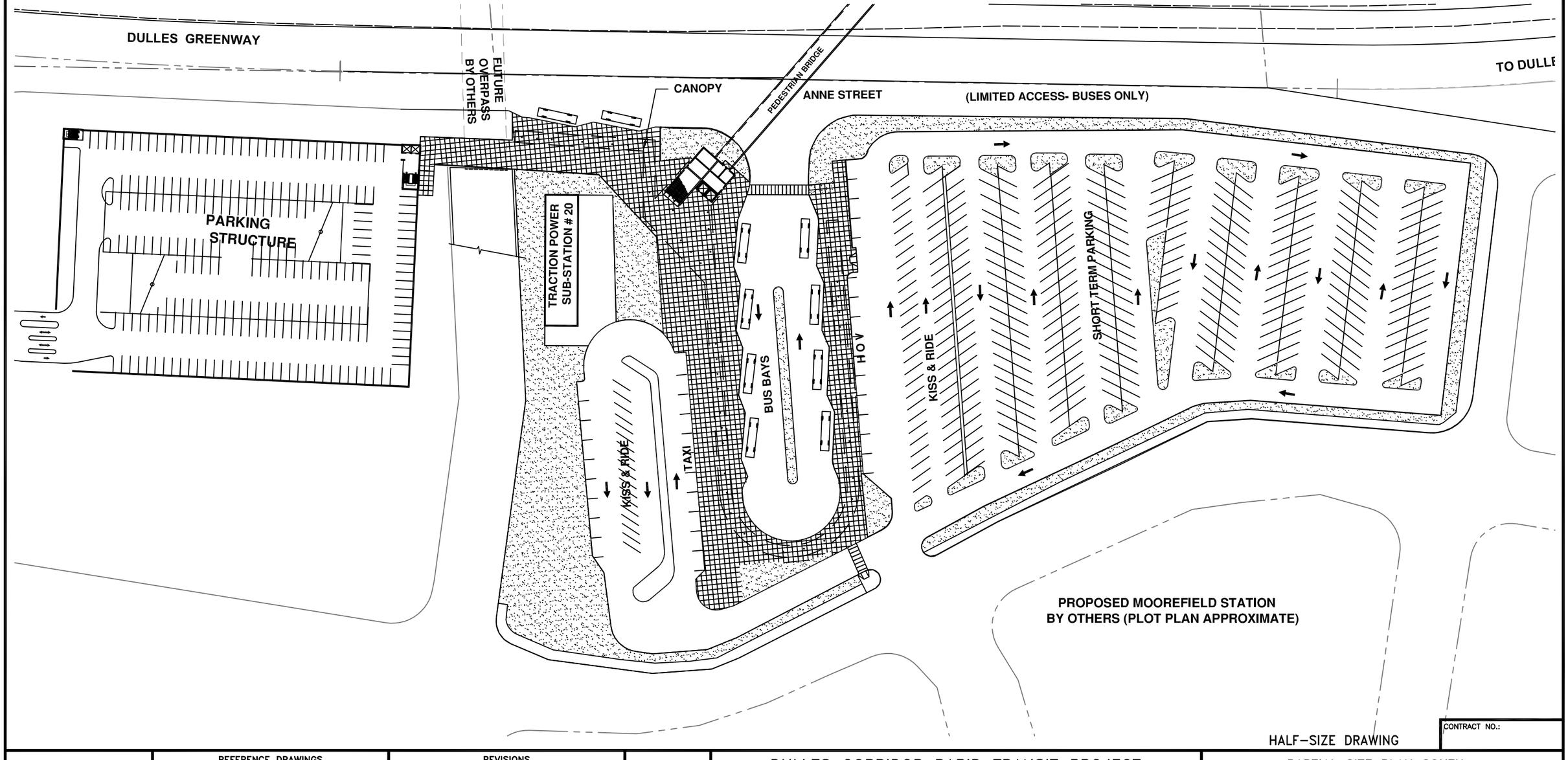
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CHECKED: 12-03 DATE			SUBMITTED Diana C. Mendes PROJECT MANAGER
APPROVED: DATE			FINAL GENERAL PLANS JULY 2004

PARTIAL SITE PLAN – NORTH
ROUTE 772 STATION

SCALE: 1"=50' (25 0 25 50)

DRAWING NO.: GPN-A-102-R772 | 006

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CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

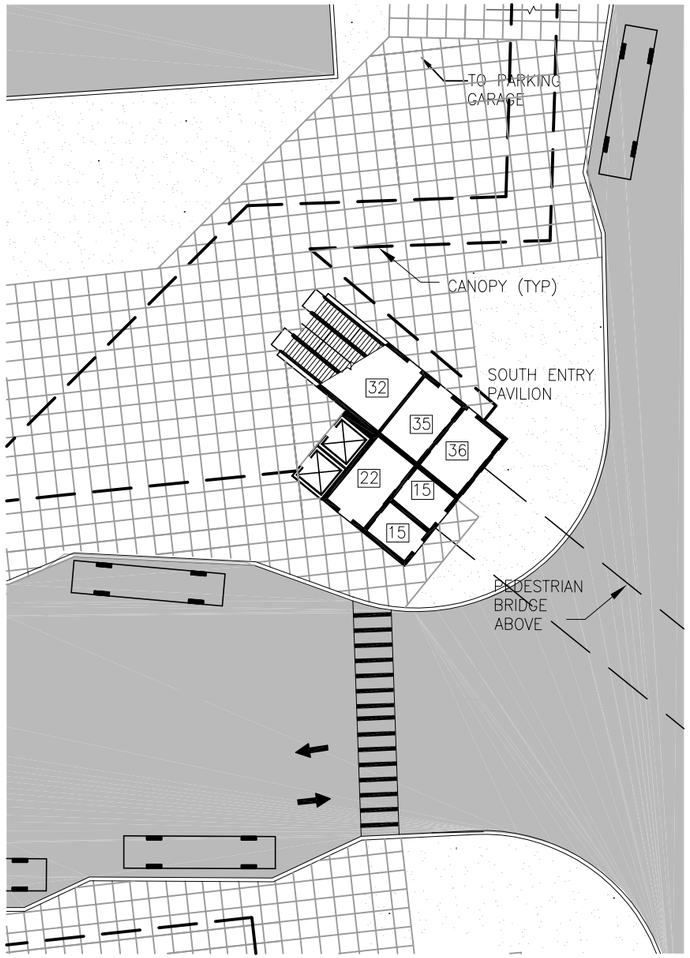
FINAL GENERAL PLANS
JULY 2004

PARTIAL SITE PLAN SOUTH
ROUTE 722 STATION

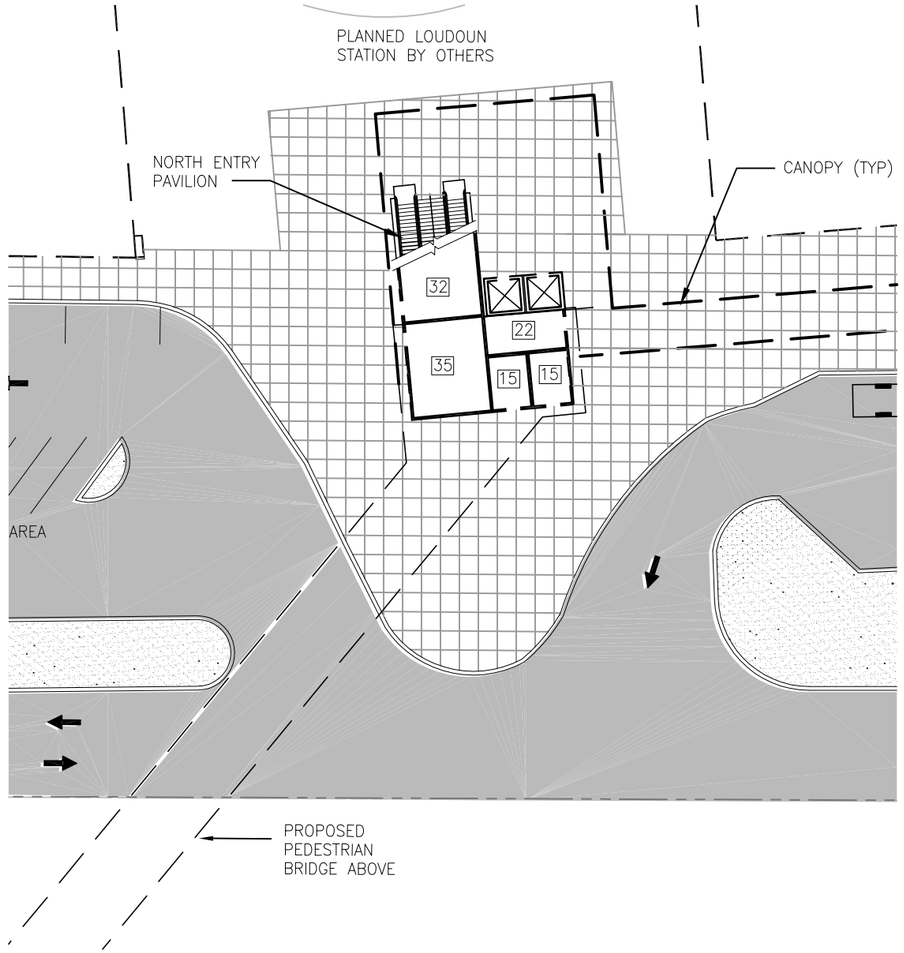
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2 SOUTH ENTRY PLAN



1 NORTH ENTRY PLAN

HALF-SIZE DRAWING

CONTRACT NO.:

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DRAWN: GP 12-03 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

SUBMITTED — CAPITAL TRANSIT CONSULTANTS
Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

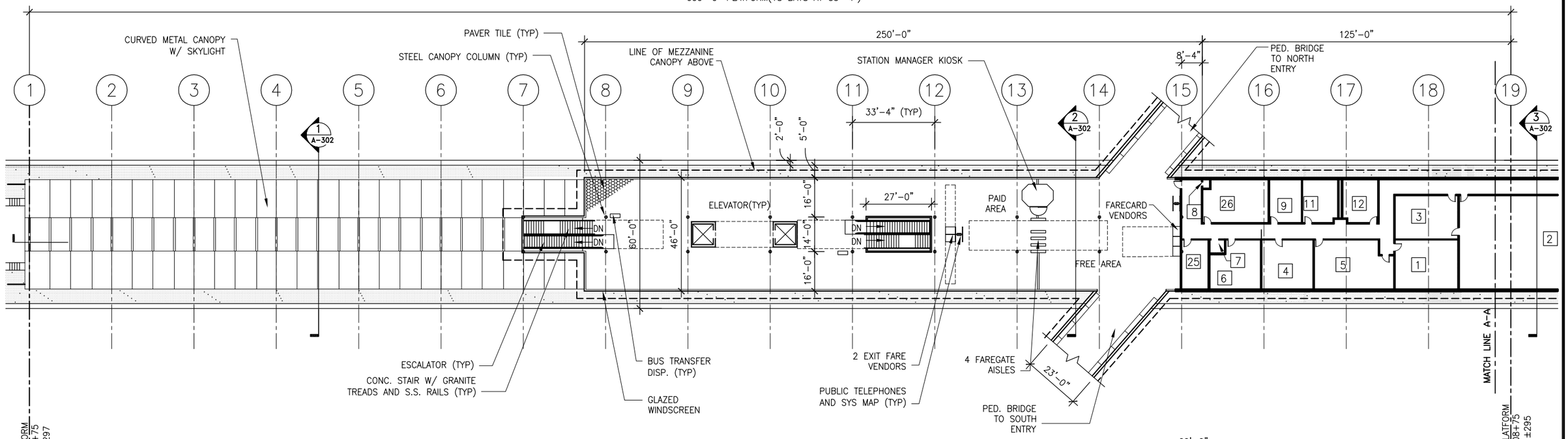
NORTH AND SOUTH ENTRY PLANS
ROUTE 772 STATION

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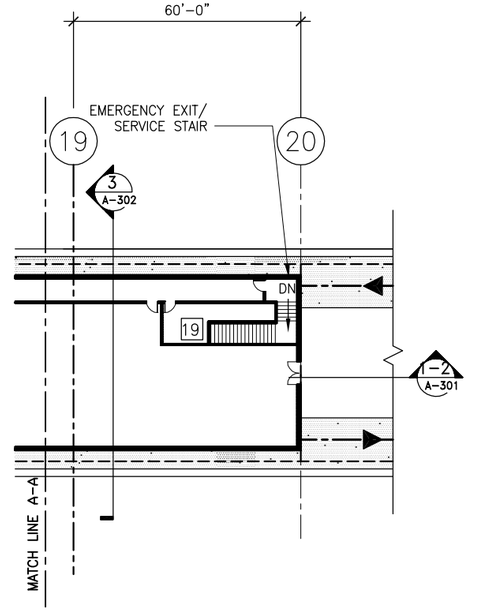
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1 MEZZANINE PLAN



2 MEZZANINE PLAN (CONTINUED)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02 DATE
DRAWN: B. LIOANAG 3-15-02 DATE
CHECKED: DATE
APPROVED: DATE

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NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

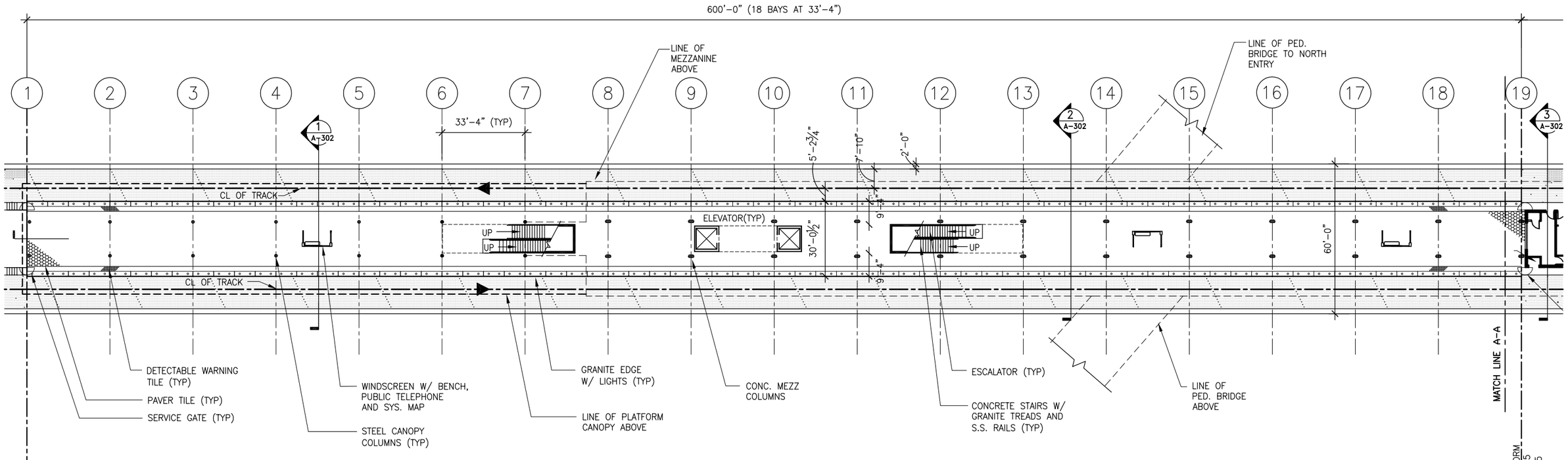
MEZZANINE PLAN
ROUTE 772 STATION

SCALE: 1"-20' (10 0 10 20)

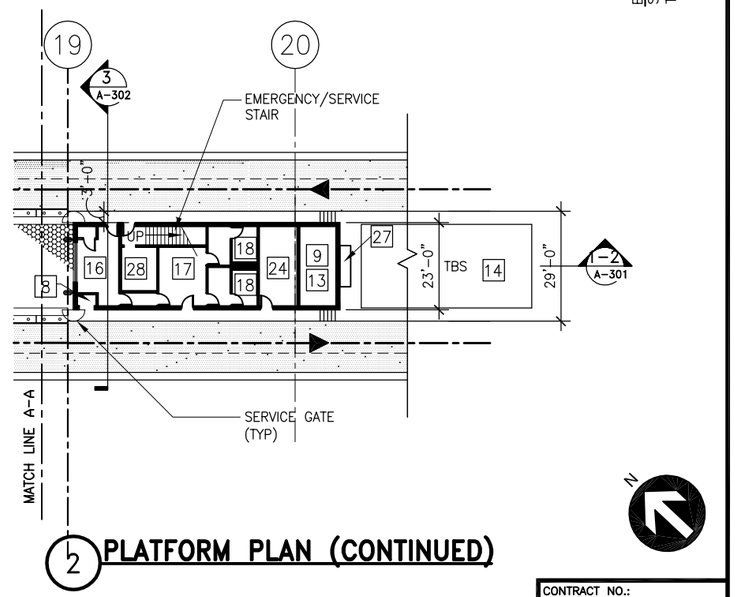
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1 PLATFORM PLAN



2 PLATFORM PLAN (CONTINUED)

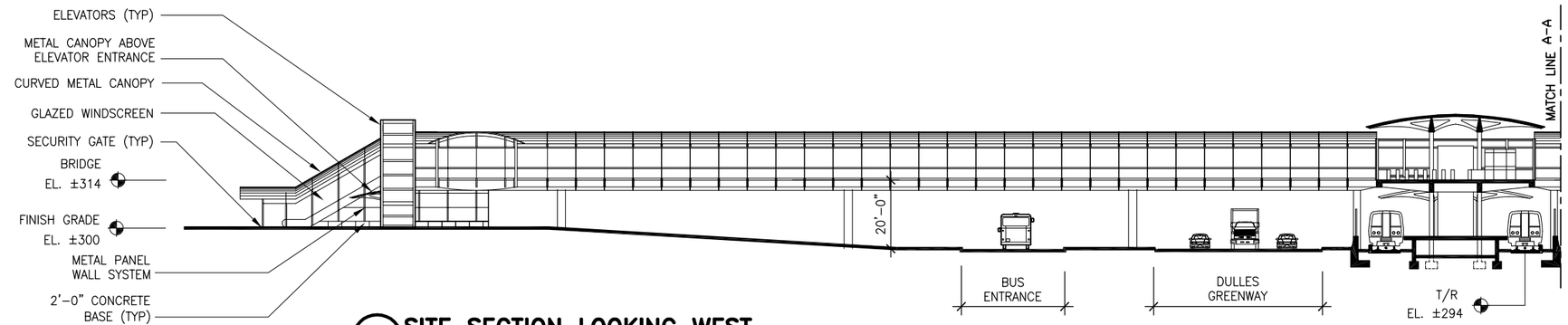
NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

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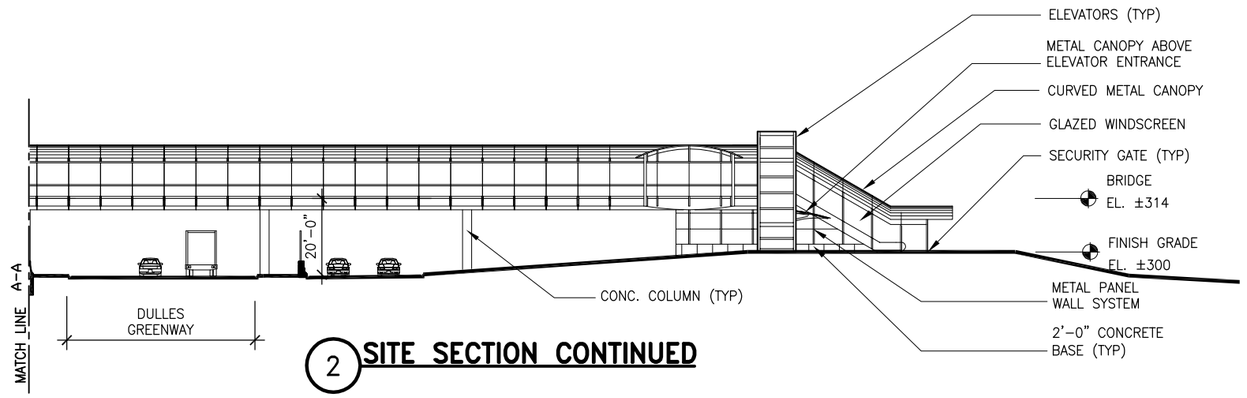
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CHECKED:			FINAL GENERAL PLANS JULY 2004
APPROVED:			PLATFORM PLAN ROUTE 772 STATION
			SCALE: 1"-20' (10 0 10 20) — DRAWING NO.: GPN-A-201-R772 — 010

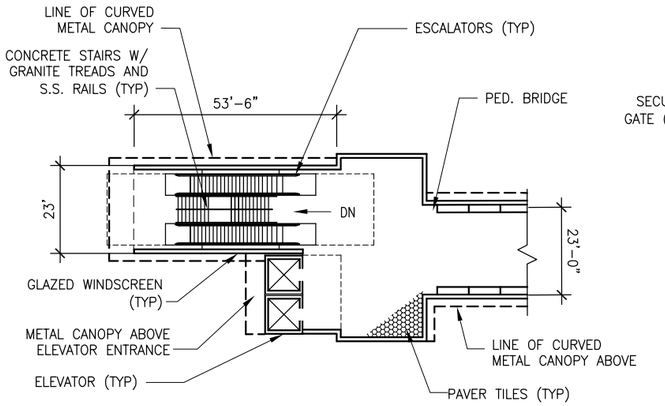
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1 SITE SECTION LOOKING WEST

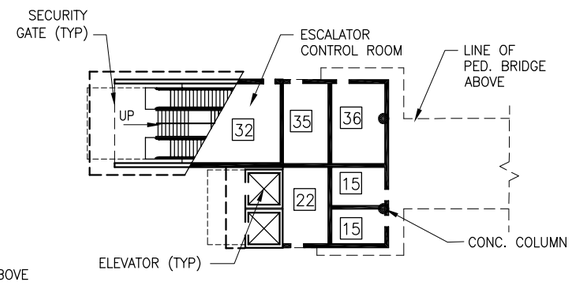


2 SITE SECTION CONTINUED

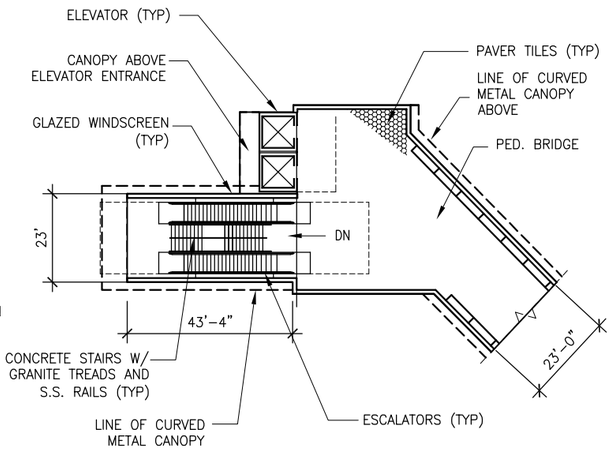


3 SOUTH ENTRY PLAN (BRIDGE LEVEL)

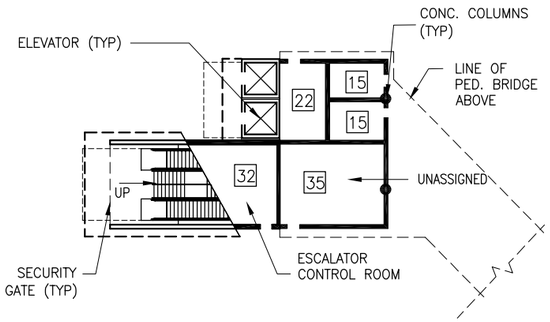
NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.



4 SOUTH ENTRY PLAN (GROUND LEVEL)



5 NORTH ENTRY PLAN (BRIDGE LEVEL)



6 NORTH ENTRY PLAN (GROUND LEVEL)

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER	3-15-02	
DRAWN: N.IBIEBELE	12-03	
CHECKED:		
APPROVED:	5-31-02	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

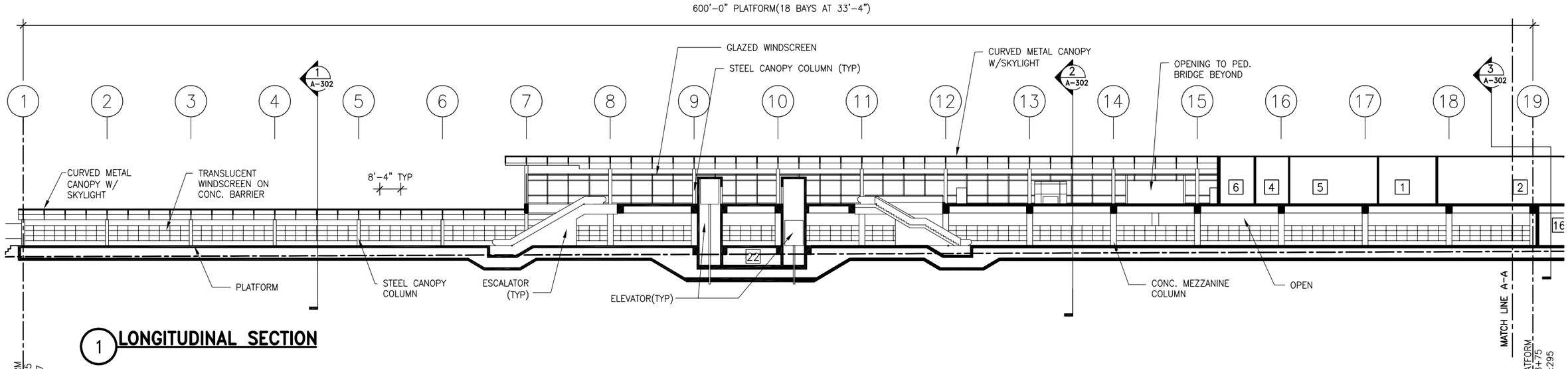
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ROUTE 772 STATION

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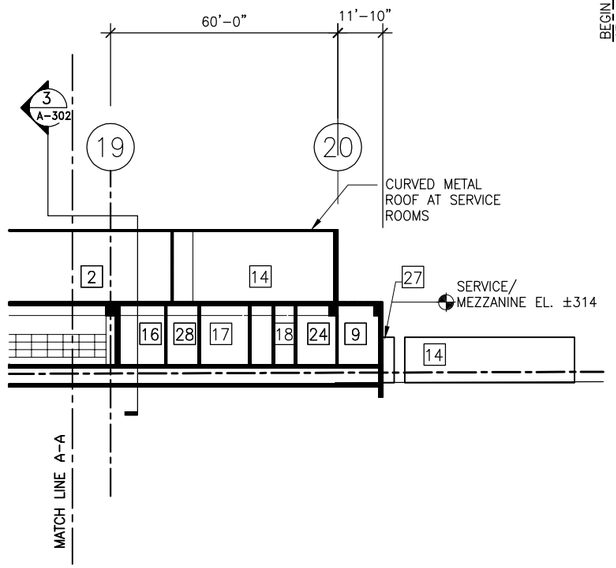
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1 LONGITUDINAL SECTION



2 LONGITUDINAL SECTION (CONTINUED)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02 DATE
DRAWN: B. UOANAG 3-15-02 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

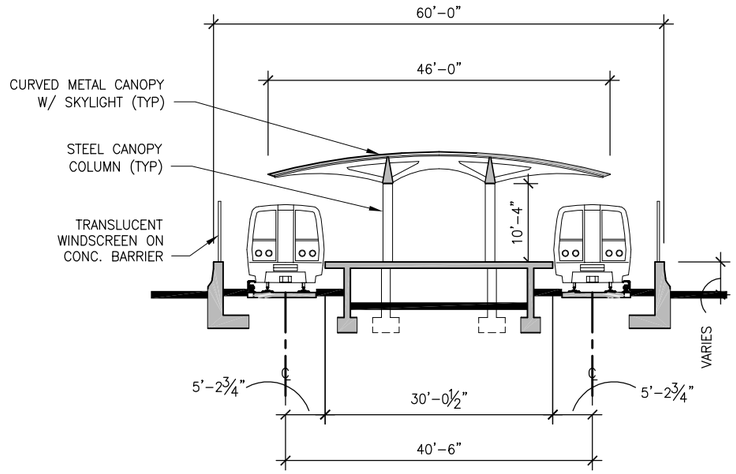
LONGITUDINAL SECTION
ROUTE 772 STATION

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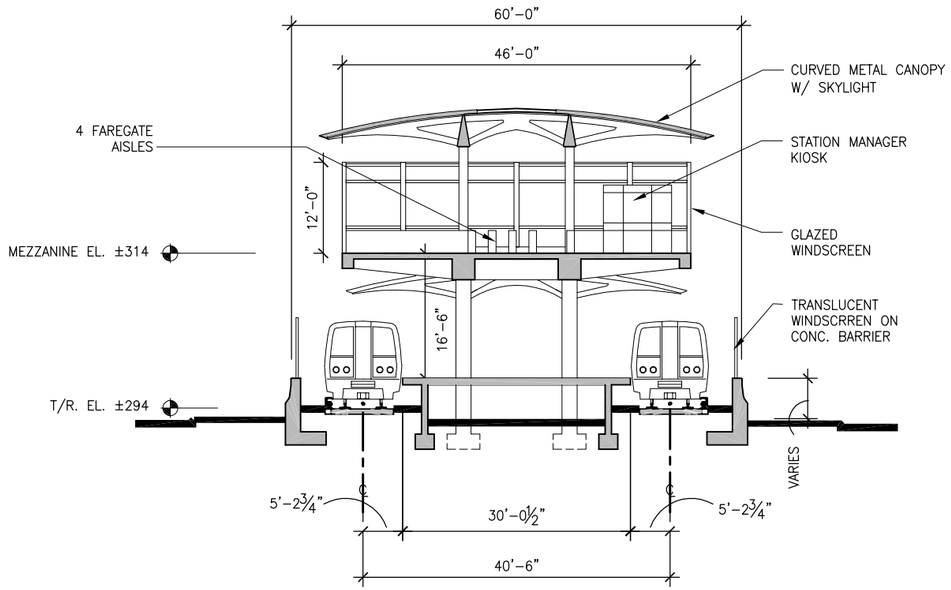
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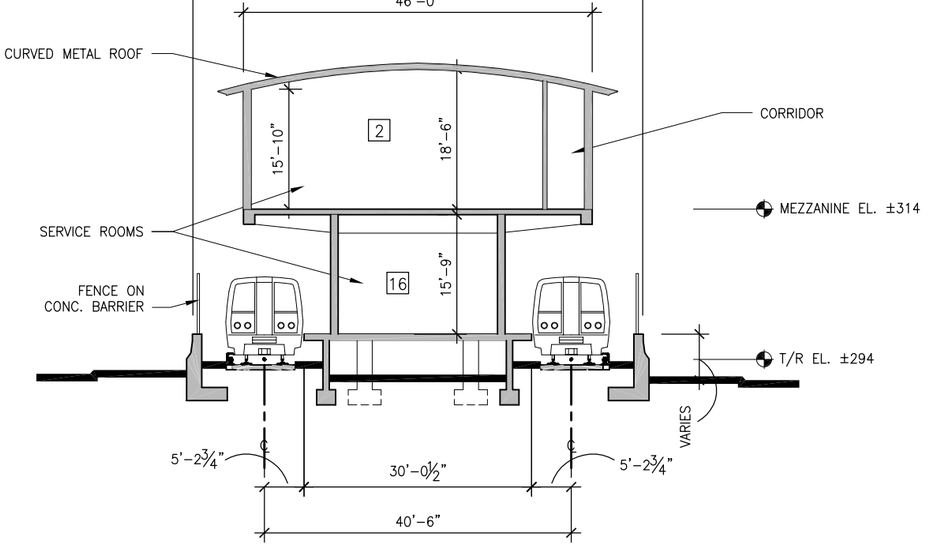
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1 PLATFORM TRANSVERSE SECTION



2 MEZZANINE TRANSVERSE SECTION



3 SERVICE ROOMS TRANSVERSE SECTION

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: B. LOANAG 3-15-02 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

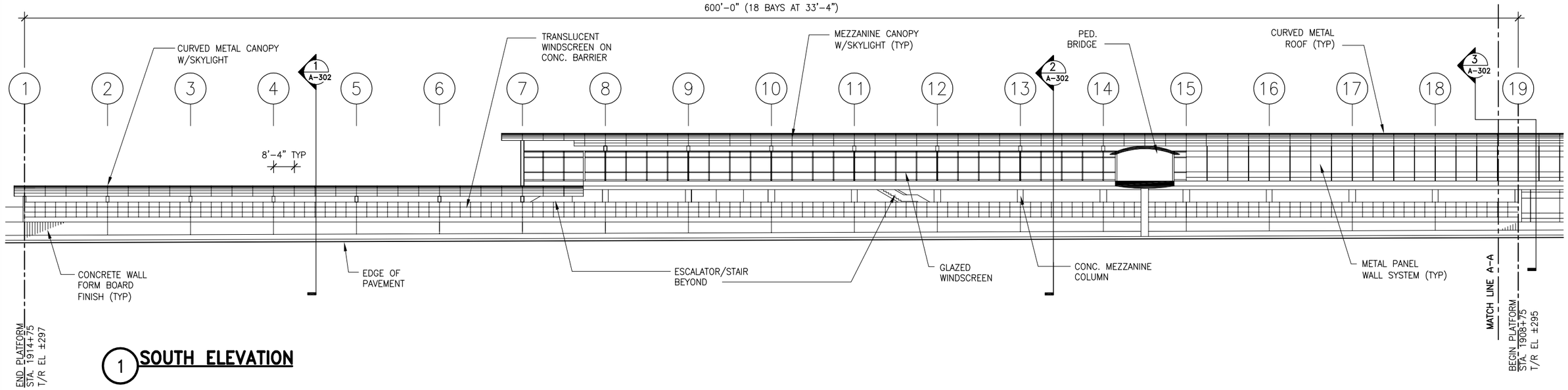
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ROUTE 772 STATION

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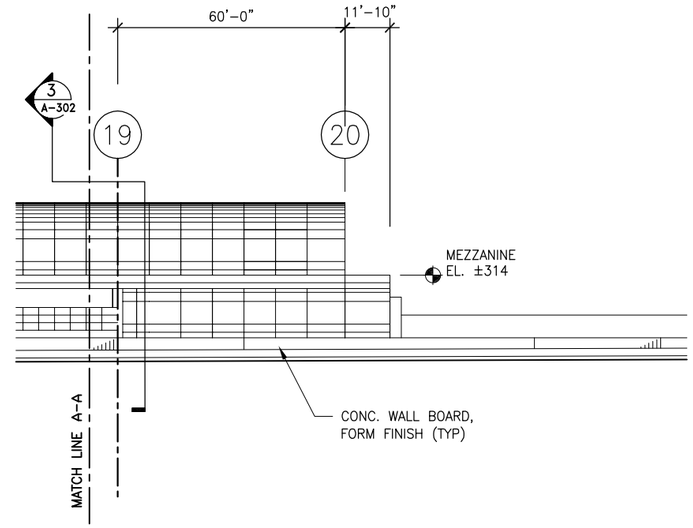
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1 SOUTH ELEVATION



2 SOUTH ELEVATION (CONTINUED)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02 DATE
DRAWN: B. LIOANAG 3-15-02 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

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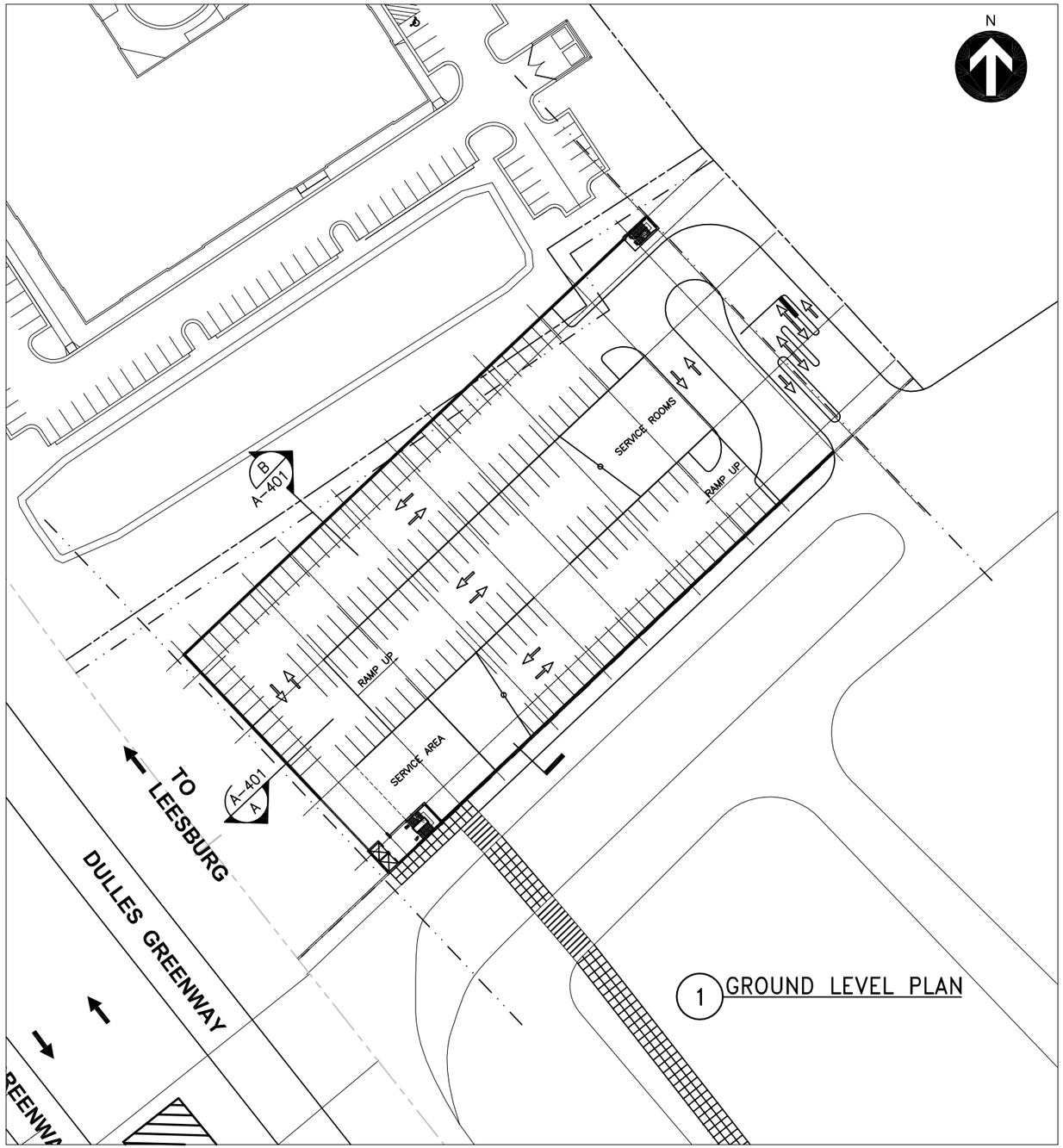
CAPITAL TRANSIT CONSULTANTS
SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

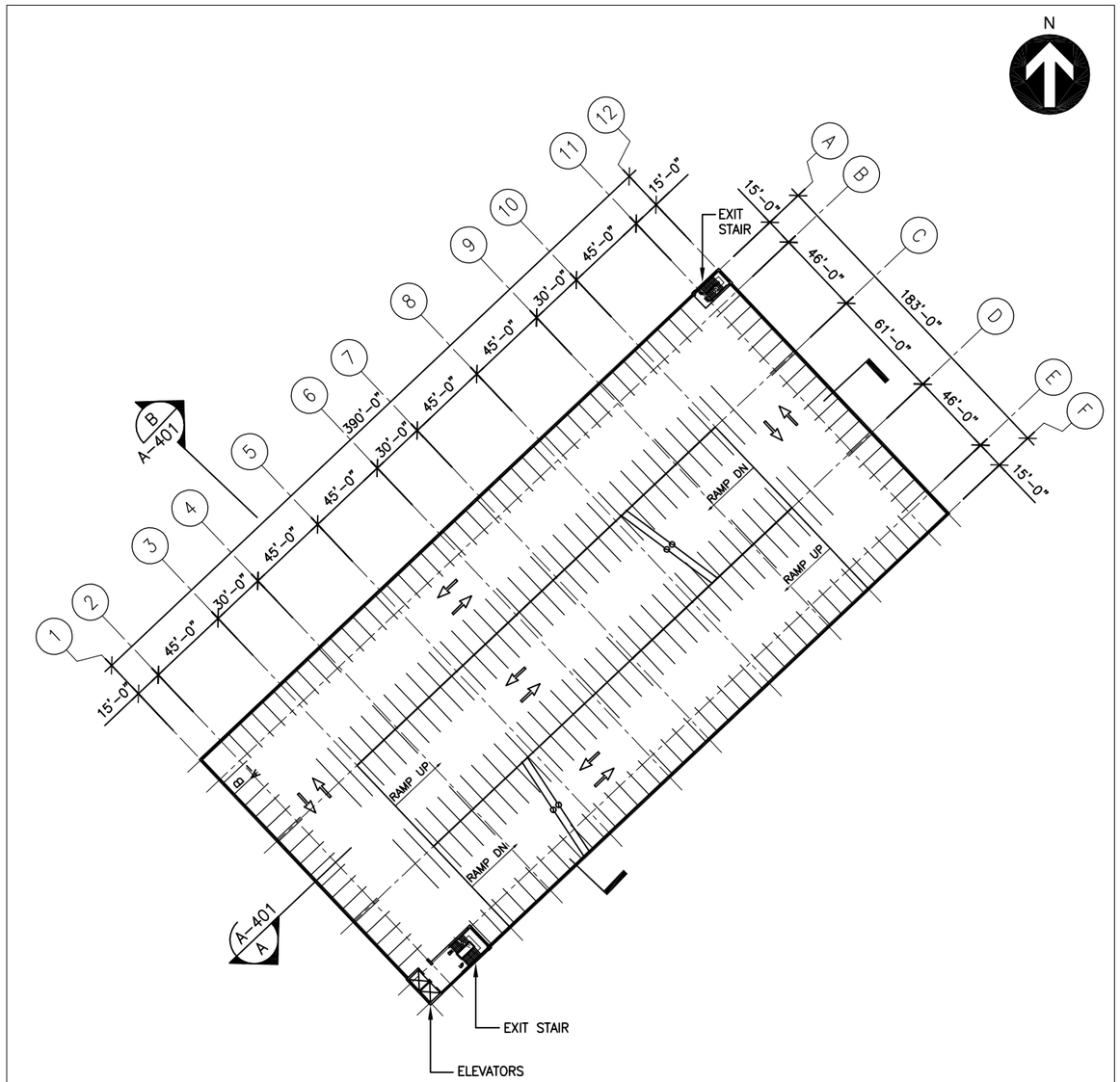
ELEVATIONS
ROUTE 772 STATION

SCALE: 1"-20' (10 0 10 20)
DRAWING NO.: GPN-A-303-R772
014

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1 GROUND LEVEL PLAN



2 TYPICAL LEVEL PLAN

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED:	S. SROUJI	11-03	DATE
DRAWN:	GP, MJK	12-03	DATE
CHECKED:	H. KIVETT	12-03	DATE
APPROVED:			DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

Diana C Mendes

PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

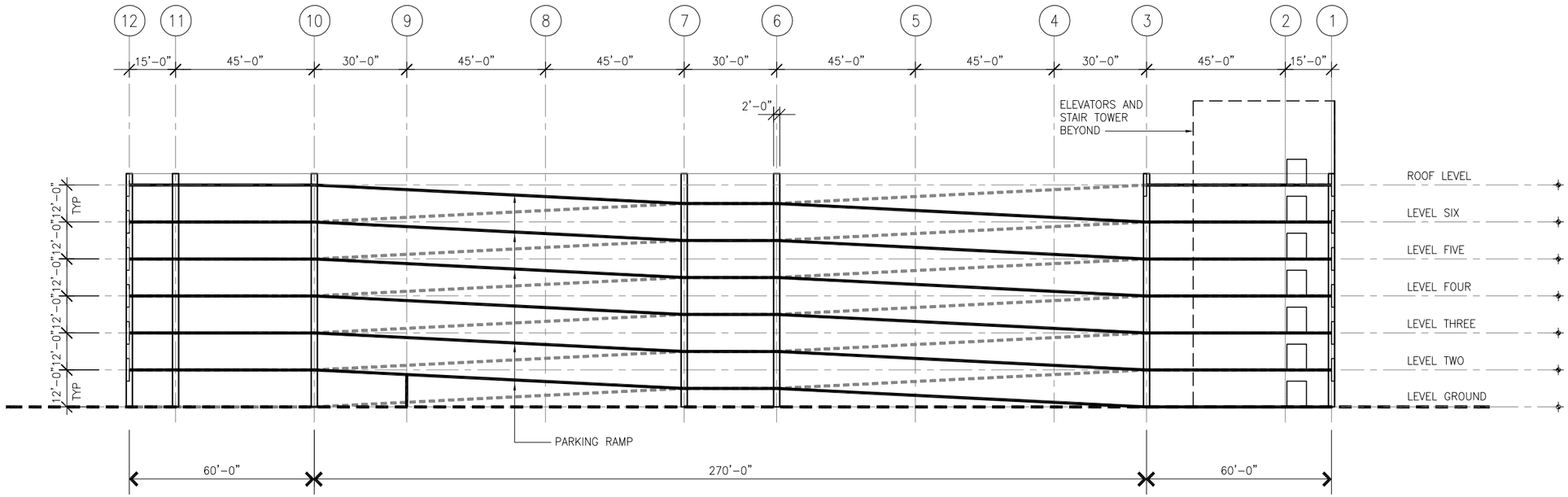
NORTH PARKING GARAGE
ROUTE 772 STATION
GROUND LEVEL AND TYPICAL LEVEL PLANS

SCALE: 1"=40' 20 0 20 40

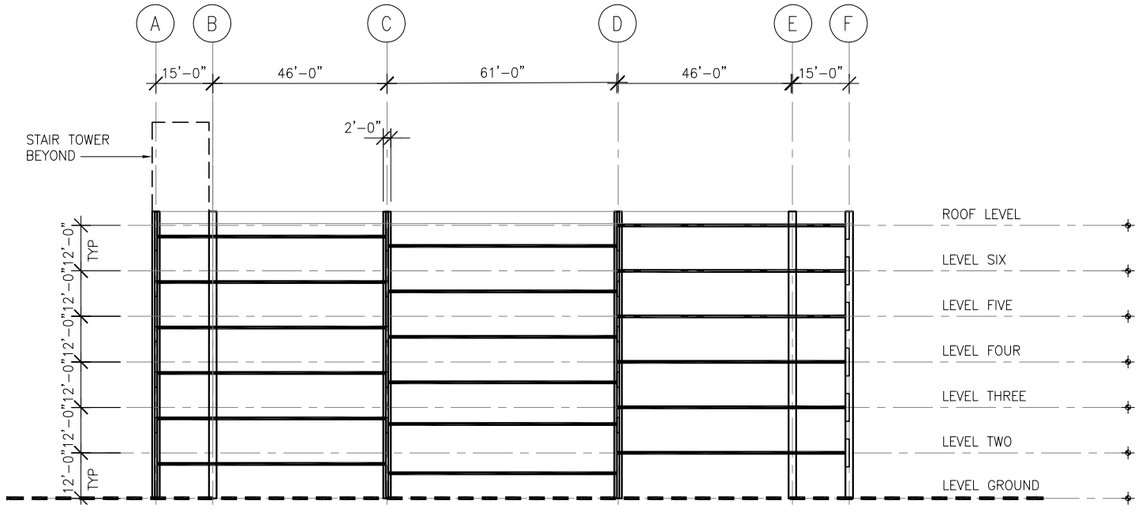
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1 BUILDING SECTION A



2 BUILDING SECTION B

N

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: S. SROUJI	11-03 DATE		
DRAWN: GP, MJK	12-03 DATE		
CHECKED: H. KIVETT	12-03 DATE		
APPROVED:	DATE		

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

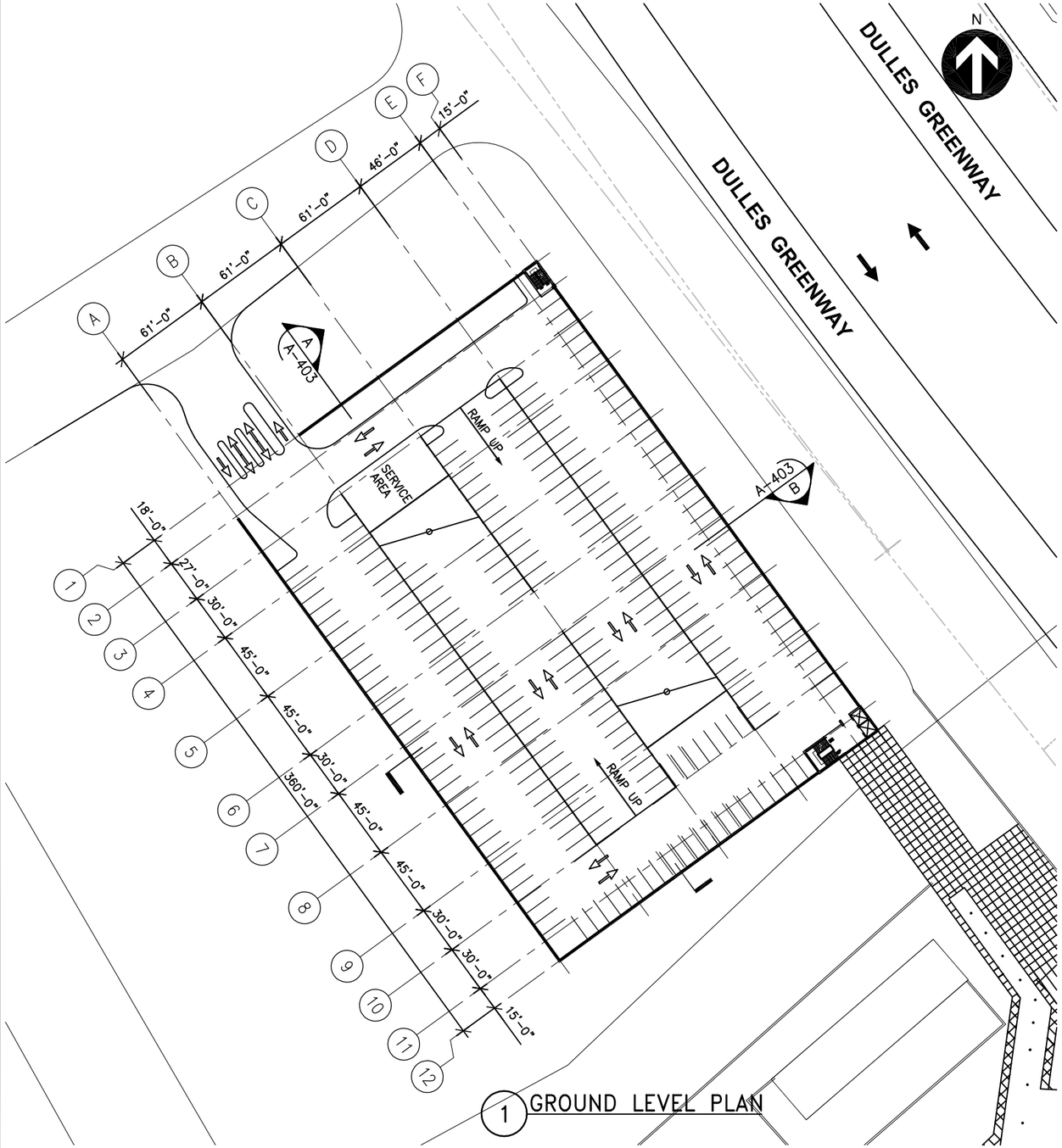
NORTH PARKING GARAGE BUILDING SECTIONS
ROUTE 772 STATION

SCALE: 1"=20' (10 0 10 20)

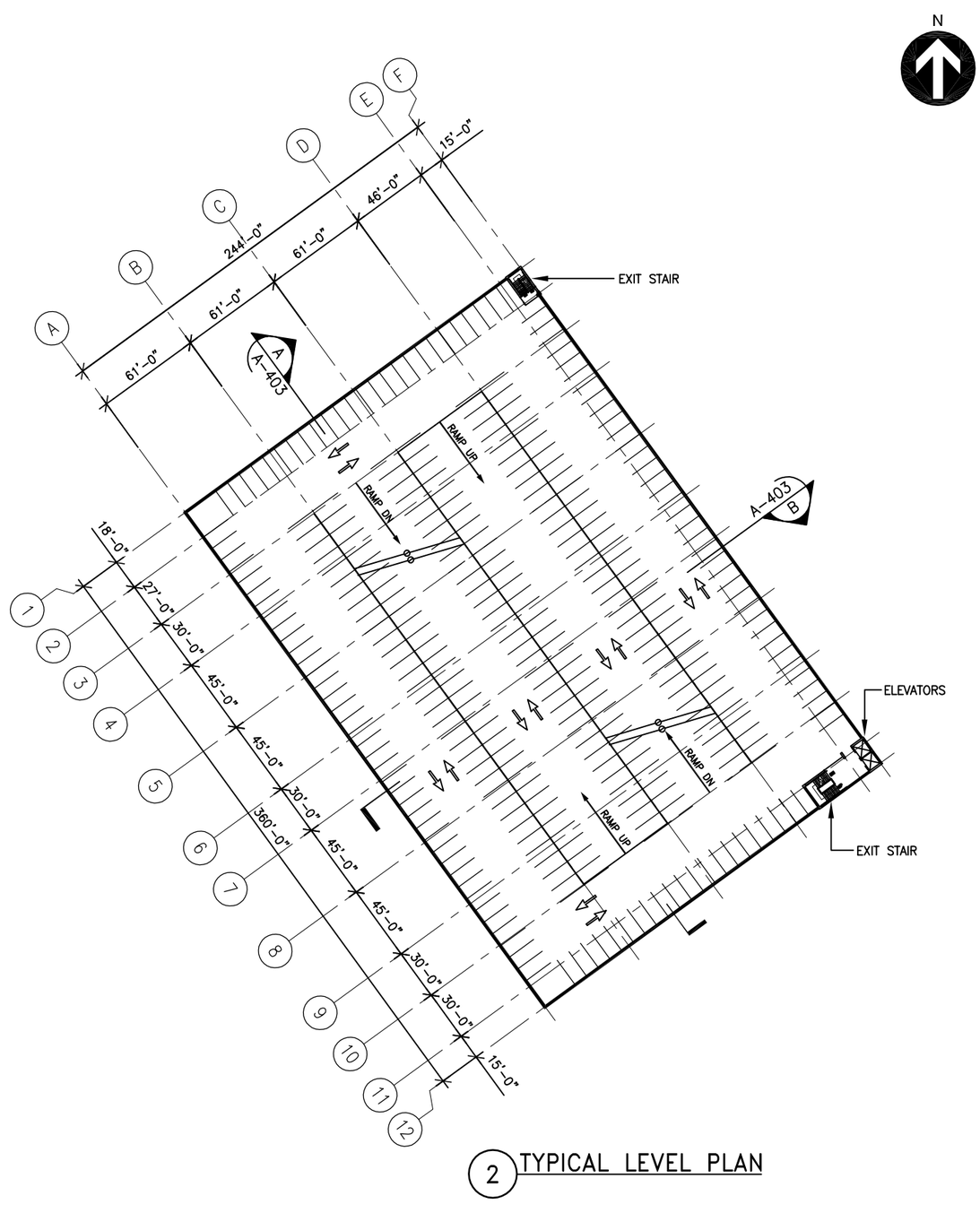
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1 GROUND LEVEL PLAN



2 TYPICAL LEVEL PLAN

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED:	S. SROUJI	11-03 DATE
DRAWN:	GP, MJK	12-03 DATE
CHECKED:	H. KIVETT	12-03 DATE
APPROVED:		DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

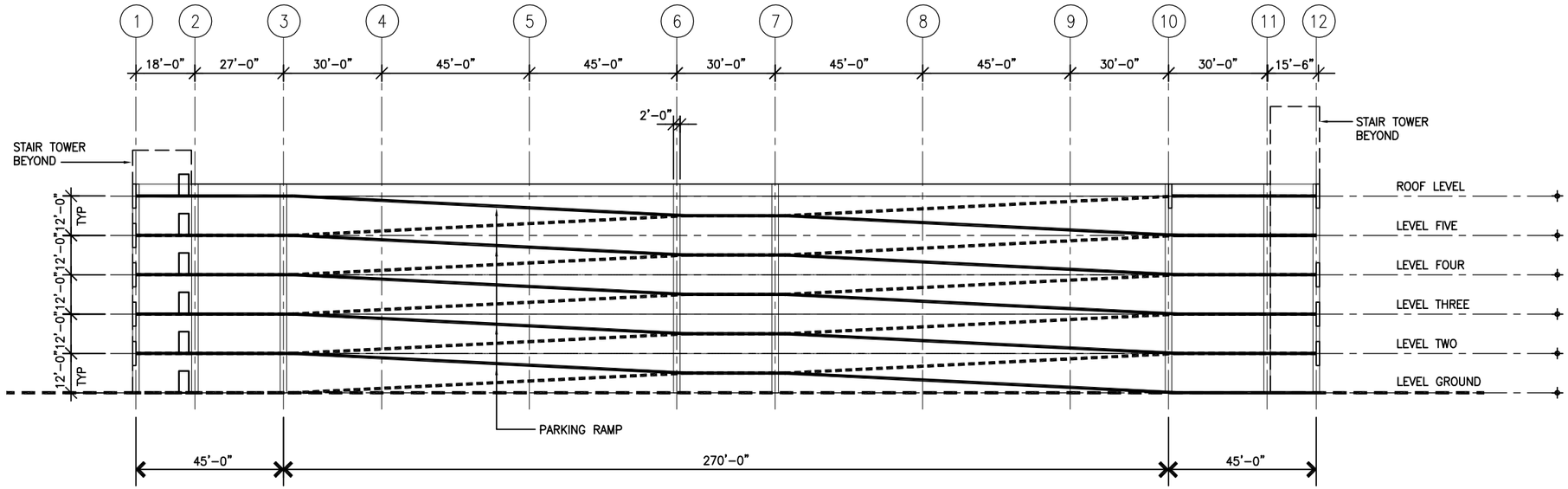
SOUTH PARKING GARAGE
ROUTE 772 STATION
GROUND LEVEL AND TYPICAL LEVEL PLANS

SCALE: 1"=40' 20 0 20 40

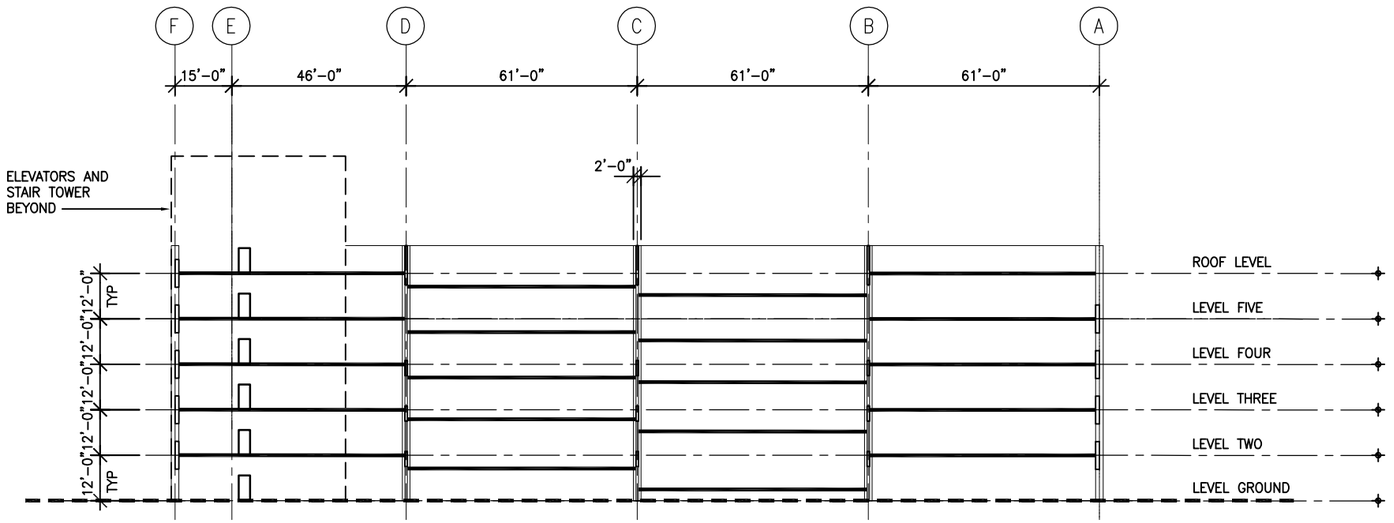
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1 BUILDING SECTION A



2 BUILDING SECTION B

N

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: S. SROUJI	11–03 DATE	
DRAWN: GP, MJK	12–03 DATE	
CHECKED: H. KIVETT	12–03 DATE	
APPROVED:	DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

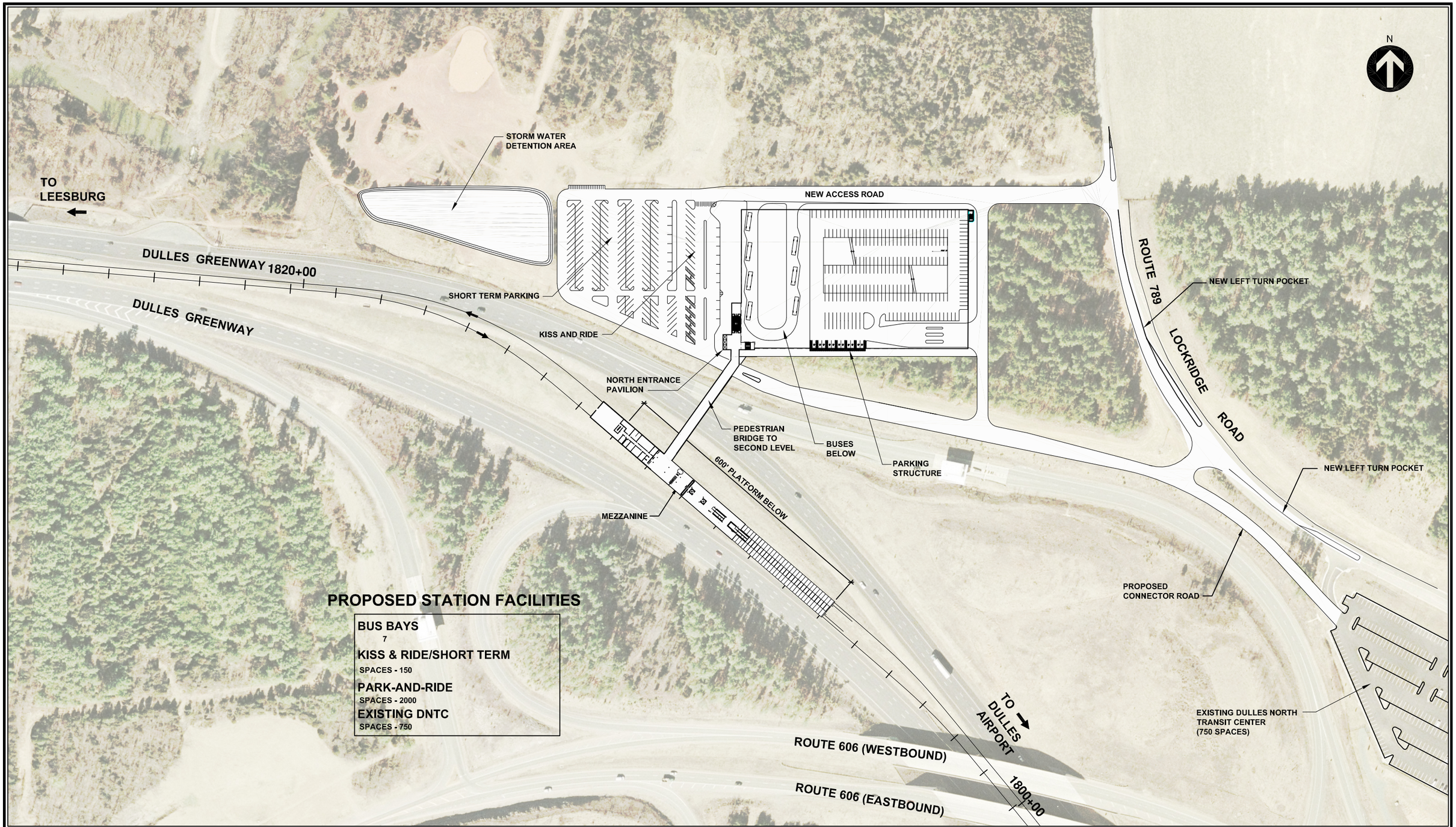
SOUTH PARKING GARAGE BUILDING SECTIONS
ROUTE 772 STATION

SCALE: 1"=20' (10 0 10 20)

DRAWING NO.: GPN–A–403–R772

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PROPOSED STATION FACILITIES

BUS BAYS
7

KISS & RIDE/SHORT TERM
SPACES - 150

PARK-AND-RIDE
SPACES - 2000

EXISTING DNTC
SPACES - 750

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: GP 12-03 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: GP 12-03 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

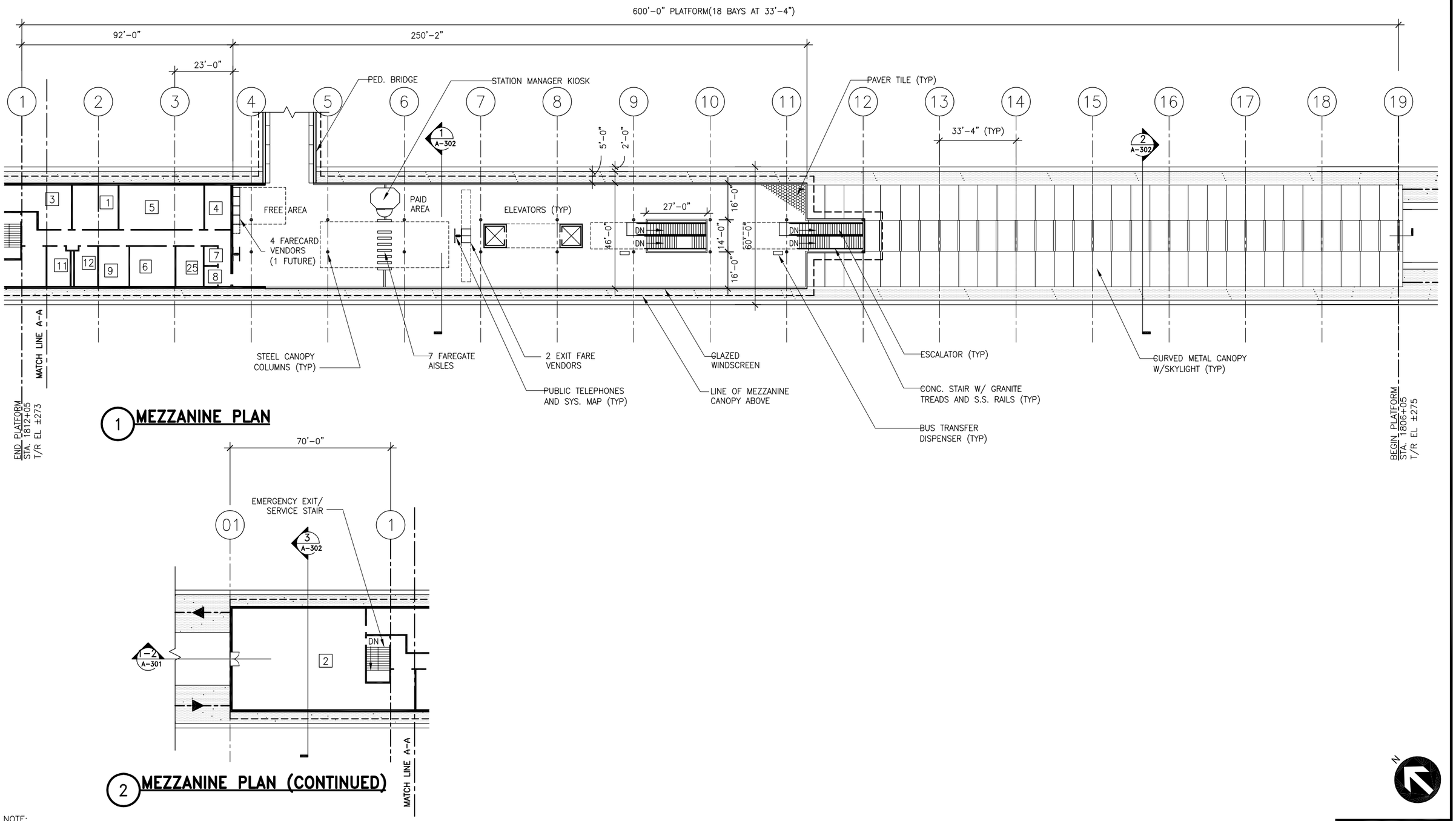
SITE PLAN
ROUTE 606 STATION – LPA

SCALE: 1"=100' (50 0 50 100)

DRAWING NO.: GPN-A-100-R606

019

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1 MEZZANINE PLAN

2 MEZZANINE PLAN (CONTINUED)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02	REFERENCE DRAWINGS	REVISIONS
DRAWN: B. LIOANAG 3-15-02	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS
SUBMITTED
Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

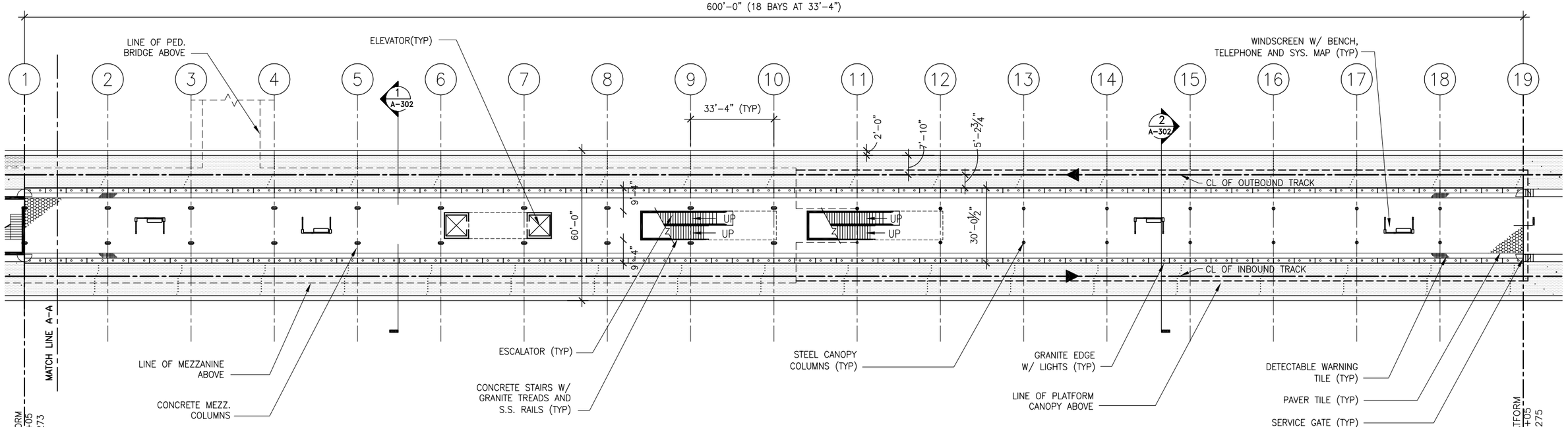
MEZZANINE PLAN
ROUTE 606 STATION

SCALE: 1"=20' (10 0 10 20)

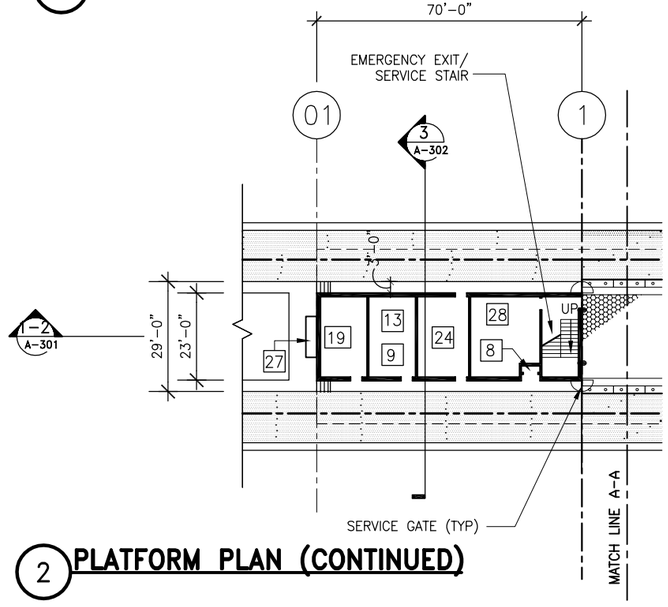
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1 PLATFORM PLAN



2 PLATFORM PLAN (CONTINUED)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02	REFERENCE DRAWINGS	REVISIONS
DRAWN: B. LIOANAG 3-15-02	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED:		
APPROVED:		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

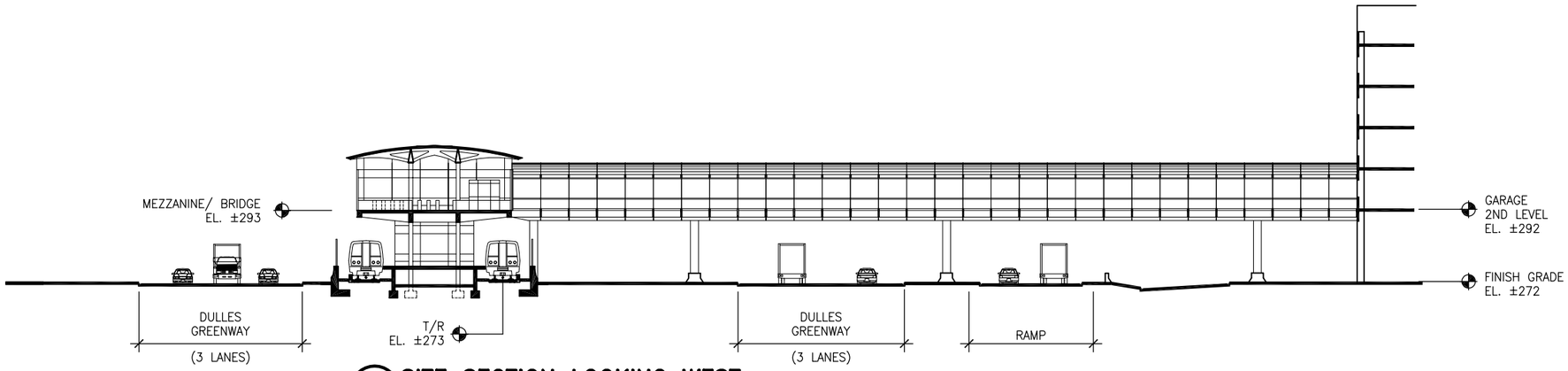
PLATFORM PLAN
ROUTE 606 STATION

SCALE: 1"-20' (10 0 10 20)

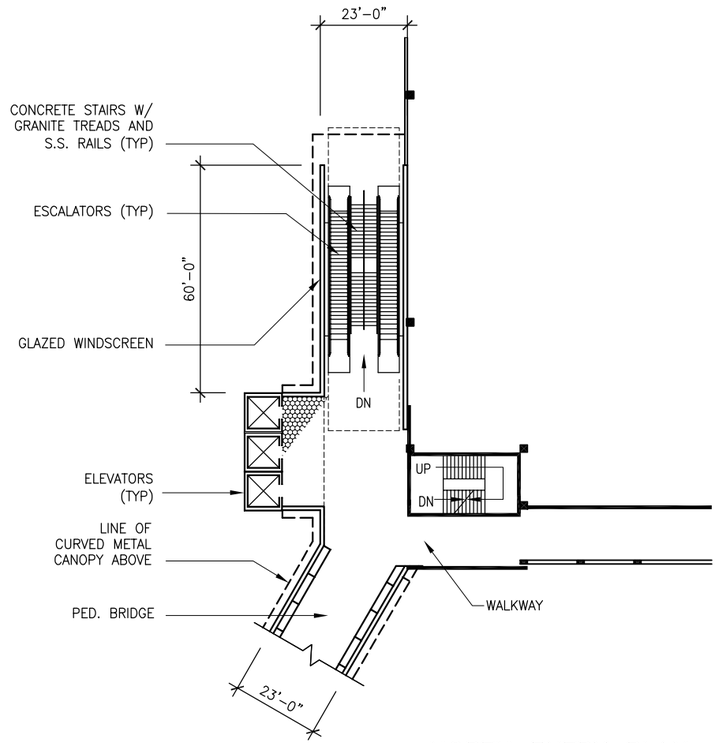
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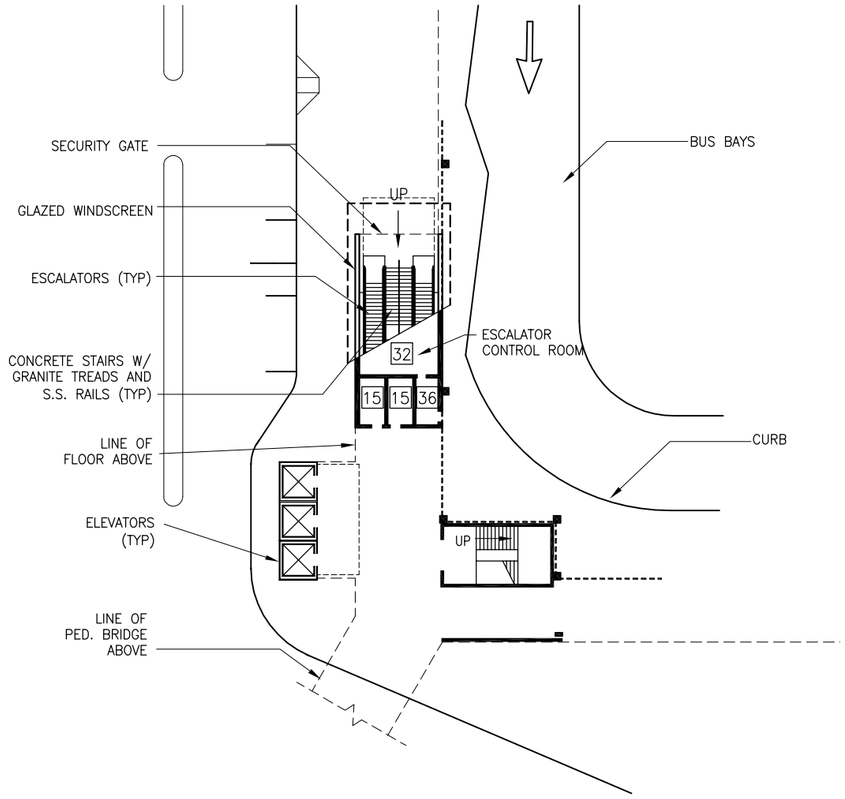
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1 SITE SECTION LOOKING WEST



2 NORTH ENTRY PLAN (BRIDGE LEVEL)



3 NORTH ENTRY PLAN (GROUND LEVEL)

N

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS,
SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02 DATE
DRAWN: B. LOANAG 3-15-02 DATE
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REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

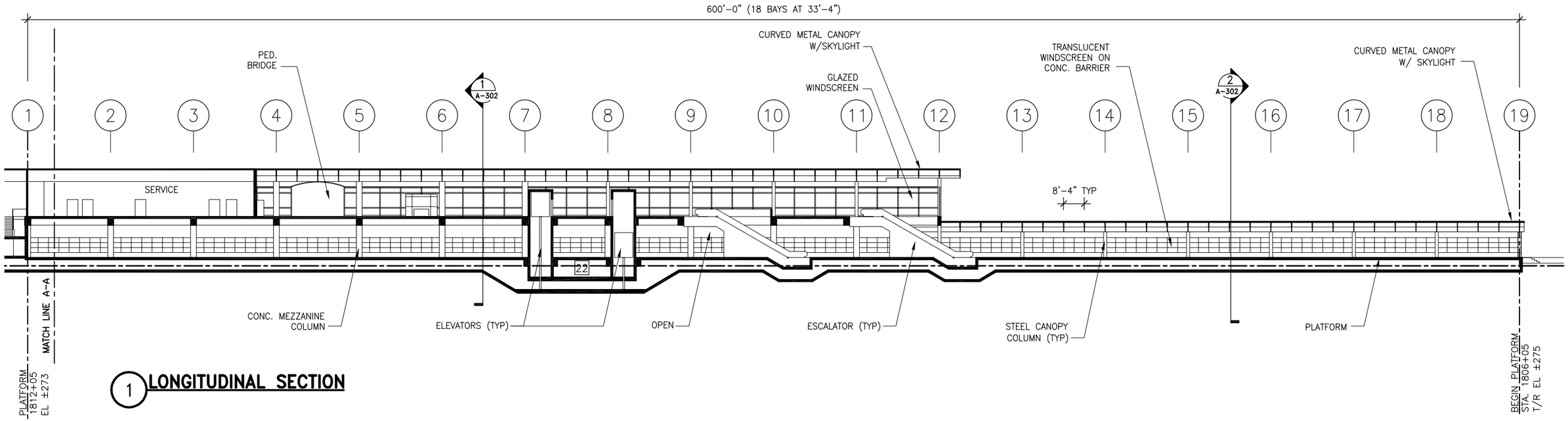
CAPITAL TRANSIT CONSULTANTS
SUBMITTED
Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

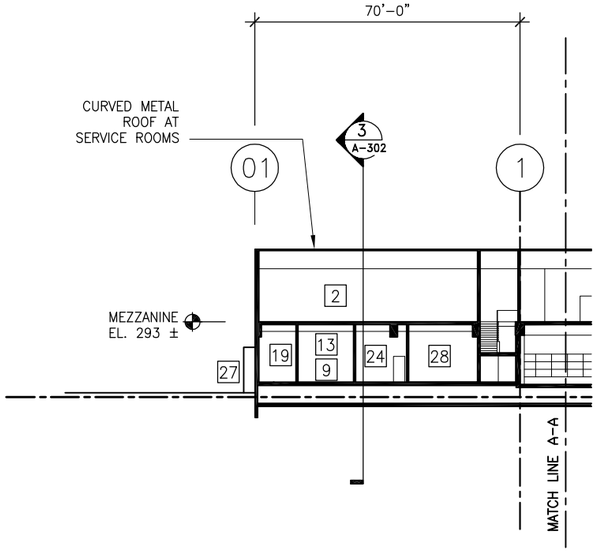
SITE SECTION/ ENTRY PLANS
ROUTE 606 STATION

SCALE: 1"=20' (10 0 10 20)
DRAWING NO.: GPN-A-300-R606
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1 LONGITUDINAL SECTION



2 LONGITUDINAL SECTION (CONTINUED)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02 (DATE)	REFERENCE DRAWINGS	REVISIONS
DRAWN: B. LIOANAG 3-15-02 (DATE)	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
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APPROVED: ____ DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

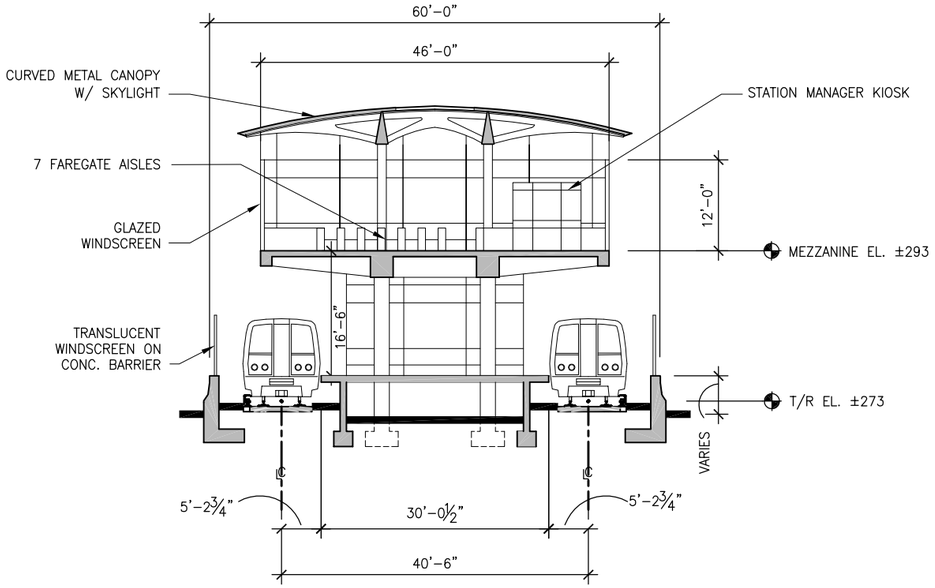
LONGITUDINAL SECTION
ROUTE 606 STATION

SCALE: 1"=20' (10 0 10 20)

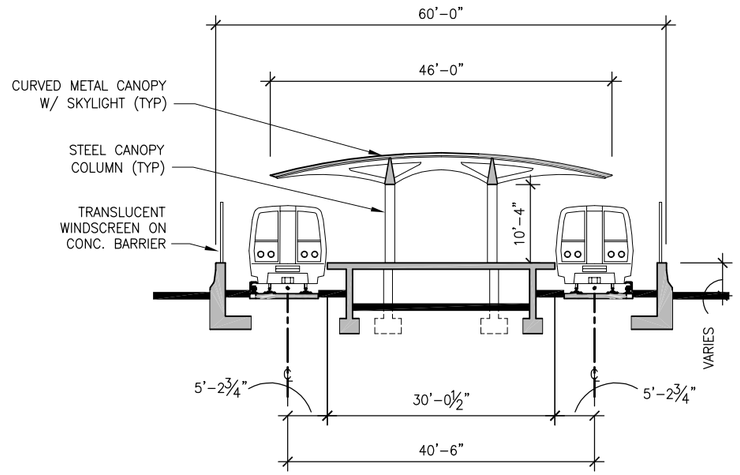
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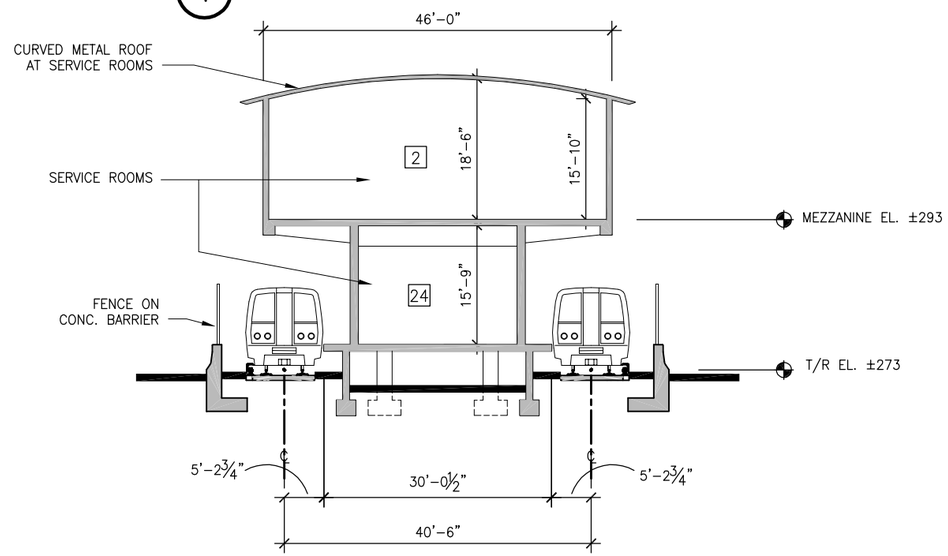
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1 MEZZANINE TRANSVERSE SECTION



2 PLATFORM TRANSVERSE SECTION



3 SERVICE ROOMS TRANSVERSE SECTION

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02 DATE
DRAWN: B. LOANAG 3-15-02 DATE
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NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

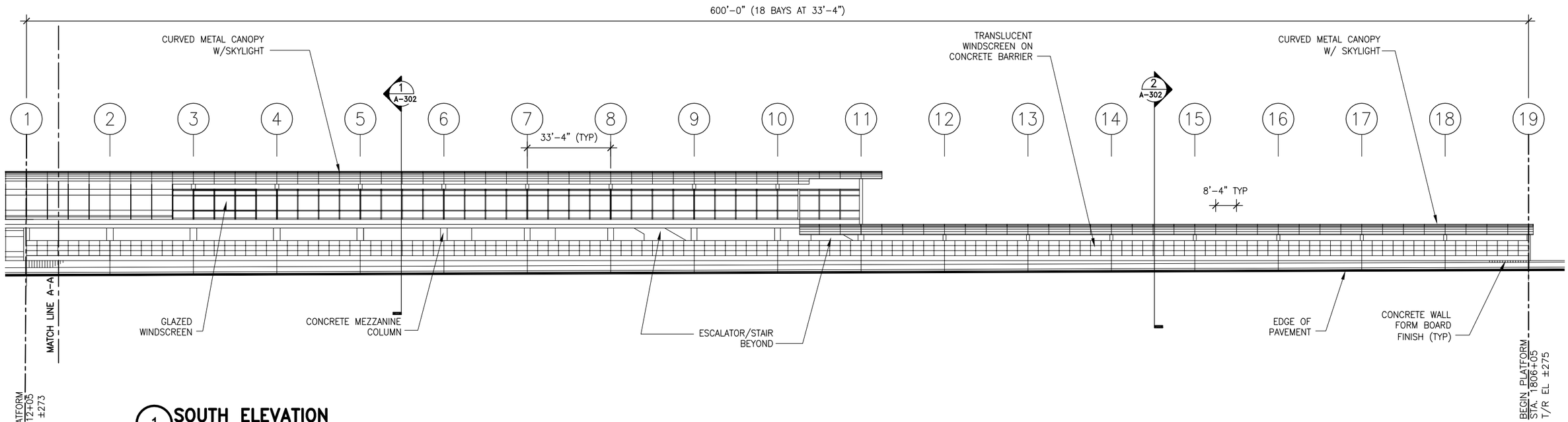
CAPITAL TRANSIT CONSULTANTS
SUBMITTED
Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

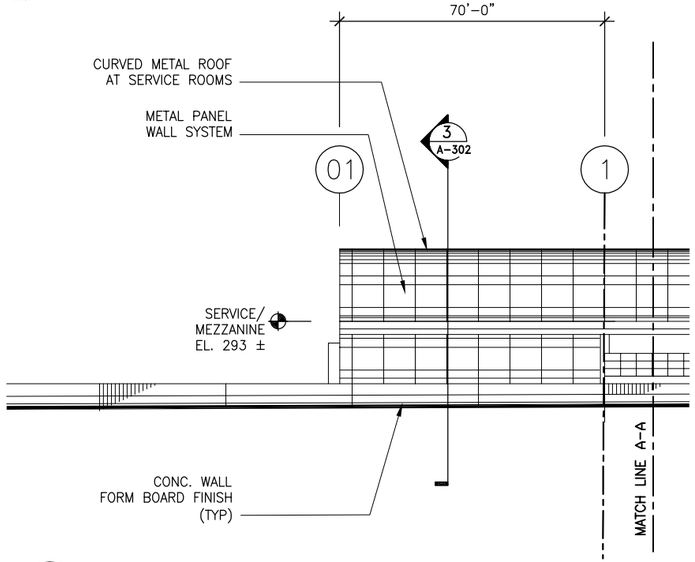
TRANSVERSE SECTIONS
ROUTE 606 STATION

SCALE: 1"=10' (5 0 5 10)
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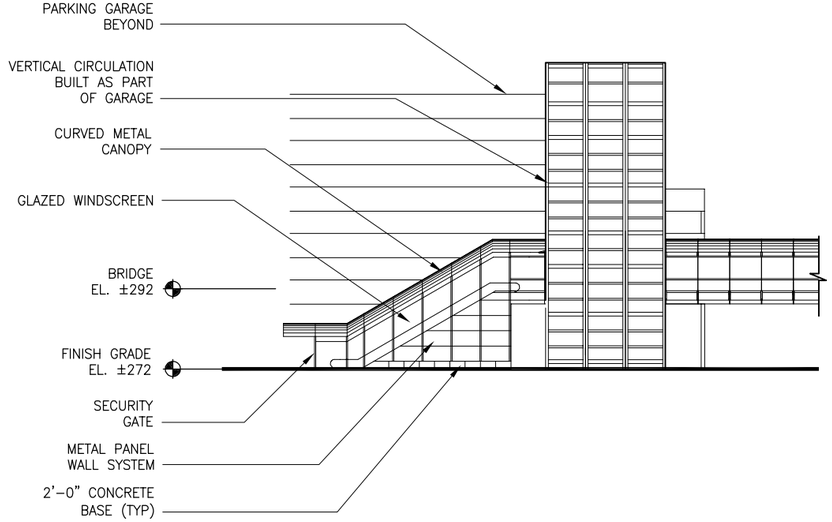
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1 SOUTH ELEVATION



2 SOUTH ELEVATION (CONTINUED)



3 NORTH ENTRY ELEVATION WEST ELEVATION

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: B. LIOANAG 3-15-02 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
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DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS
SUBMITTED
Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

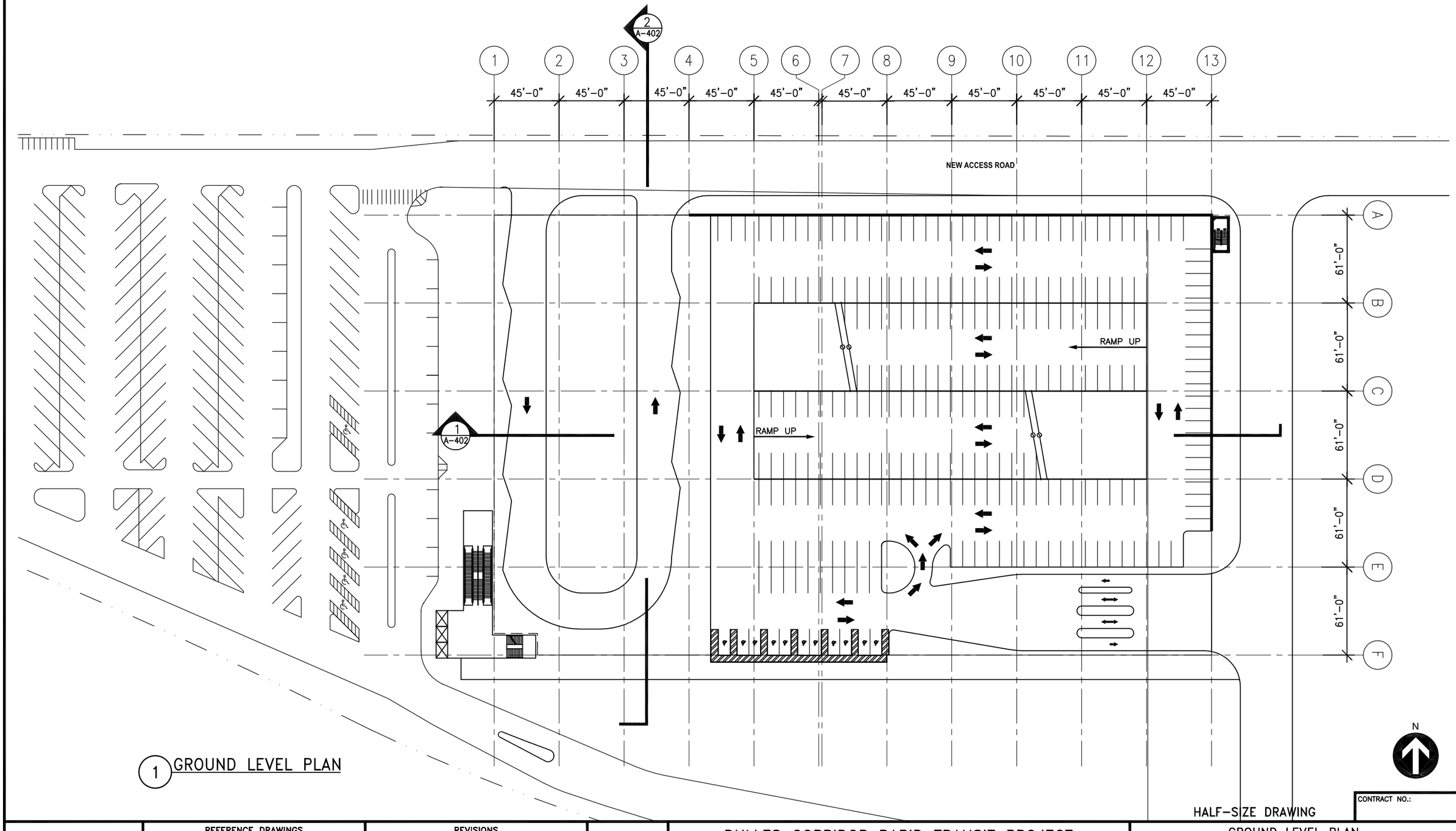
ELEVATIONS
ROUTE 606 STATION

SCALE: 1"=20' (10 0 10 20)

DRAWING NO.: GPN-A-303-R606

025

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1 GROUND LEVEL PLAN

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: S. Srouji 10/10/03	REFERENCE DRAWINGS	REVISIONS
DRAWN: M. Duong 10/14/03	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED:		
APPROVED:		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

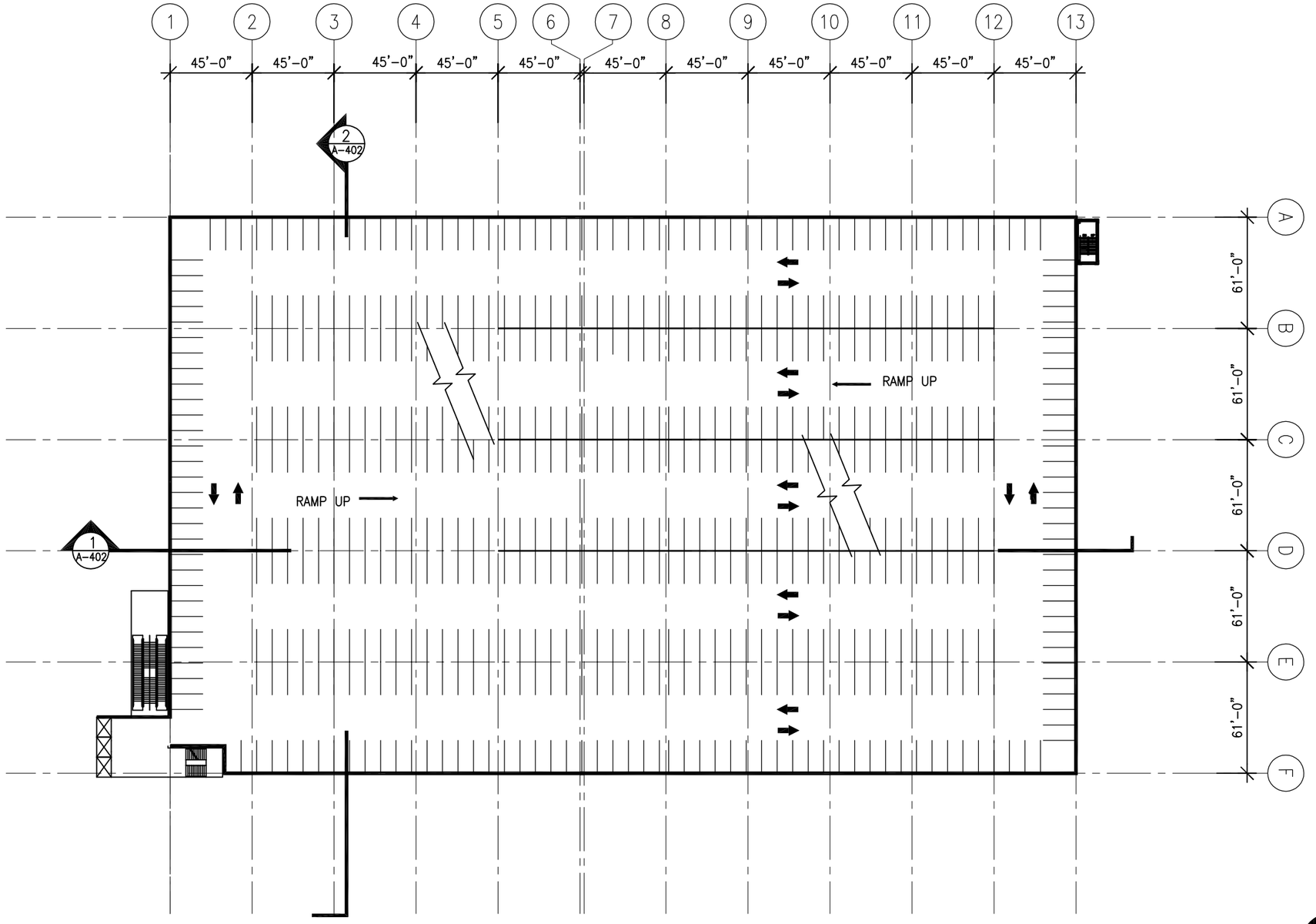
GROUND LEVEL PLAN
ROUTE 606 STATION PARKING GARAGE

SCALE: 1"=40' (20 0 20 40)

DRAWING NO.: GPN-A-400-R606

026

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1 TYPICAL LEVEL PLAN

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: S. Srouji 10/10/03 DATE	REFERENCE DRAWINGS		REVISIONS		
DRAWN: M. Duong 10/14/03 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
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DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

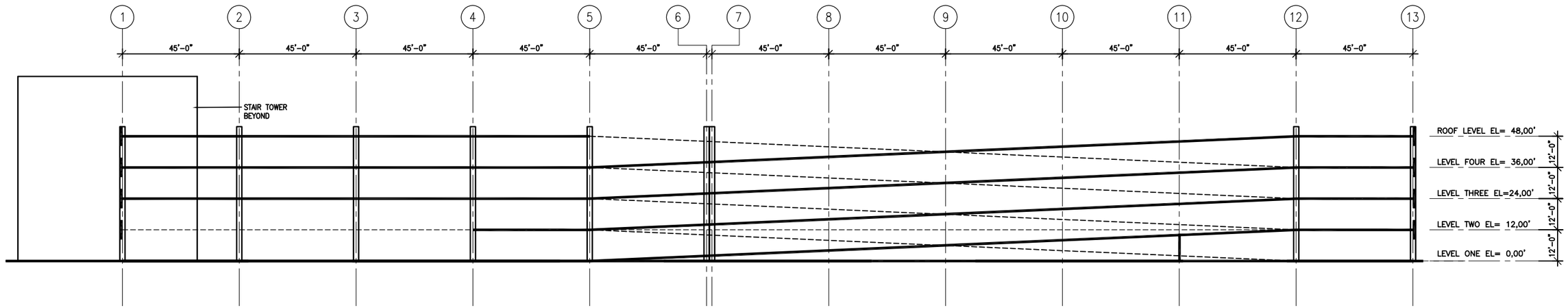
TYPICAL LEVEL PLAN
ROUTE 606 STATION PARKING GARAGE

SCALE: 1"=40' 20 0 20 40

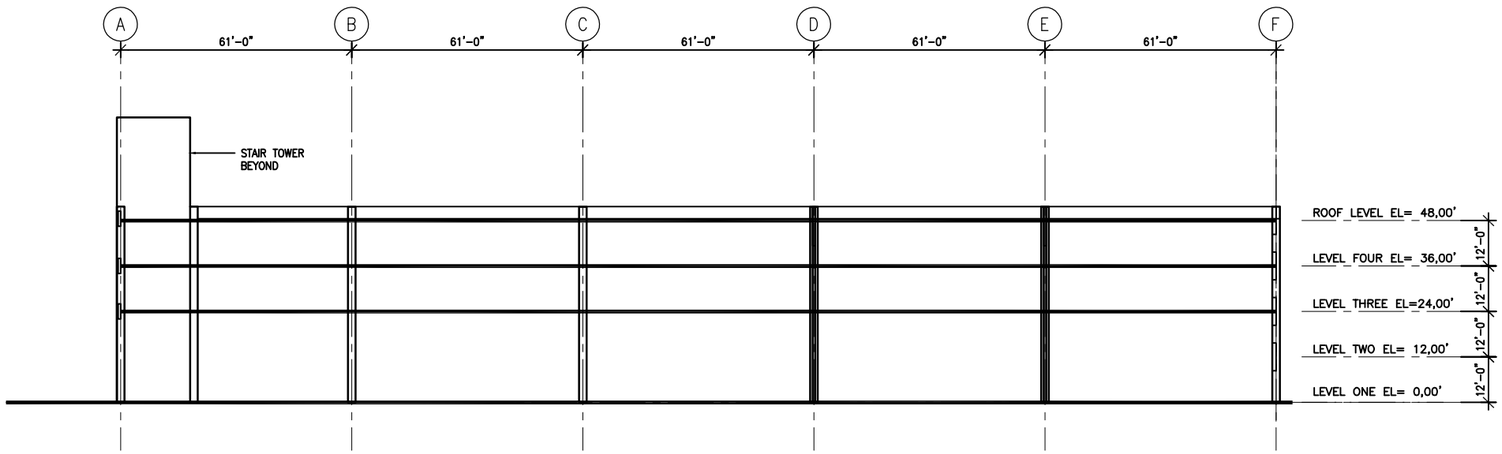
DRAWING NO.: GPN-A-401-R606

027

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1 LONGITUDINAL SECTION
A-400&401



2 CROSS SECTION
A-400&401

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: S. Srouji DATE
DRAWN: DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

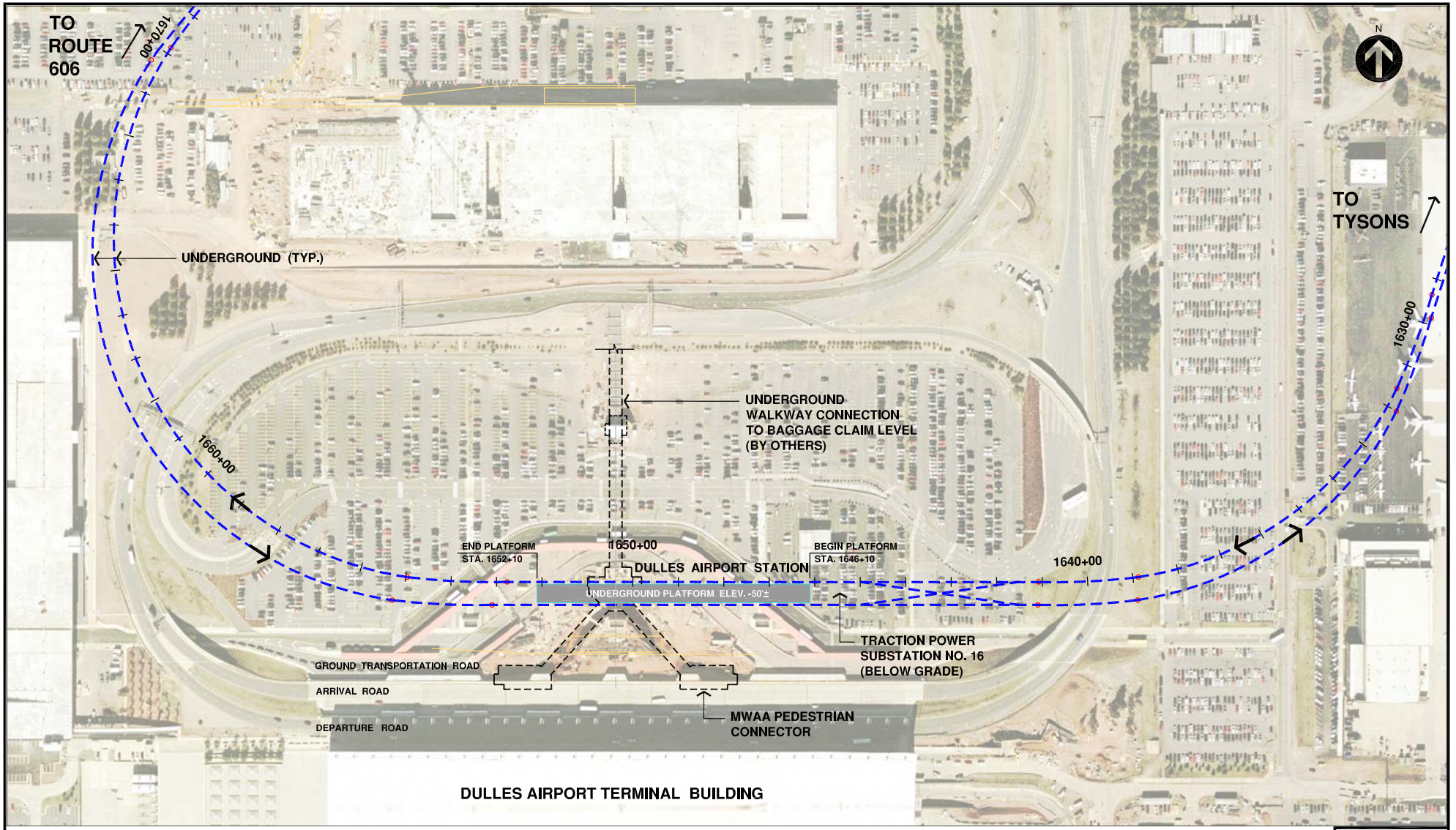
CAPITAL TRANSIT CONSULTANTS
SUBMITTED Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

SECTIONS
ROUTE 606 STATION PARKING GARAGE

SCALE: 1"=20' 10 0 10 20
DRAWING NO.: GPN-A-402-R606
028

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: GP 12-03 DATE	REFERENCE DRAWINGS: NUMBER / DESCRIPTION	REVISIONS: DATE / BY / DESCRIPTION	DULLES CORRIDOR RAPID TRANSIT PROJECT
DRAWN: GP, MJK 12-03 DATE			CAPITAL TRANSIT CONSULTANTS
CHECKED: DATE			SUBMITTED Diana C Mendes PROJECT MANAGER
APPROVED: DATE			FINAL GENERAL PLANS JULY 2004

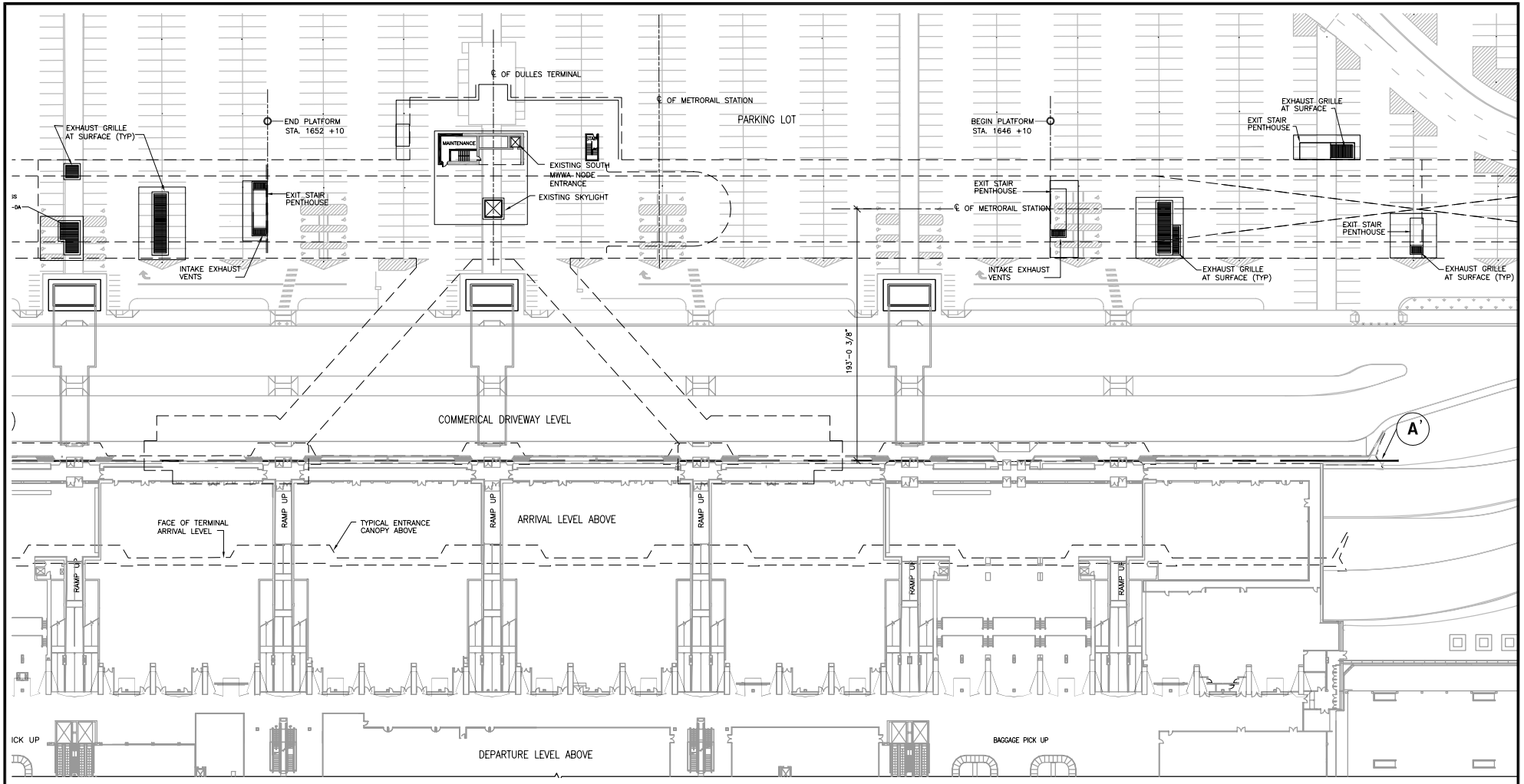
SITE PLAN
DULLES AIRPORT STATION

SCALE: 1"=100' (50 0 50 100)

DRAWING NO.: GPN-A-100-DA

029

\\D2psvr02\CTC CAD\002_dulles\FEIS GenPlans 06-04\Facilities\Dulles Airport\Dulles Airport-site.dwg, Half size, 08/05/04 03:31:42 PM, lbielstein



1 GROUND LEVEL PLAN

NOTE: ALL SURFACE PENETRATION LOCATIONS AND SIZES SUBJECT TO VERIFICATION DURING PE

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: C.R.M. 01-28-02	REFERENCE DRAWINGS	REVISIONS
DRAWN: G. P. 01-28-02	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED:		
APPROVED:		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

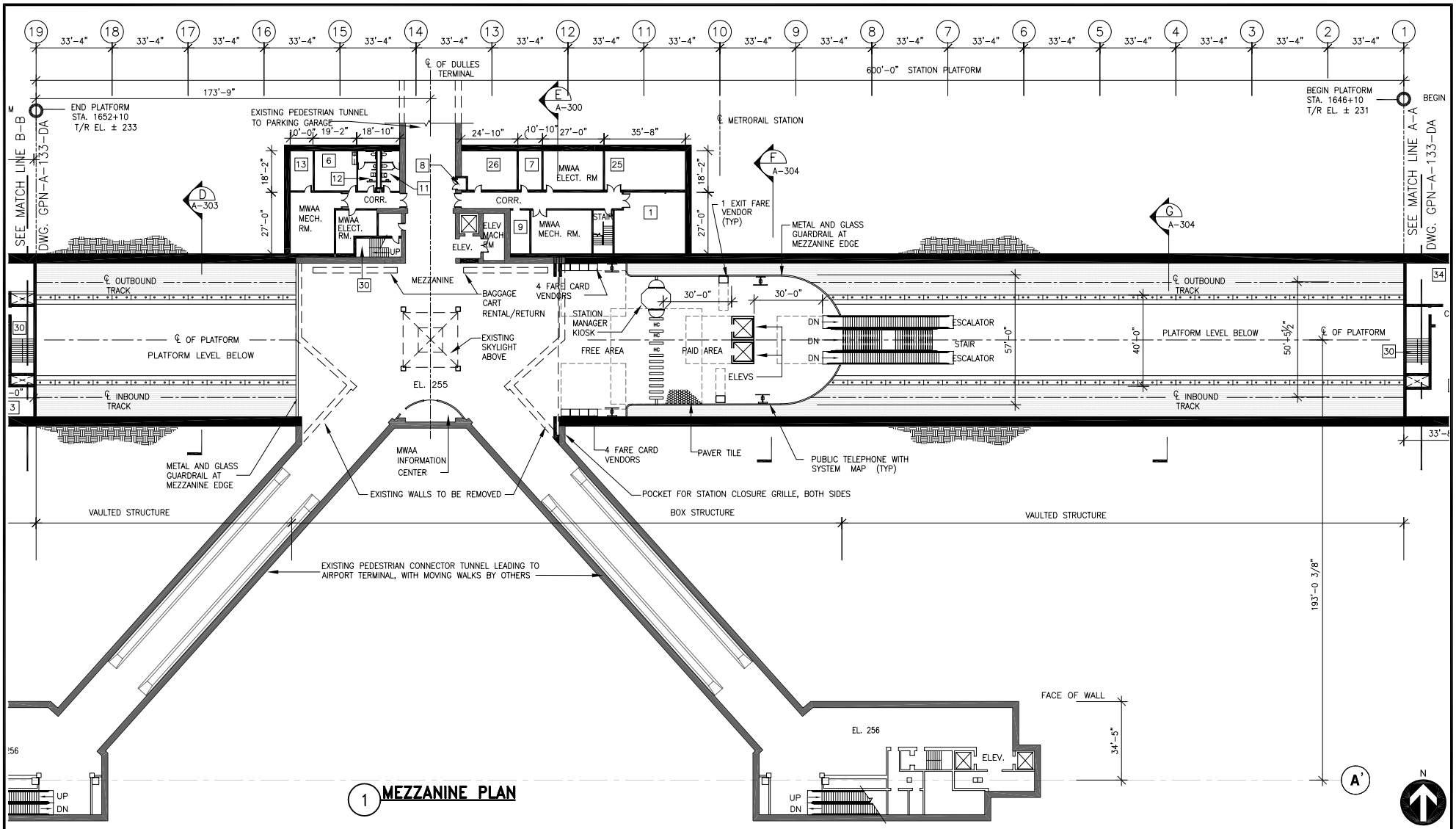
GROUND LEVEL PLAN
DULLES AIRPORT STATION

SCALE: 1"=30' (0, 15, 30, 60)

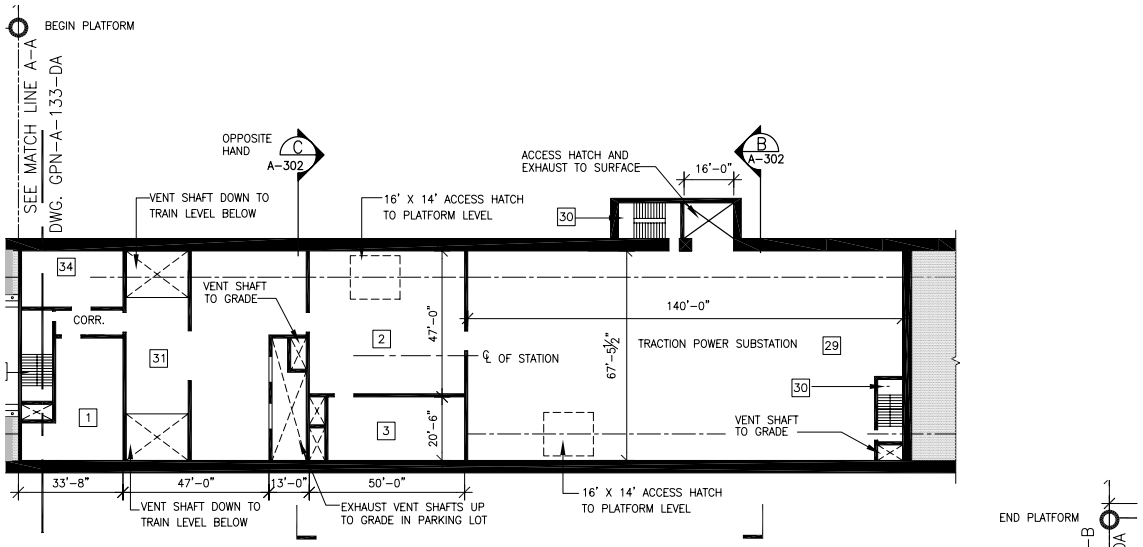
DRAWING NO.: GPN-A-101-DA

030

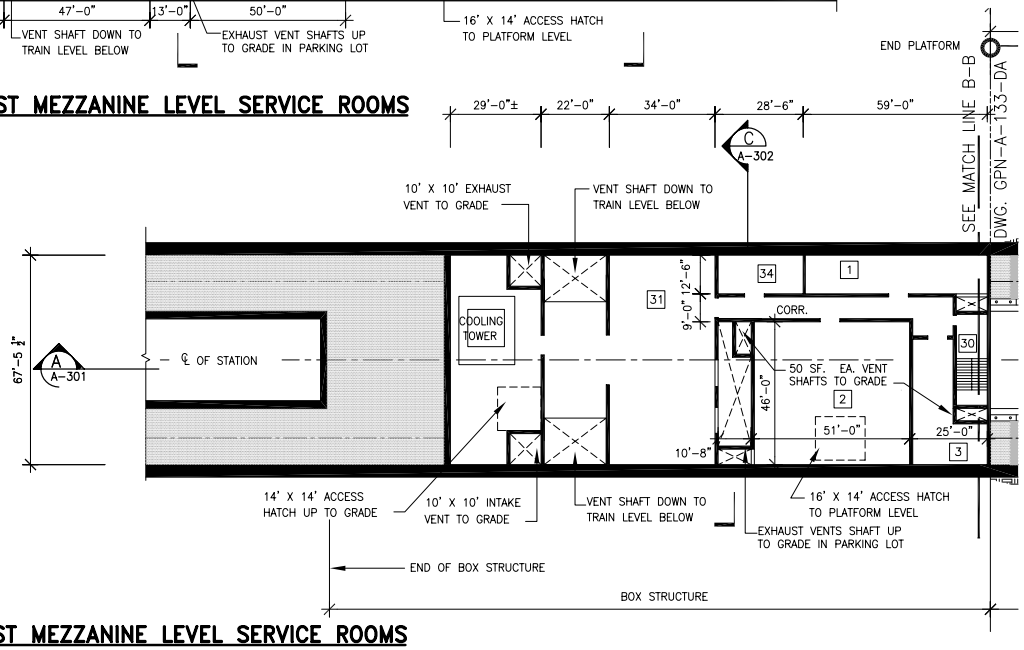
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\\D2psvr02\CTC CAD\002_dulles\FEIS GenPlans 06-04\Facilities\Dulles Airport\GPN-A-200-DA.dwg, MEZZ-20, 07/30/04 08:57:58 AM, tdebelen



1 EAST MEZZANINE LEVEL SERVICE ROOMS



2 WEST MEZZANINE LEVEL SERVICE ROOMS

N

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: C.R.M. 01-28-02 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: G. P. 01-28-02 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

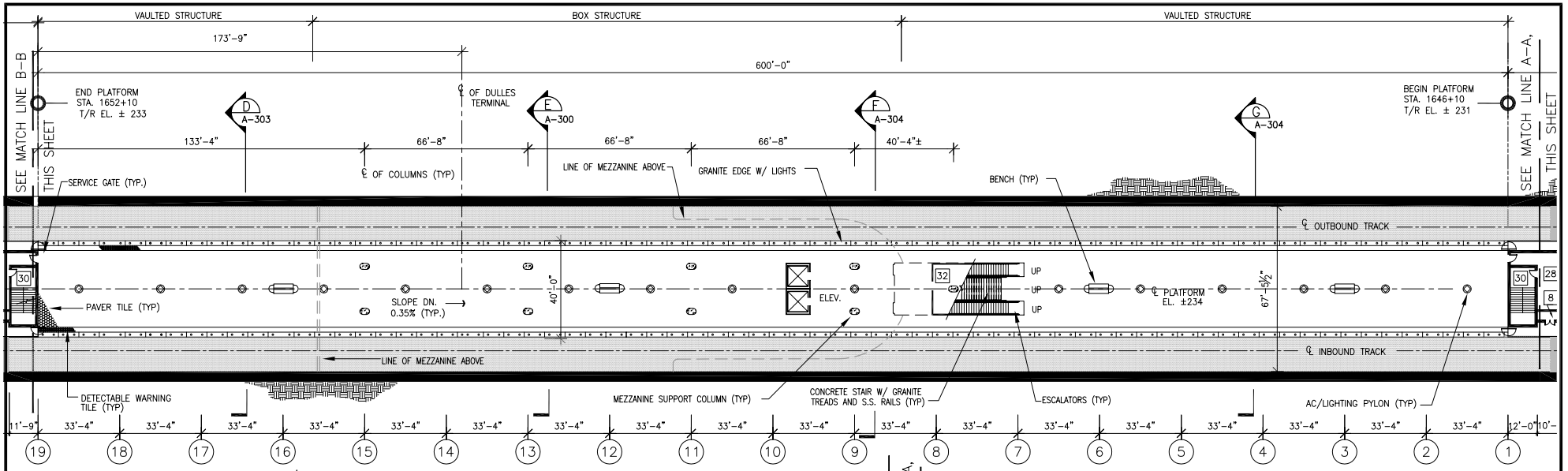
MEZZANINE SERVICE ROOM PLANS
DULLES AIRPORT STATION

SCALE: 1"=20' (0 10 20 40)

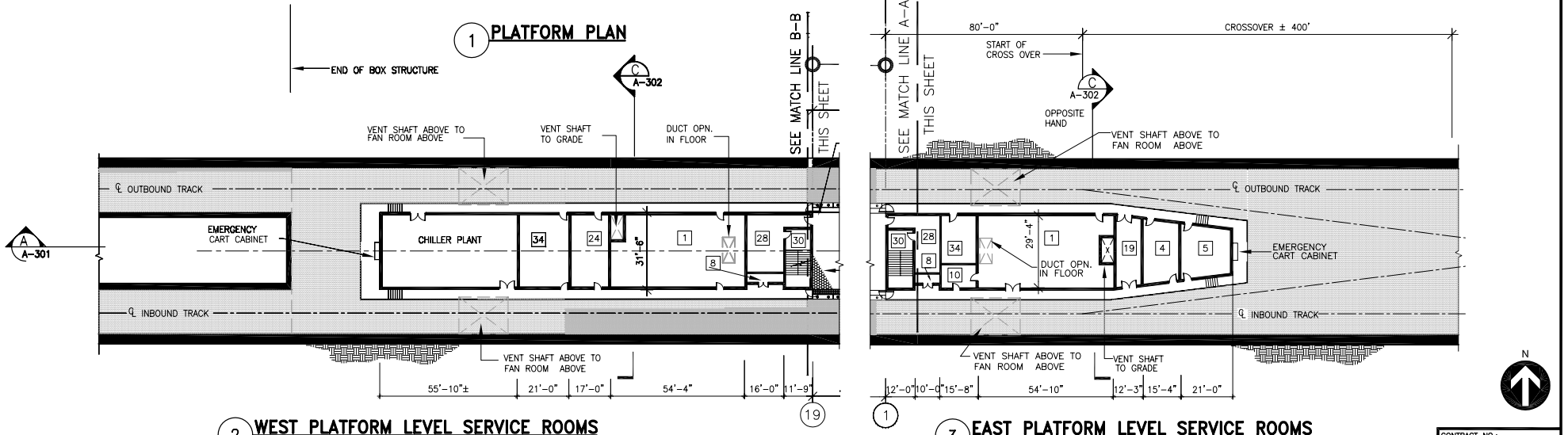
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032

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1 PLATFORM PLAN



2 WEST PLATFORM LEVEL SERVICE ROOMS

3 EAST PLATFORM LEVEL SERVICE ROOMS

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: C.R.M 01-28-02	REFERENCE DRAWINGS	REVISIONS
DRAWN: G. P. 01-28-02	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

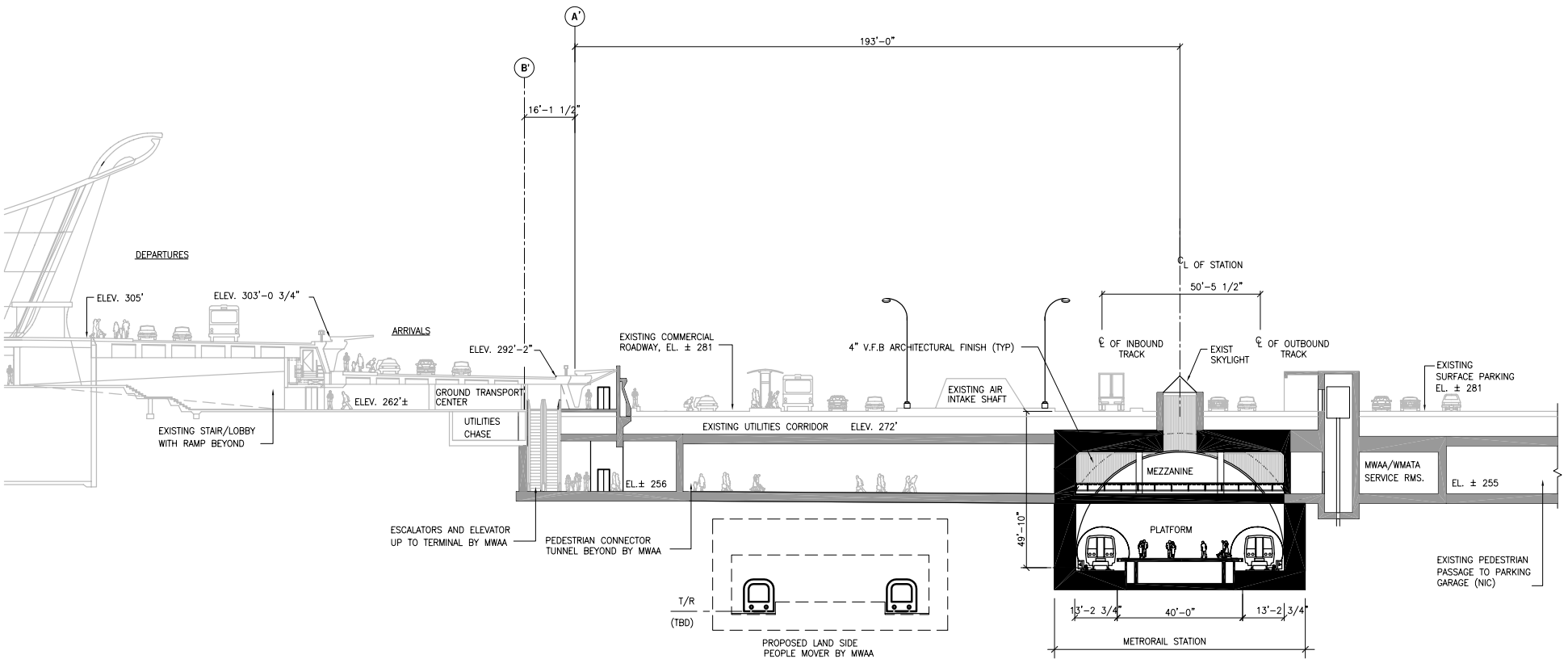
PLATFORM PLAN
DULLES AIRPORT STATION

SCALE: 1"=20' (0 10 20 40)

DRAWING NO.: GPN-A-202-DA

033

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1 CROSS SECTION E

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: C.R.M. 01-28-02 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: G. P. 01-28-02 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

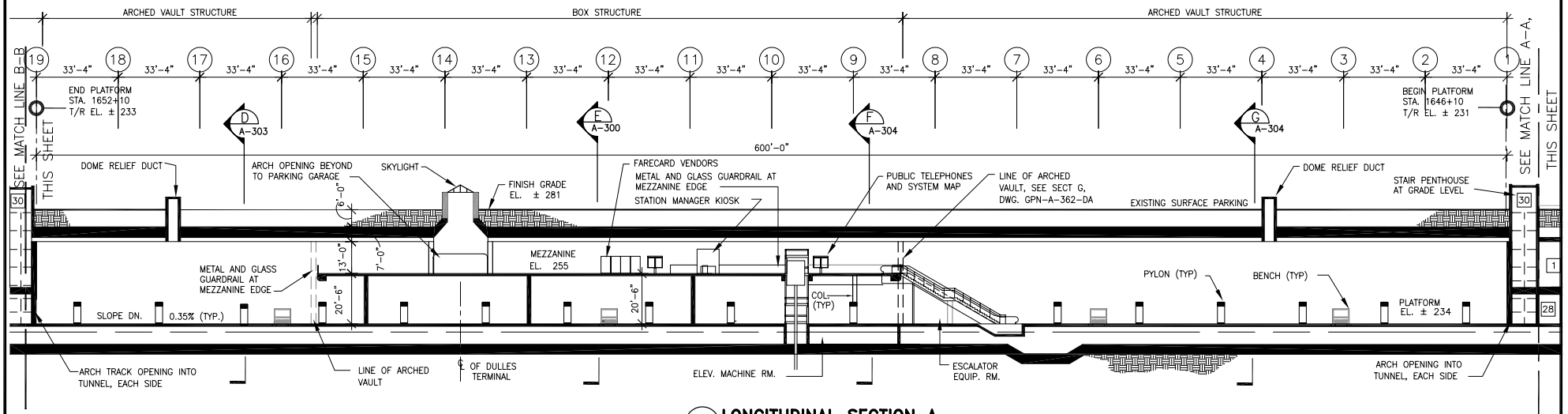
SITE SECTION
DULLES AIRPORT STATION

SCALE: 1"=16' (4 0 4 8 12 16 20)

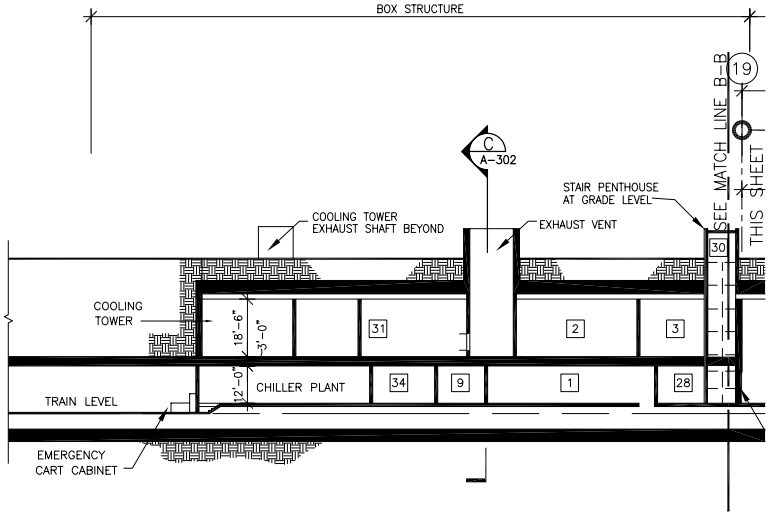
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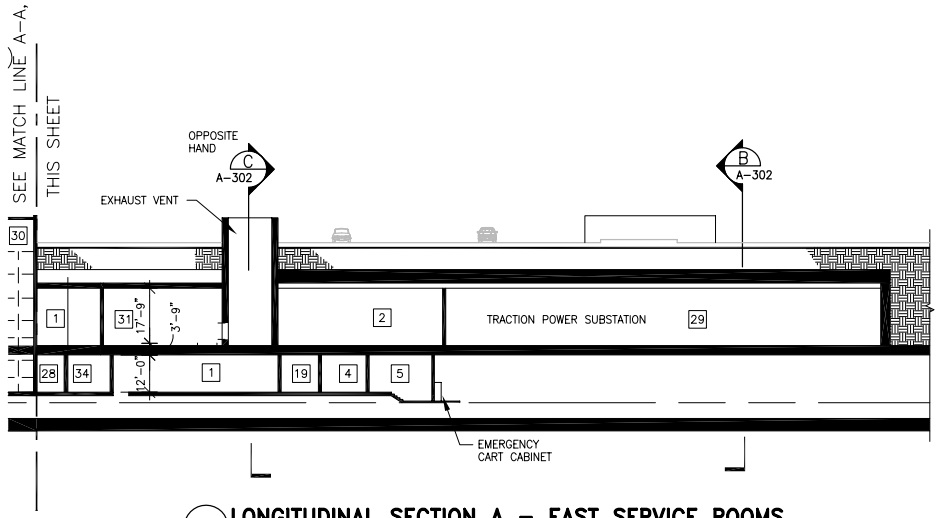
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1 LONGITUDINAL SECTION A



2 LONGITUDINAL SECTION A – WEST SERVICE ROOMS



3 LONGITUDINAL SECTION A – EAST SERVICE ROOMS

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: C.R.M. 01–28–02 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: G. P. 01–28–02 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

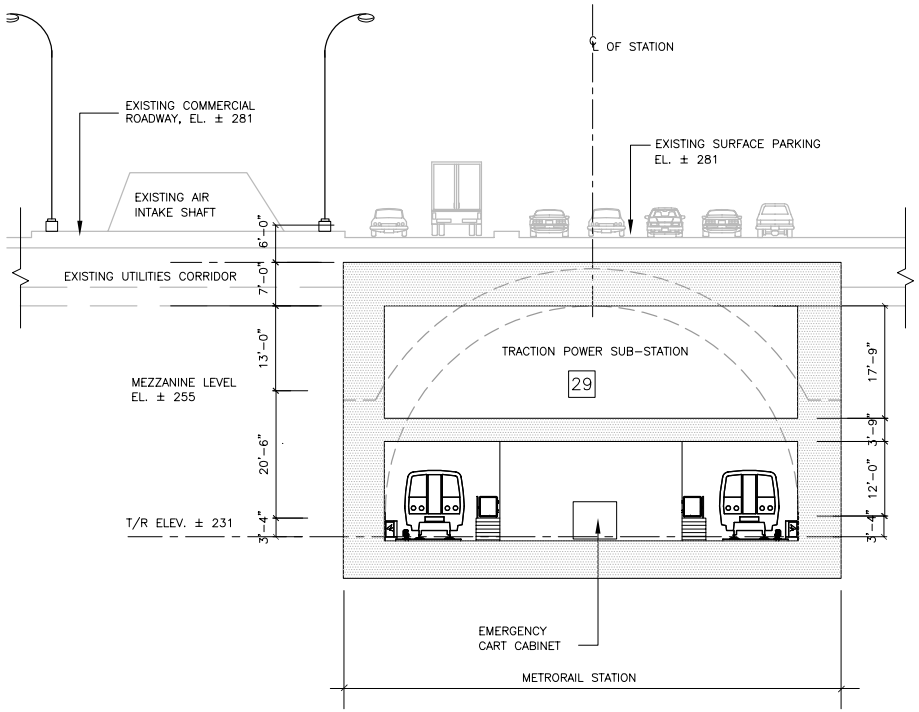
LONGITUDINAL SECTION A
DULLES AIRPORT STATION

SCALE: 1"=20' (0, 10, 20, 40)

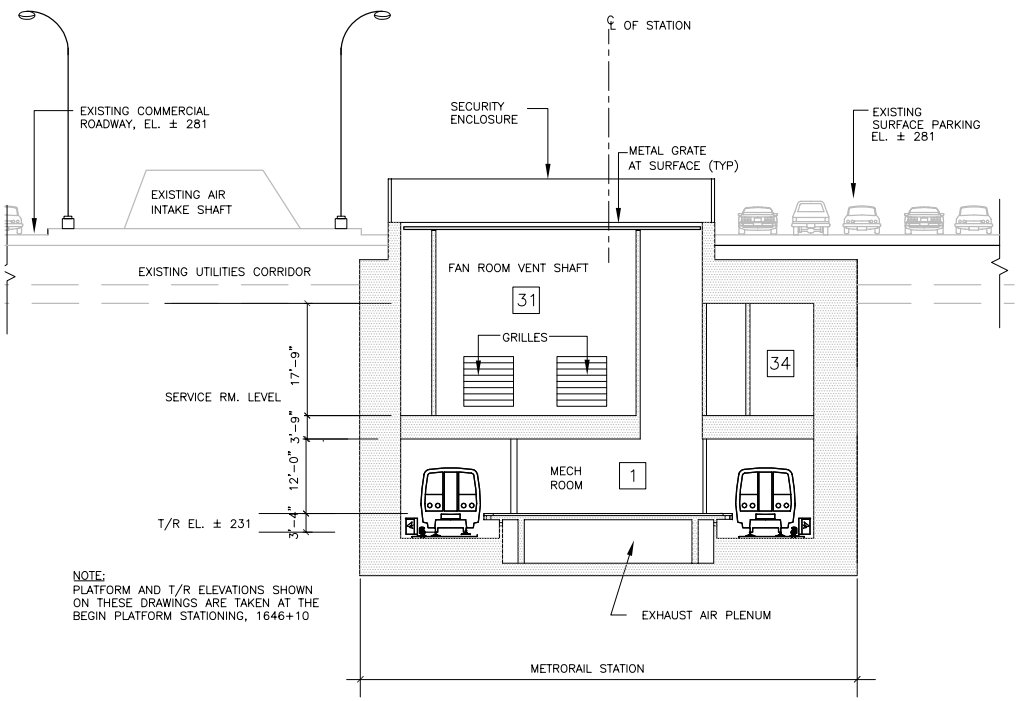
DRAWING NO.: GPN–A–301–DA

035

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1 TRANSVERSE SECTIONS B



2 TRANSVERSE SECTIONS C

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: C.R.M. 01-28-02 DATE	REFERENCE DRAWINGS		REVISIONS		
DRAWN: G. P. 01-28-02 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
CHECKED: DATE					
APPROVED: DATE					

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

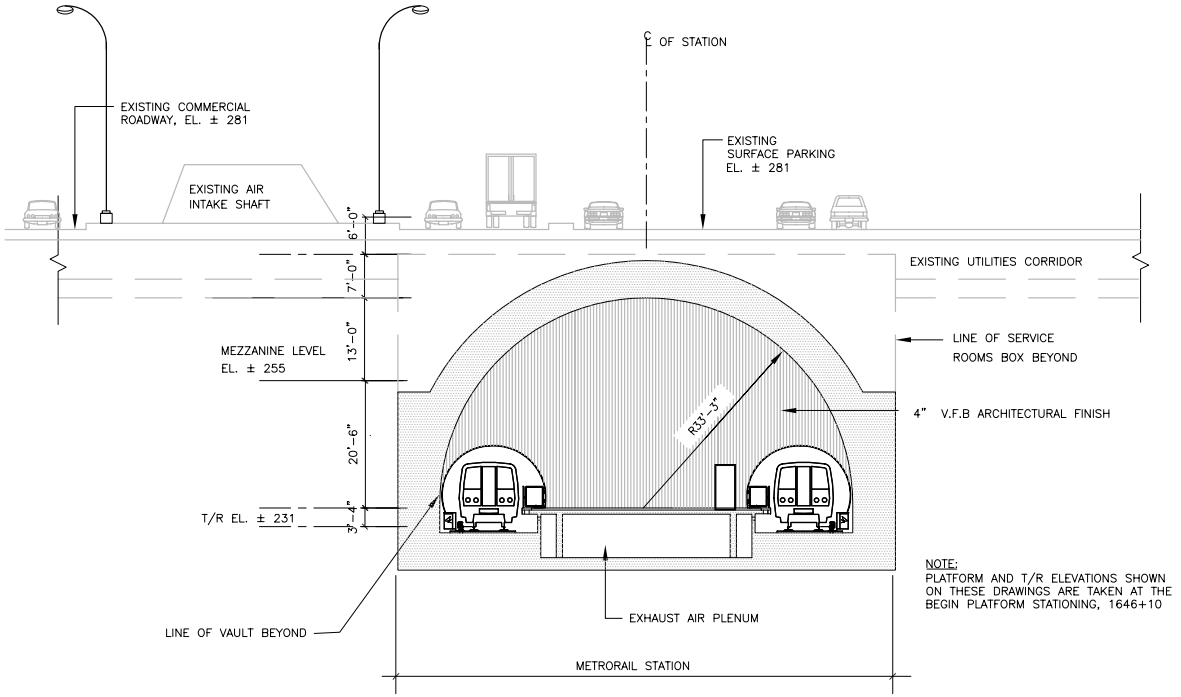
TRANSVERSE SECTIONS B & C
DULLES AIRPORT STATION

SCALE: 1"=10' (0, 5, 10, 20)

DRAWING NO.: GPN-A-302-DA

036

\\D2psvr02\CTC CAD\002_dulles\FEIS GenPlans 06-04\Facilities\Dulles Airport\GPN-A-302-DA.dwg, CROSS-SECT-B-C, 07/30/04 09:27:59 AM, ltabelen



1 TRANSVERSE SECTION D

HALF-SIZE DRAWING

CONTRACT NO.:

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DRAWN: G. P. 3-15-02 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

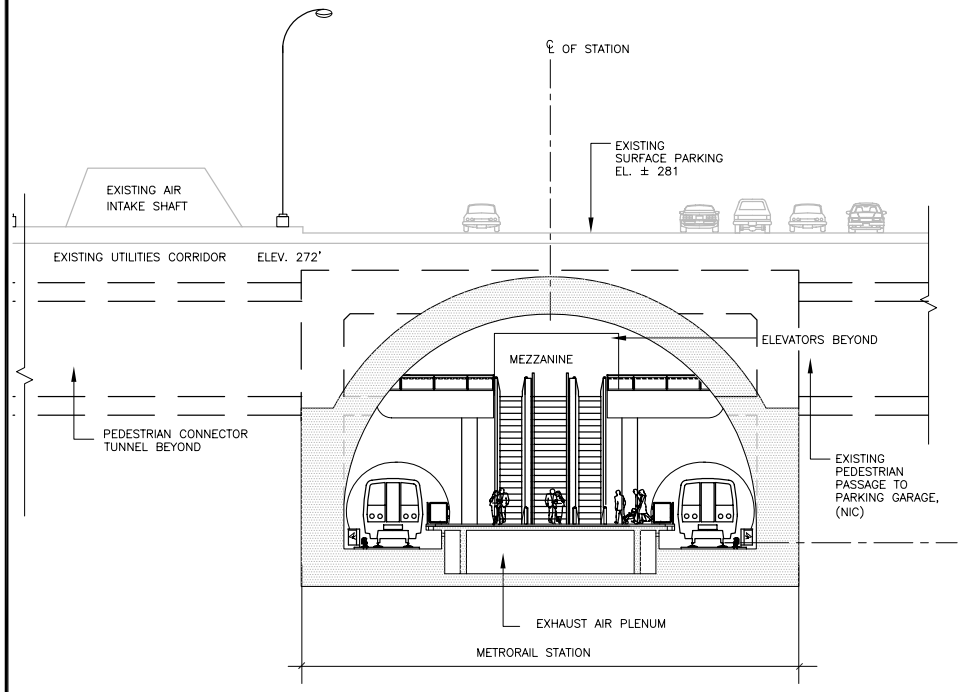
TRANSVERSE SECTION D
DULLES AIRPORT STATION

SCALE: 1"=10' (0 5 10 20)

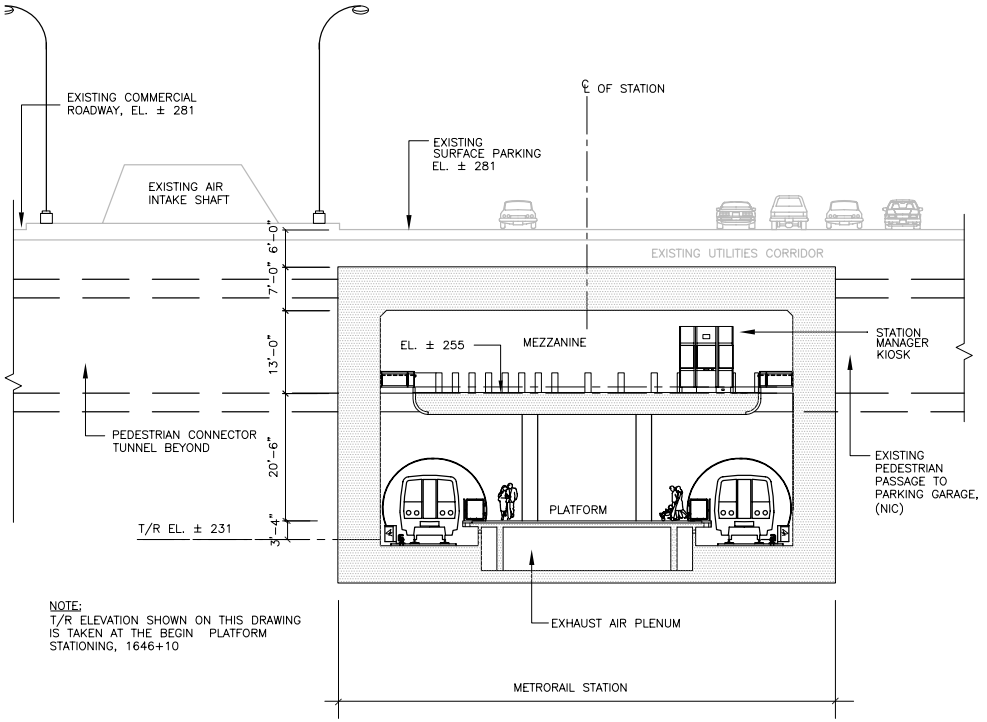
DRAWING NO.: GPN-A-303-DA

037

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1 **TRANSVERSE SECTION G**
AT ARCHED VAULT



NOTE;
T/R ELEVATION SHOWN ON THIS DRAWING IS TAKEN AT THE BEGIN PLATFORM STATIONING, 1646+10

2 **TRANSVERSE SECTION F**
AT BOX VAULT

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: C.R.M. 01-28-02 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: G.P. 01-28-02 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS
SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

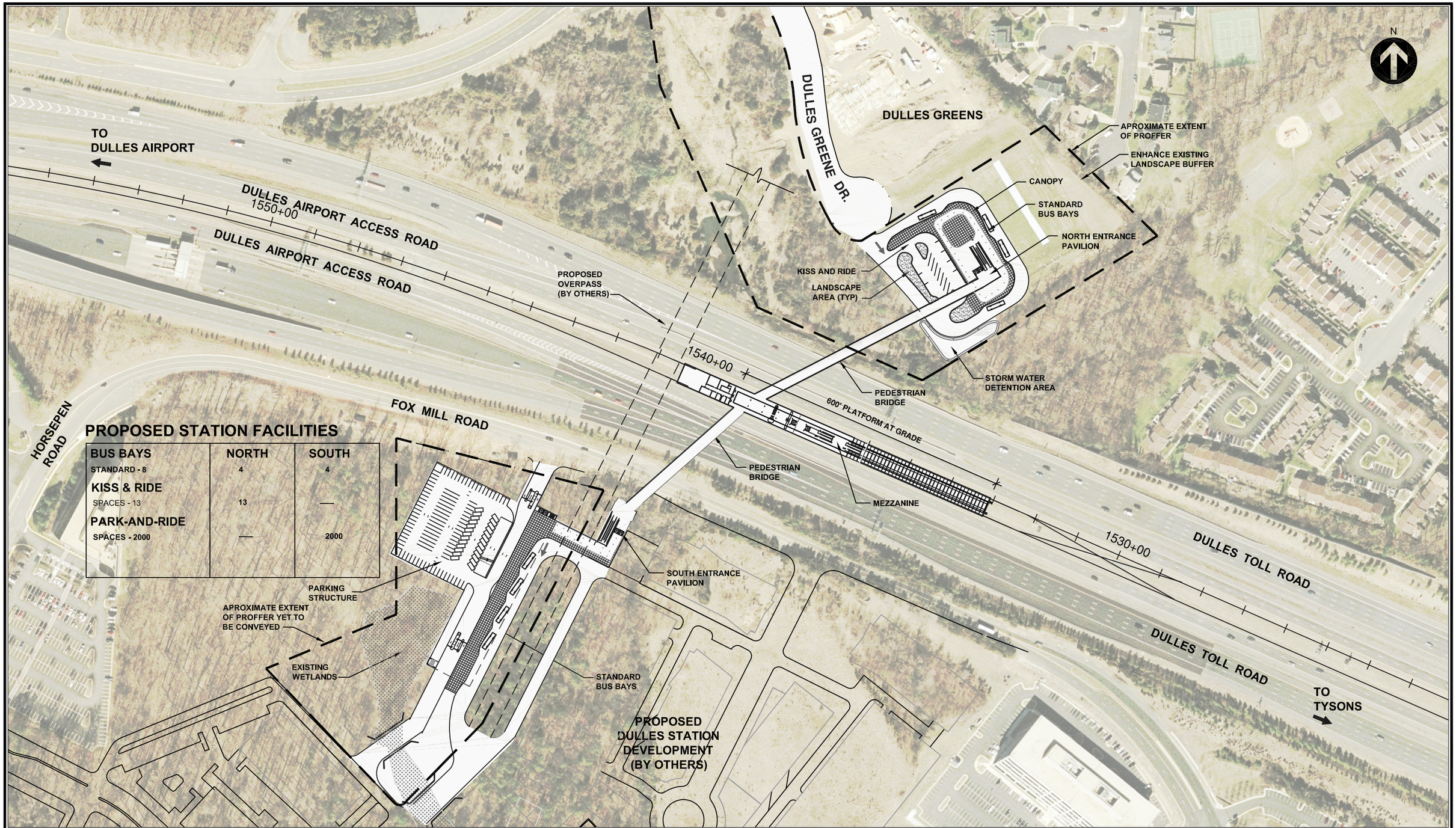
TRANSVERSE SECTIONS F & G
DULLES AIRPORT STATION

SCALE: 1"=10' 0 5 10 20

DRAWING NO.: GPN-A-304-DA

038

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HALF-SIZE DRAWING

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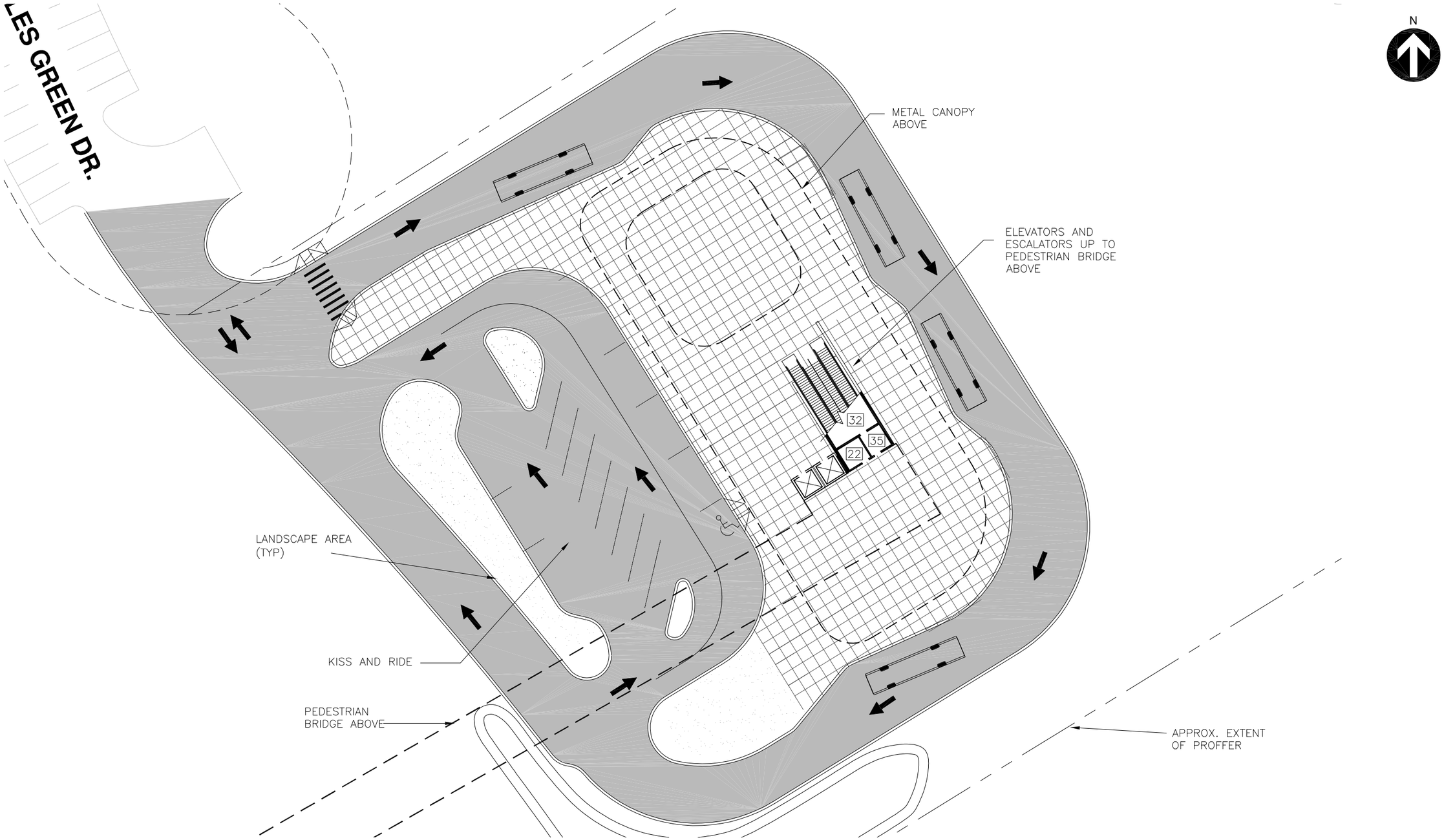
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DRAWN: GP 12-03 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION	CAPITAL TRANSIT CONSULTANTS
CHECKED: DATE			SUBMITTED Diana C. Mendes PROJECT MANAGER
APPROVED: DATE			FINAL GENERAL PLANS JULY 2004

SITE PLAN
ROUTE 28 STATION

SCALE: 1"=100' (10 0 10 20)

DRAWING NO.: GPN-A-100-R28 039

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1 NORTH ENTRY PLAN

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: GP 12-03 DATE
DRAWN: GP 12-03 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

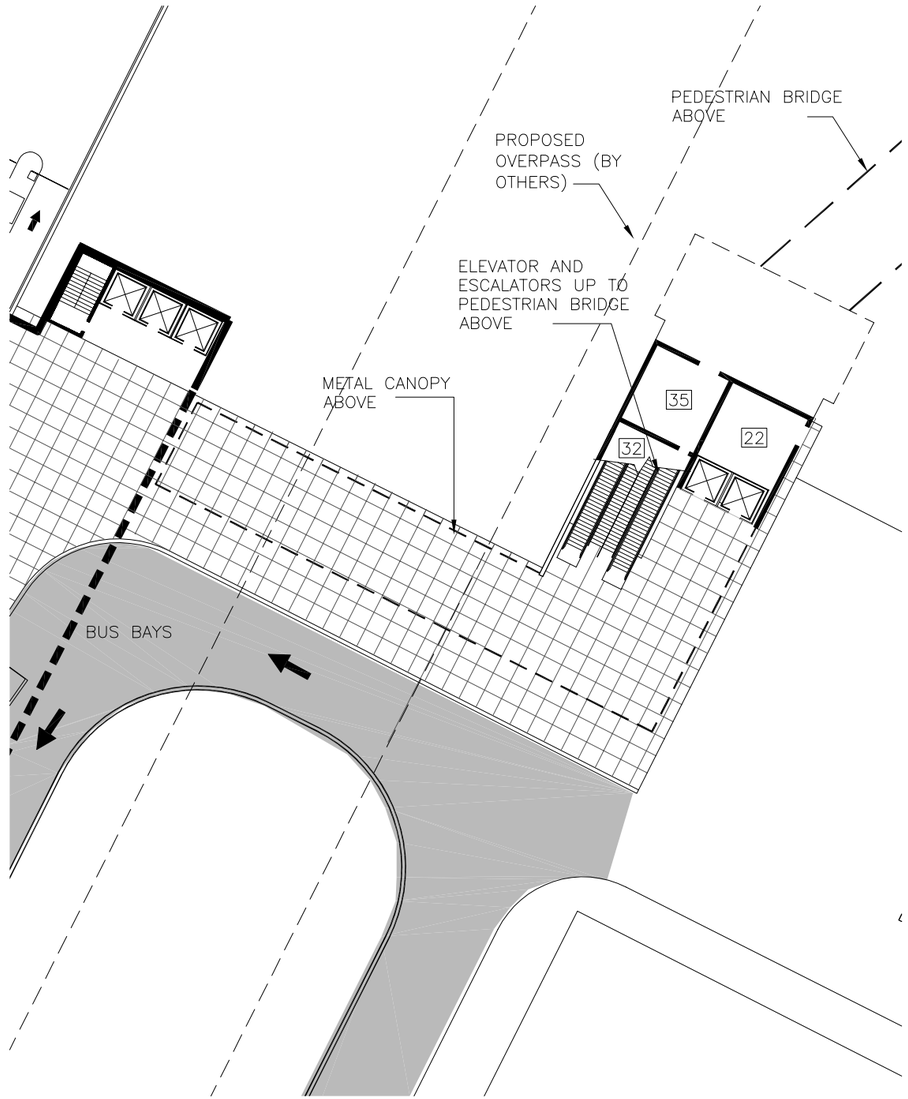
NORTH ENTRY PLAN
ROUTE 28 STATION

SCALE: 1"=40' 0 10 20 40

DRAWING NO.: GPN-A-101-R28

040

\\D2psvr02\CTC CAD\002_dulles\FEIS GenPlans 06-04\Facilities\Rt-28\RT-28-north & south entry plans.dwg, N-Half size, 07/30/04 03:58:08 PM, lbiebeleN



2 SOUTH ENTRY PLAN

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: GP 12-03 DATE
DRAWN: GP 12-03 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

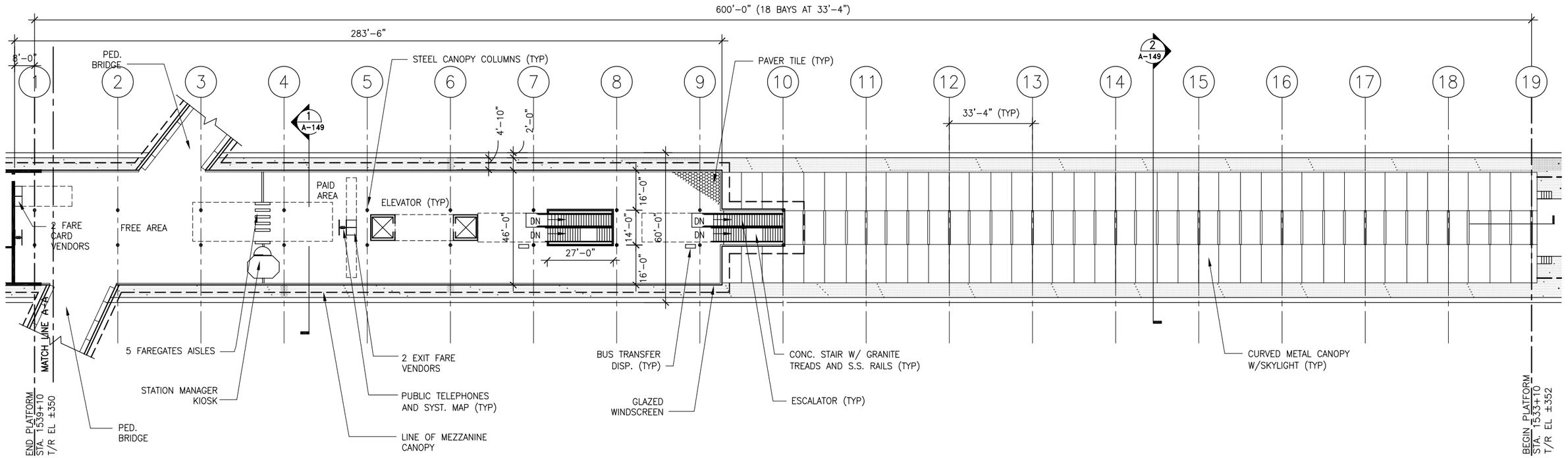
SOUTH ENTRY PLAN
ROUTE 28 STATION

SCALE: 1"=40' 0 10 20 40

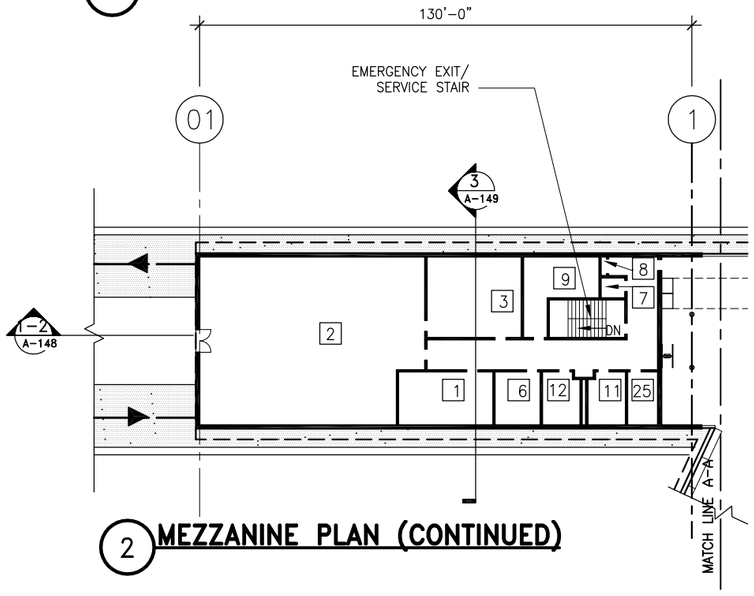
DRAWING NO.: GPN-A-102-R28

041

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1 MEZZANINE PLAN



2 MEZZANINE PLAN (CONTINUED)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

N

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02	REFERENCE DRAWINGS	REVISIONS
DRAWN: B. LOANAG 3-15-02	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

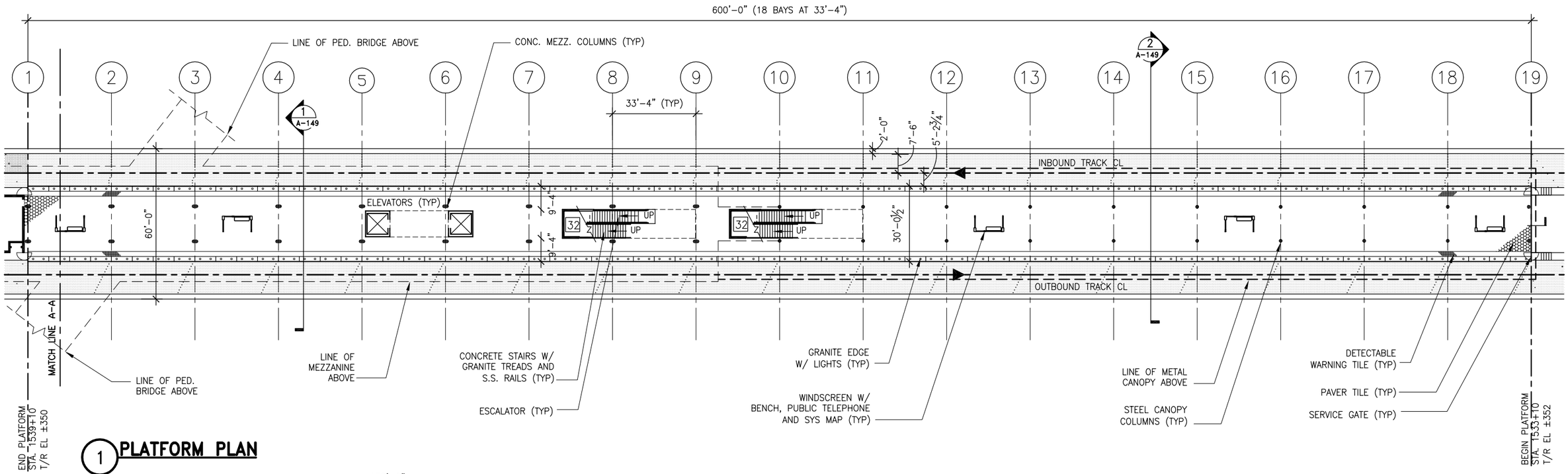
MEZZANINE PLAN
ROUTE 28 STATION

SCALE: 1"=20' (10 0 10 20)

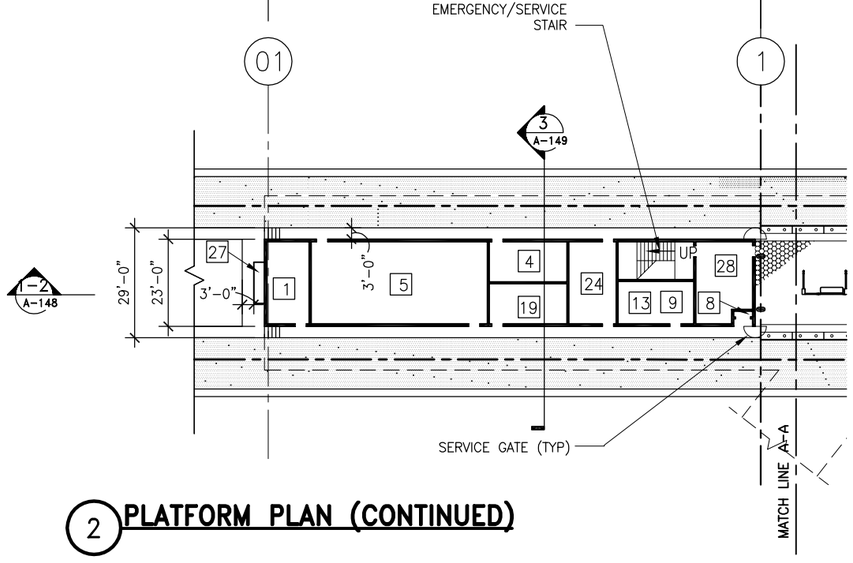
DRAWING NO.: GPN-A-200-R28

042

\\D2psvr02\CTC CAD\002_dulles\FEIS GenPlans 06-04\Facilities\Rt-28\GPN-A-200-R28.dwg, MEZZANINE, 07/30/04 04:00:40 PM, tbiebeleN



1 PLATFORM PLAN



2 PLATFORM PLAN (CONTINUED)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02	REFERENCE DRAWINGS	REVISIONS
DRAWN: B. LIOANAG 3-15-02	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED:		
APPROVED:		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

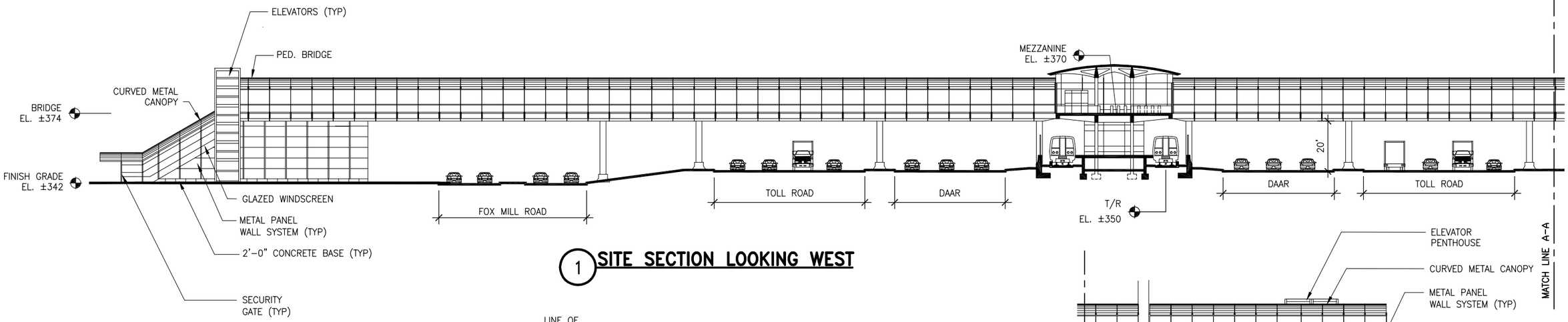
PLATFORM PLAN
ROUTE 28 STATION

SCALE: 1"=20' (10 0 10 20)

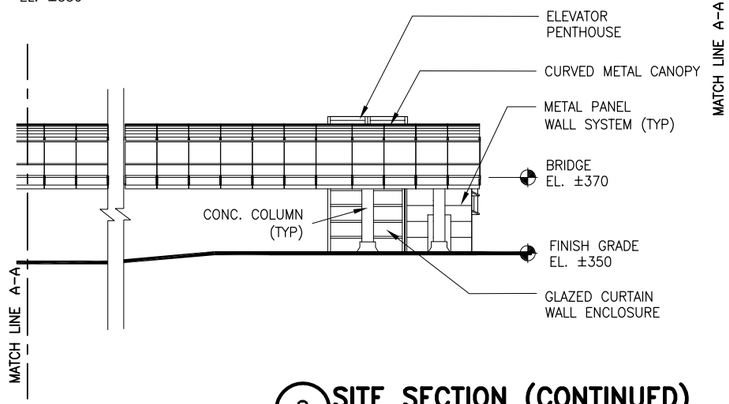
DRAWING NO.: GPN-A-201-R28

043

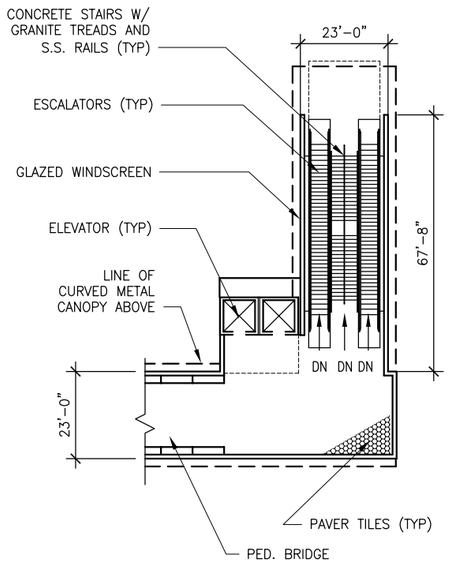
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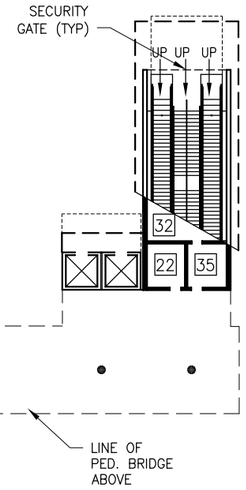
1 SITE SECTION LOOKING WEST



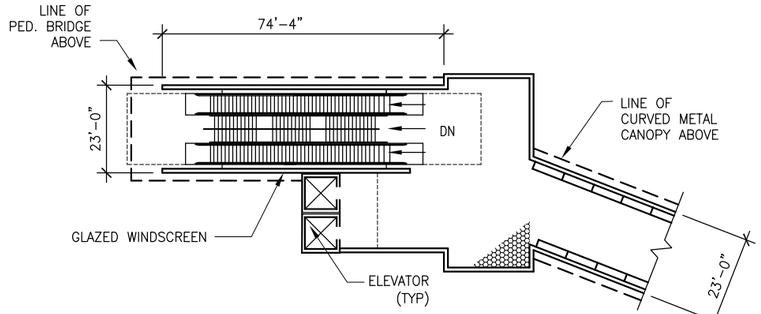
2 SITE SECTION (CONTINUED)



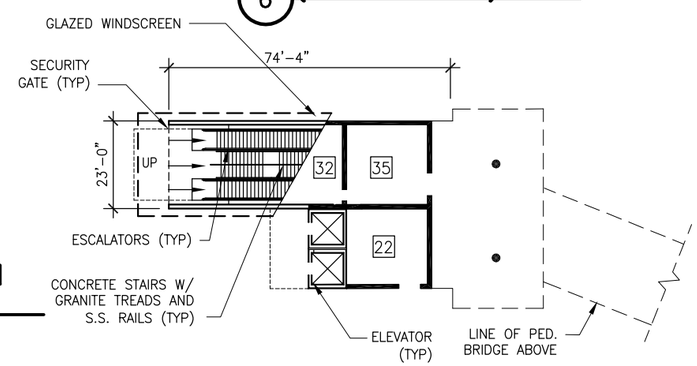
3 NORTH ENTRY PLAN (BRIDGE LEVEL)



4 NORTH ENTRY PLAN (GROUND LEVEL)



6 SOUTH ENTRY PLAN (BRIDGE LEVEL)



5 SOUTH ENTRY PLAN (GROUND LEVEL)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: B. LIOANAG 3-15-02 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

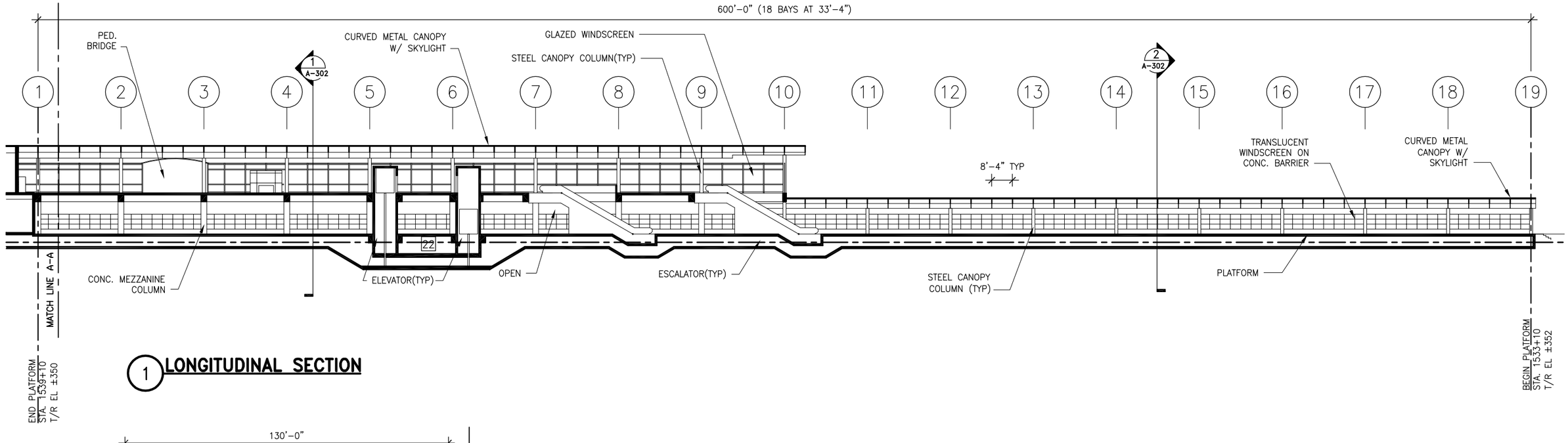
SITE SECTION / ENTRY PLANS
ROUTE 28 STATION

SCALE: 1"=20' (10 0 10 20)

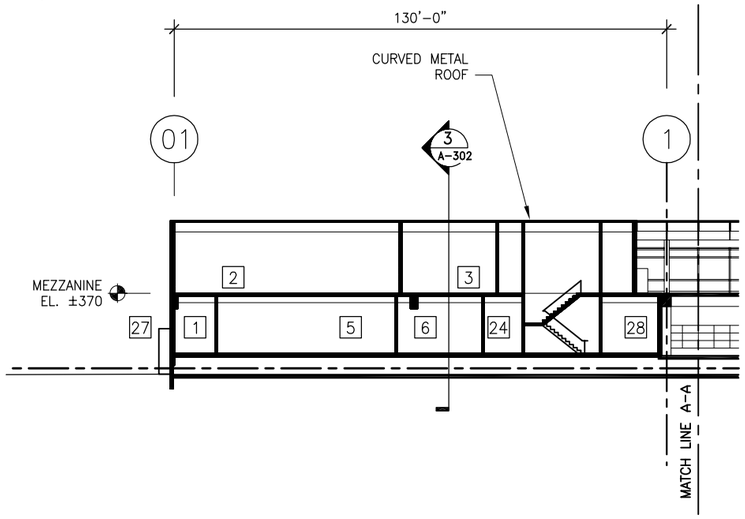
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1 LONGITUDINAL SECTION



2 LONGITUDINAL SECTION (CONTINUED)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02	REFERENCE DRAWINGS	REVISIONS
DRAWN: B. LOANAG 3-15-02	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

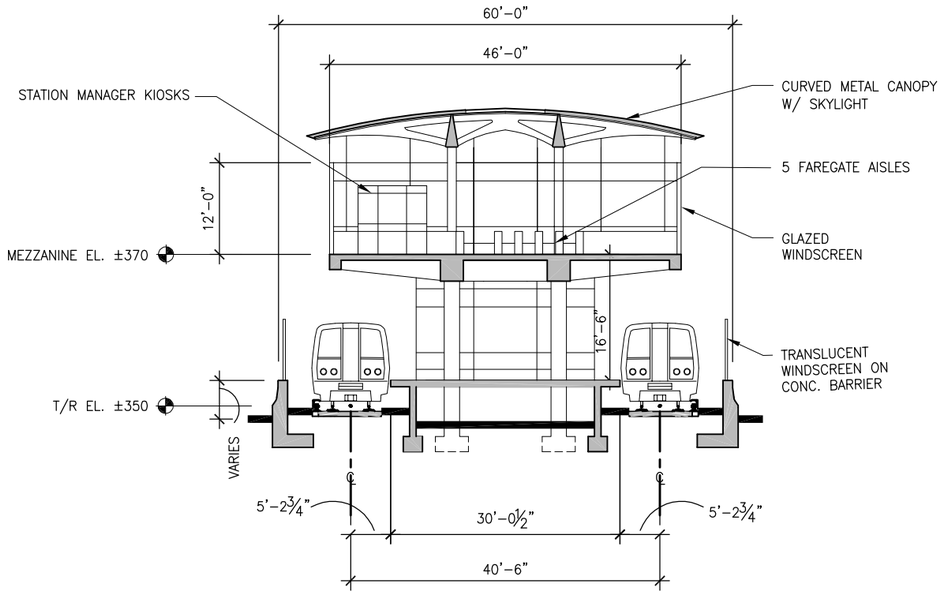
LONGITUDINAL SECTION
ROUTE 28 STATION

SCALE: 1"=20' (10 0 10 20)

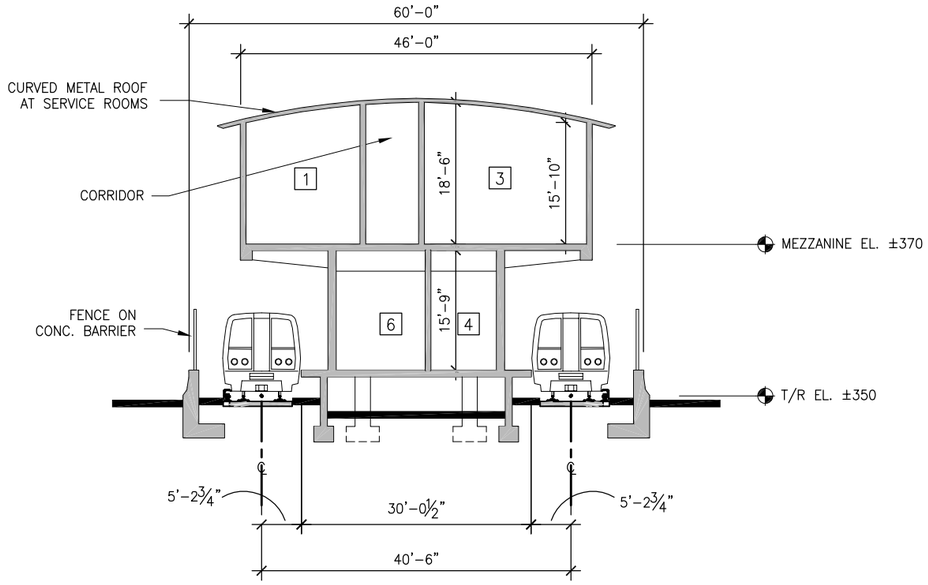
DRAWING NO.: GPN-A-301-R28

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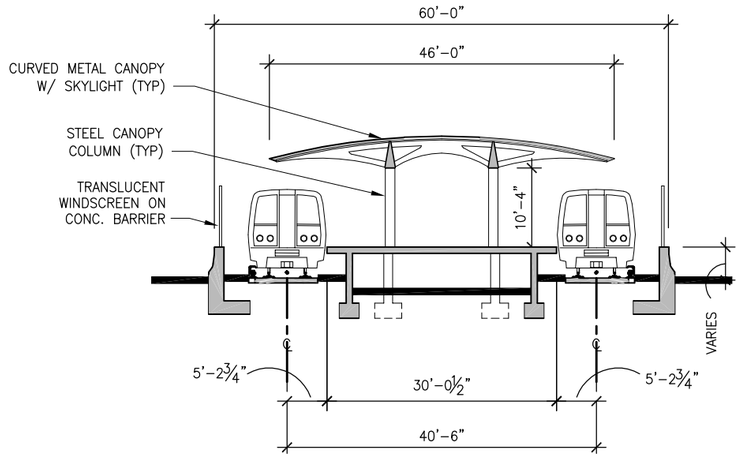
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1 MEZZANINE TRANSVERSE SECTION



3 SERVICE ROOMS TRANSVERSE SECTION



2 PLATFORM TRANSVERSE SECTION

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS,
SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: B. LOANAG 3-15-02 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS
SUBMITTED
Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

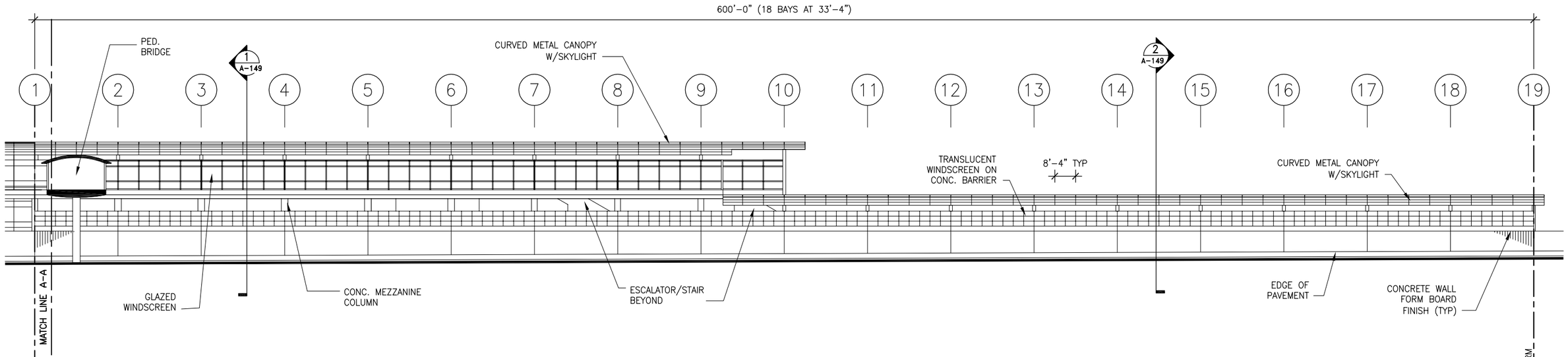
TRANSVERSE SECTIONS
ROUTE 28 STATION

SCALE: 1"=10' (5 0 5 10)

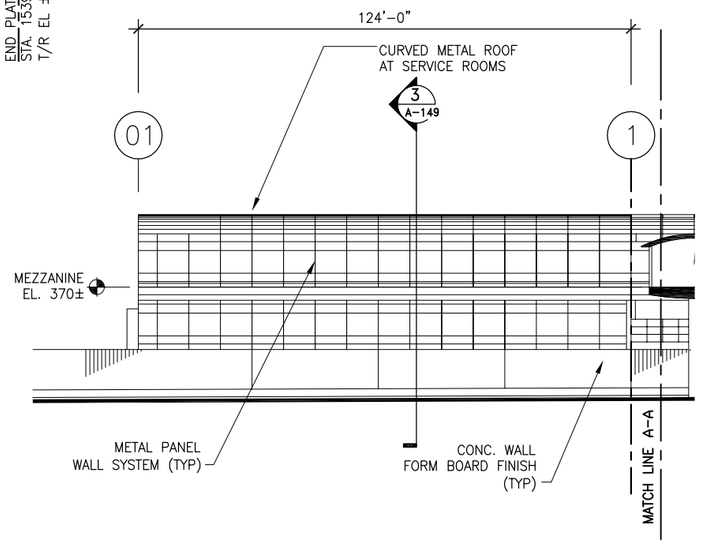
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1 SOUTH ELEVATION



2 SOUTH ELEVATION (CONTINUED)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02	REFERENCE DRAWINGS	REVISIONS
DRAWN: B. LIOANAG 3-15-02	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

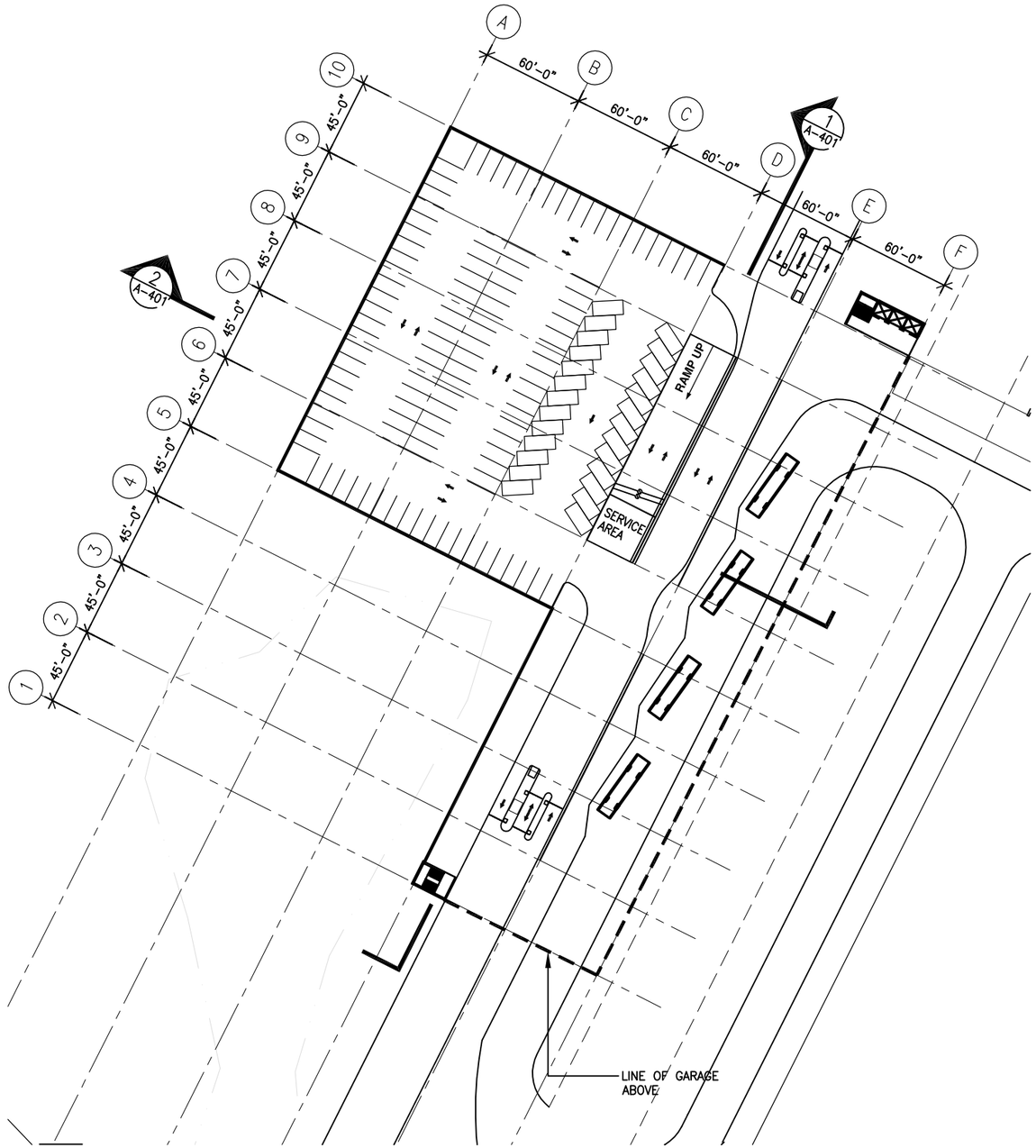
ELEVATIONS
ROUTE 28 STATION

SCALE: 1"=20' (10 0 10 20)

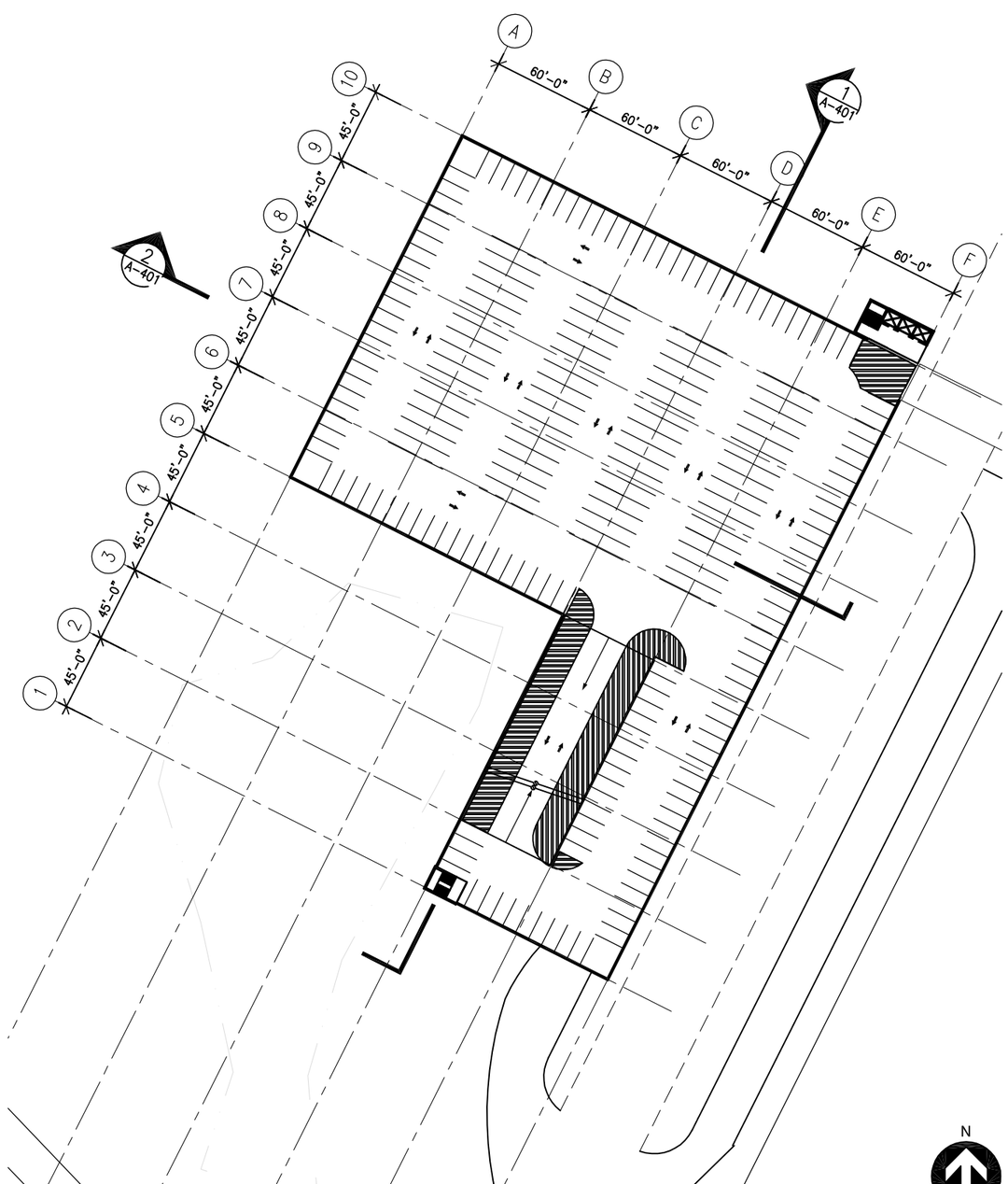
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1 GROUND LEVEL PLAN



2 TYPICAL LEVEL PLAN

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: S.SROUJI 11-03 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: GP 11-03 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

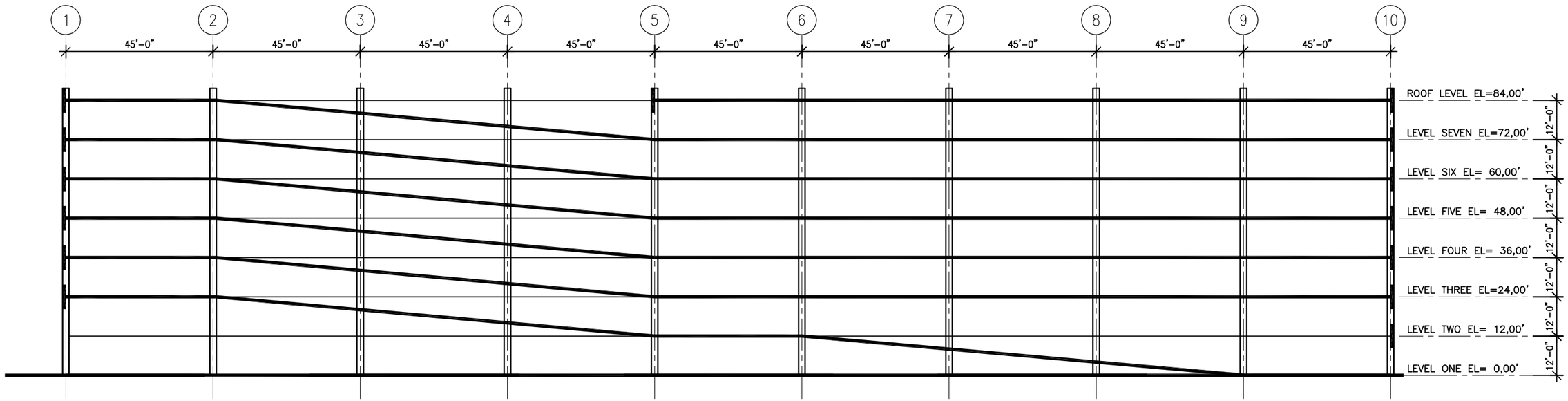
GROUND AND TYPICAL LEVEL PLAN
ROUTE 28 STATION PARKING GARAGE

SCALE: 1"=40' (20 0 20 40)

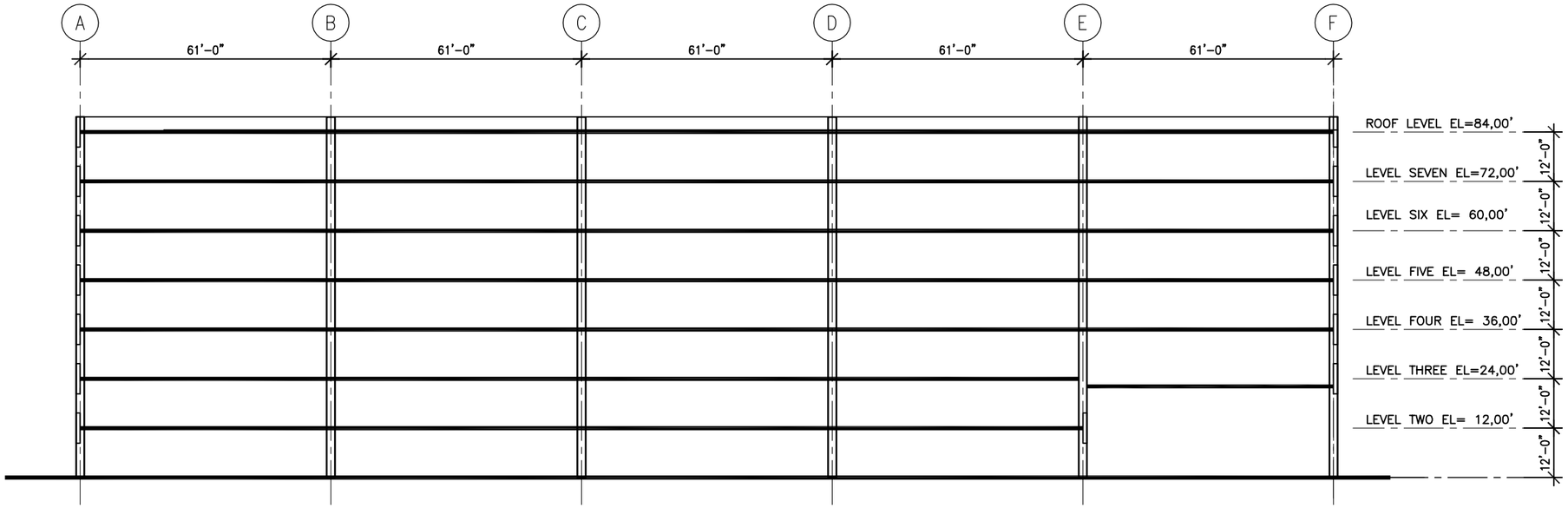
DRAWING NO.: GPN-A-400-R28

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1 / A–400 LONGITUDINAL SECTION



2 / A–400 CROSS SECTION

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: S. SROUJI 11–03 DATE	REFERENCE DRAWINGS: NUMBER / DESCRIPTION	REVISIONS: DATE / BY / DESCRIPTION
DRAWN: GP 12–03 DATE		
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

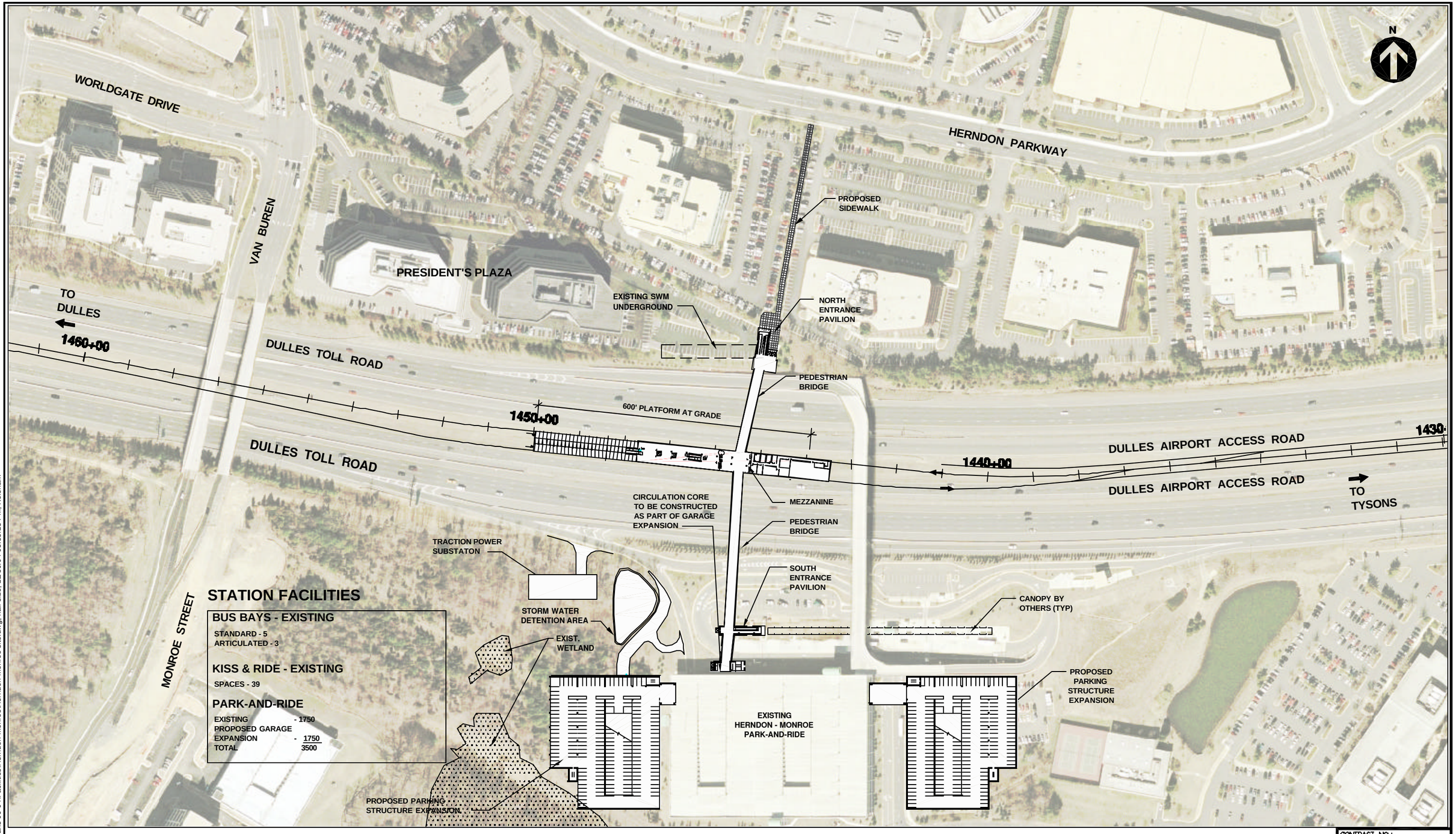
SECTIONS
ROUTE 28 STATION PARKING GARAGE

SCALE: 1/16"=1'–0" 4 0 4 8 12 16 20

DRAWING NO.: GPN–A–401–R28

049

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: GP	12-03 DATE	
DRAWN: GP	12-03 DATE	
CHECKED:	DATE	
APPROVED:	DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

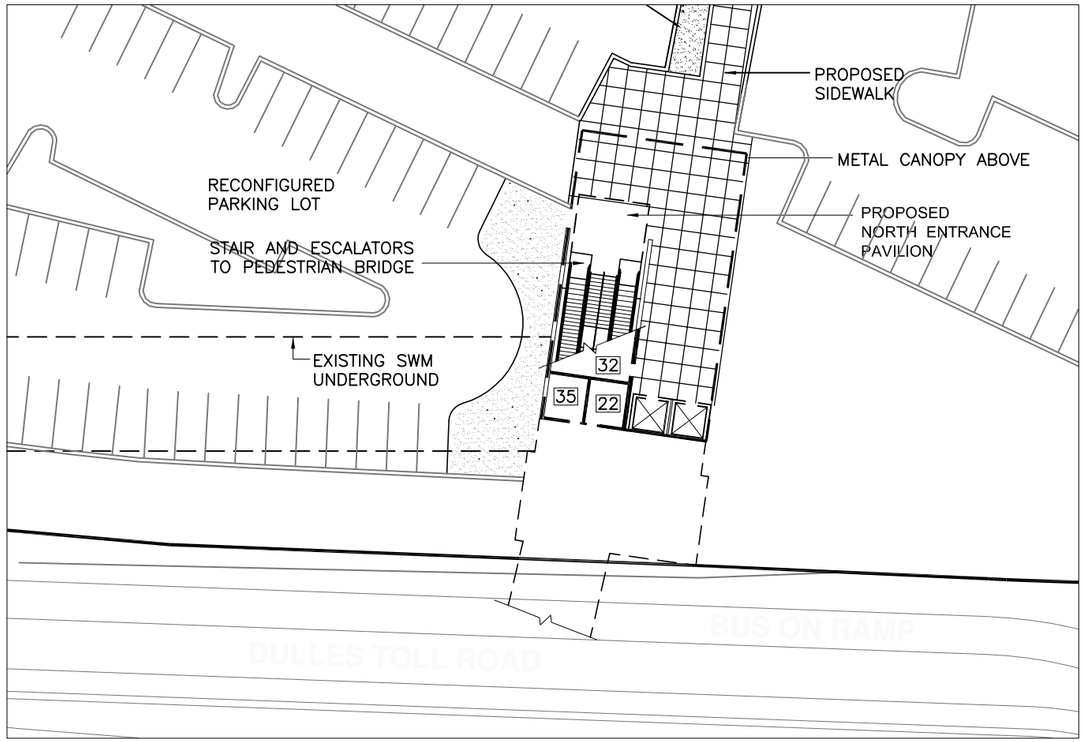
SITE PLAN
HERNDON MONROE STATION

SCALE: 1"=100' 50 0 50 100

DRAWING NO.: GPN-A-100-HM 050

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N



1 NORTH ENTRY PLAN

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: GP 12-03 DATE	REFERENCE DRAWINGS	REVISIONS	DULLES CORRIDOR RAPID TRANSIT PROJECT
DRAWN: GP 12-03 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION	CAPITAL TRANSIT CONSULTANTS
CHECKED: DATE			SUBMITTED Diana C. Mendes PROJECT MANAGER
APPROVED: DATE			FINAL GENERAL PLANS JULY 2004

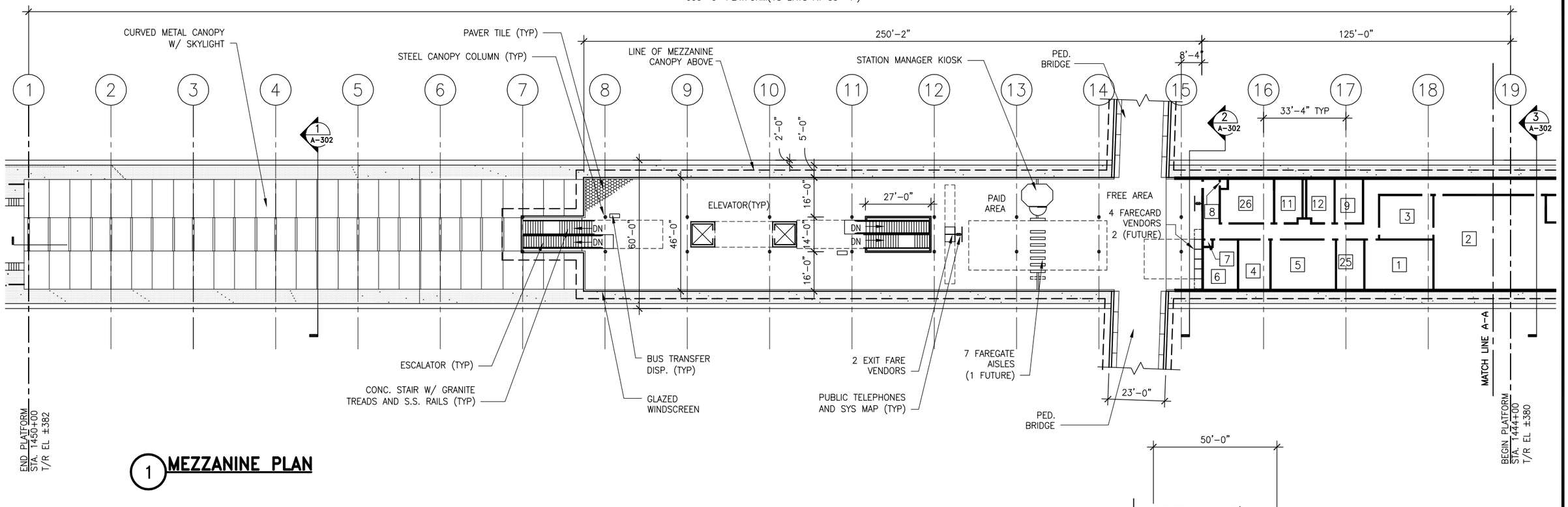
NORTH STATION ENTRY PLAN
HERNDON MONROE STATION

SCALE: 1"=40' (0 10 20 40)

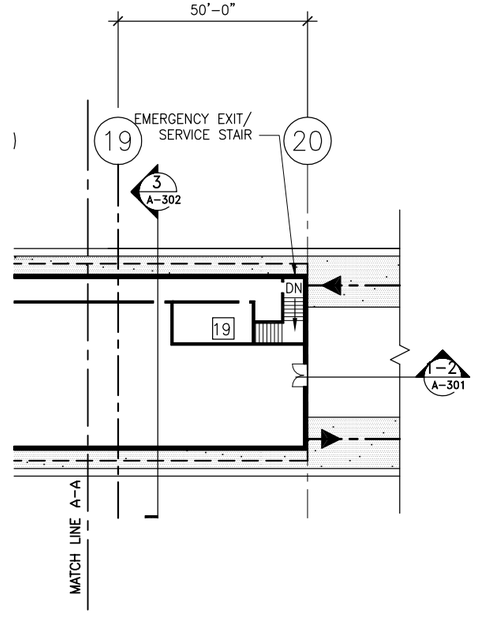
DRAWING NO.: GPN-A-101-HM

051

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1 MEZZANINE PLAN



2 MEZZANINE PLAN (CONTINUED)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: N. IBIEBELE 11-03 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: N. IBIEBELE 3-15-02 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

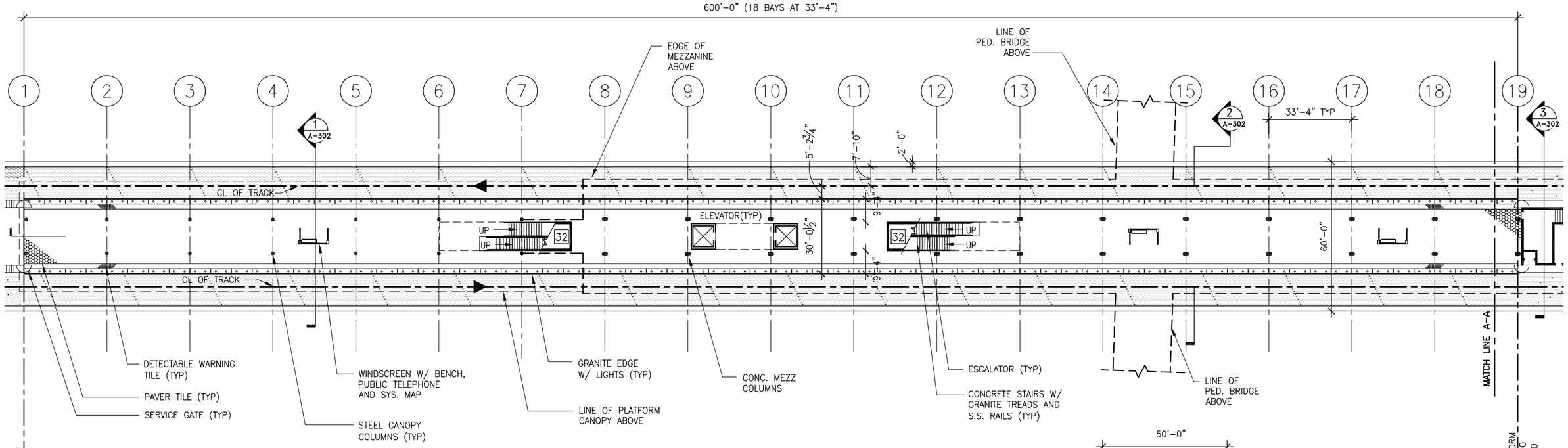
MEZZANINE PLAN
HERNDON MONROE STATION

SCALE: 1"=20' (10 0 10 20)

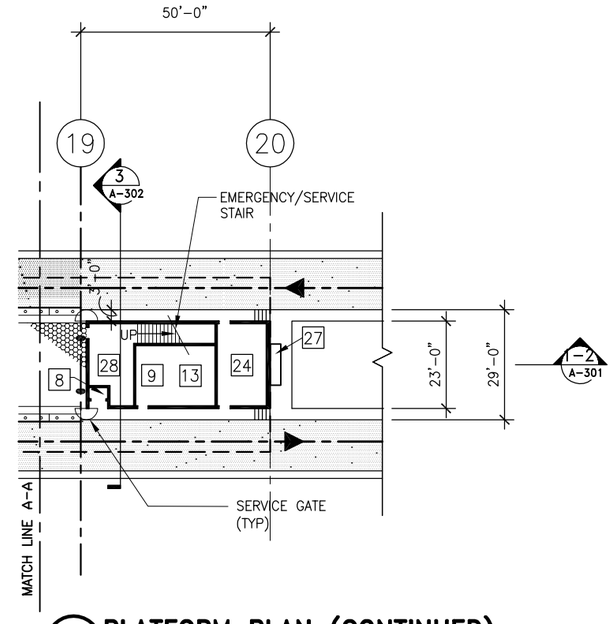
DRAWING NO.: GPN-A-200-HM

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1 PLATFORM PLAN



2 PLATFORM PLAN (CONTINUED)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: N. IBIEBELE 3-15-02 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: N. IBIEBELE 3-15-02 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

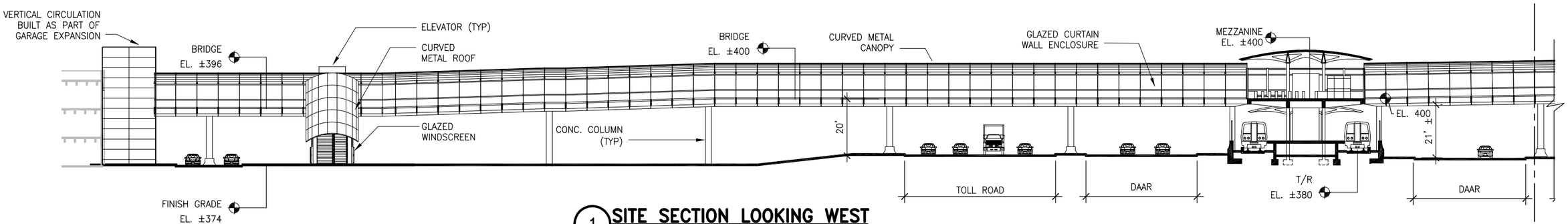
PLATFORM PLAN
HERNDON MONROE STATION

SCALE: 1"=20' (10 0 10 20)

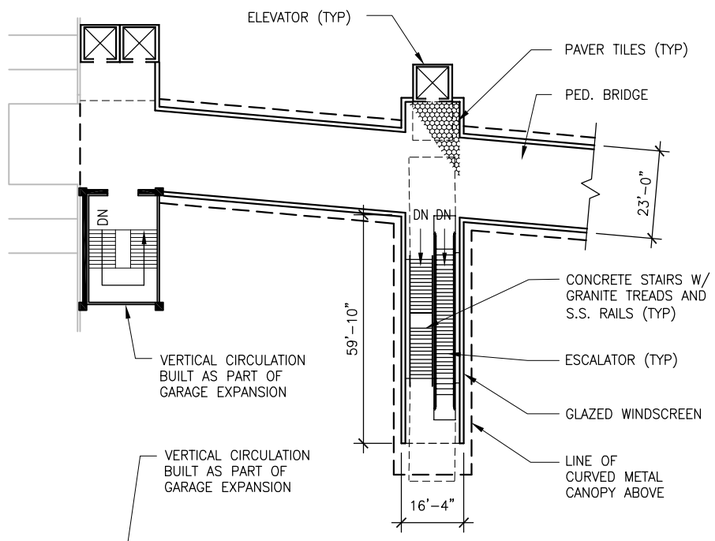
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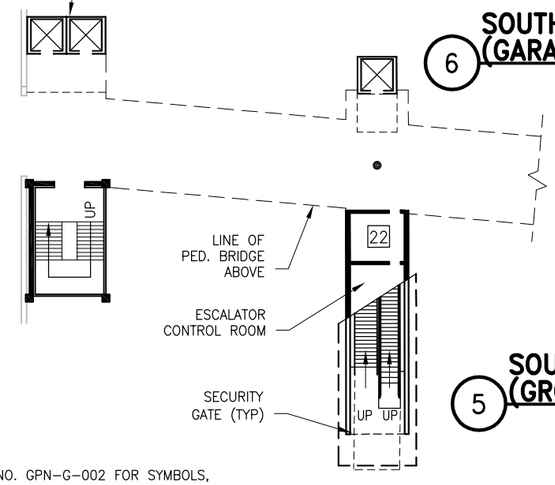
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1 SITE SECTION LOOKING WEST

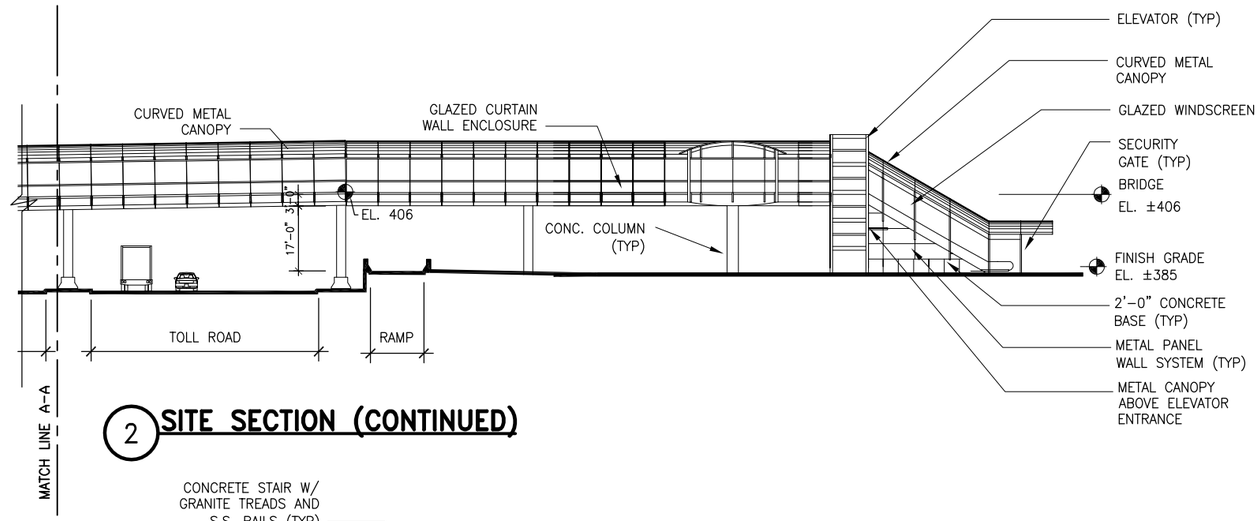


6 SOUTH ENTRY PLAN (GARAGE LEVEL)

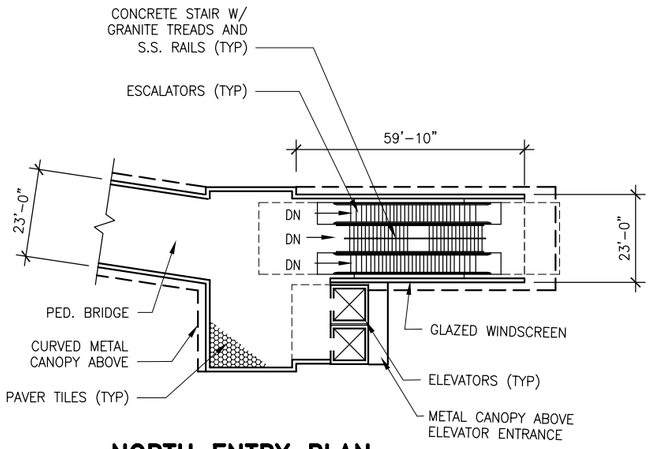


5 SOUTH ENTRY PLAN (GROUND LEVEL)

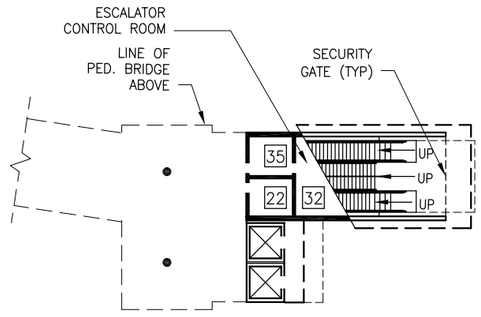
NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.



2 SITE SECTION (CONTINUED)



3 NORTH ENTRY PLAN (BRIDGE LEVEL)



4 NORTH ENTRY PLAN (GROUND LEVEL)

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: N. IBIEBELE 11-03 DATE	REFERENCE DRAWINGS	REVISIONS	DULLES CORRIDOR RAPID TRANSIT PROJECT
DRAWN: N. IBIEBELE 12-03 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION	CAPITAL TRANSIT CONSULTANTS
CHECKED: DATE			SUBMITTED Diana C. Mendes PROJECT MANAGER
APPROVED: DATE			FINAL GENERAL PLANS JULY 2004

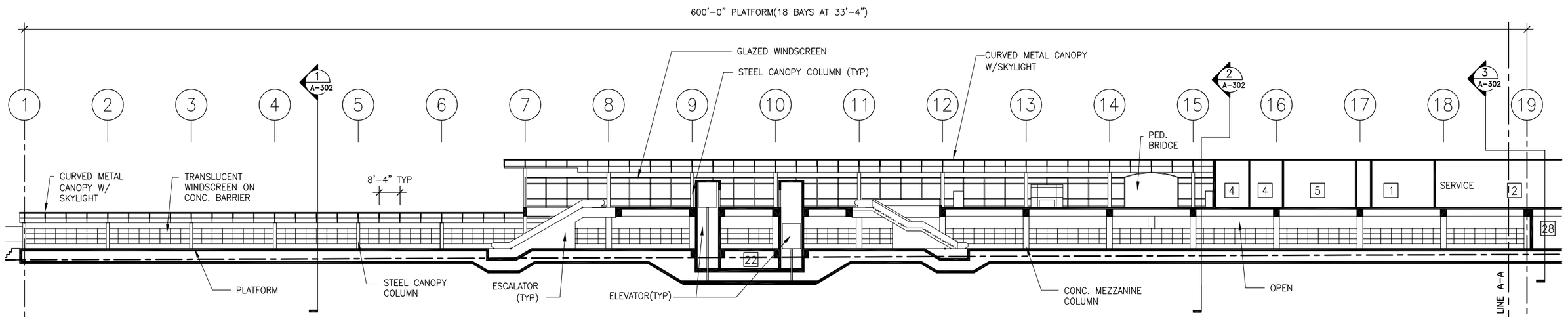
SITE SECTION / ENTRY PLANS
HERNDON MONROE STATION

SCALE: 1"=20' (10 0 10 20)

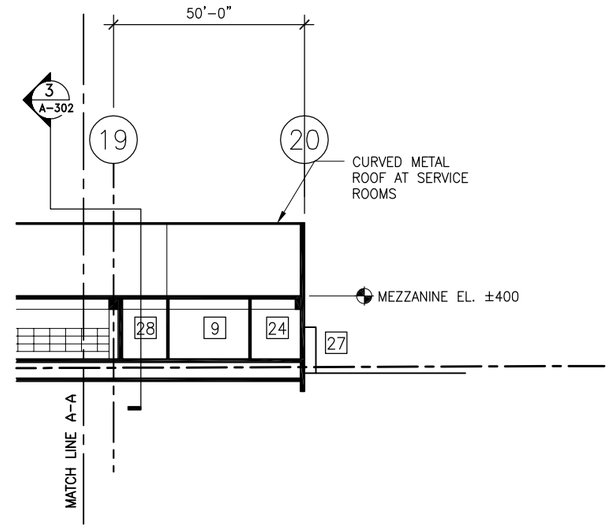
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054

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1 LONGITUDINAL SECTION



2 LONGITUDINAL SECTION (CONTINUED)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: N. IBIEBELE 11-03 DATE
DRAWN: N. IBIEBELE 12-03 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

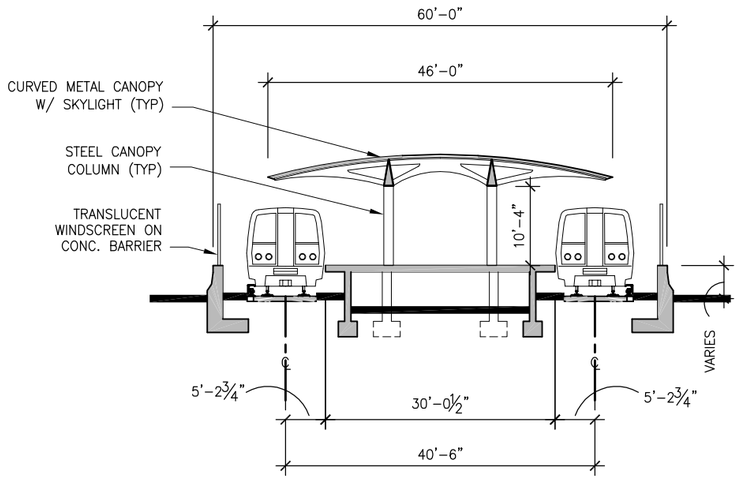
CAPITAL TRANSIT CONSULTANTS
SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

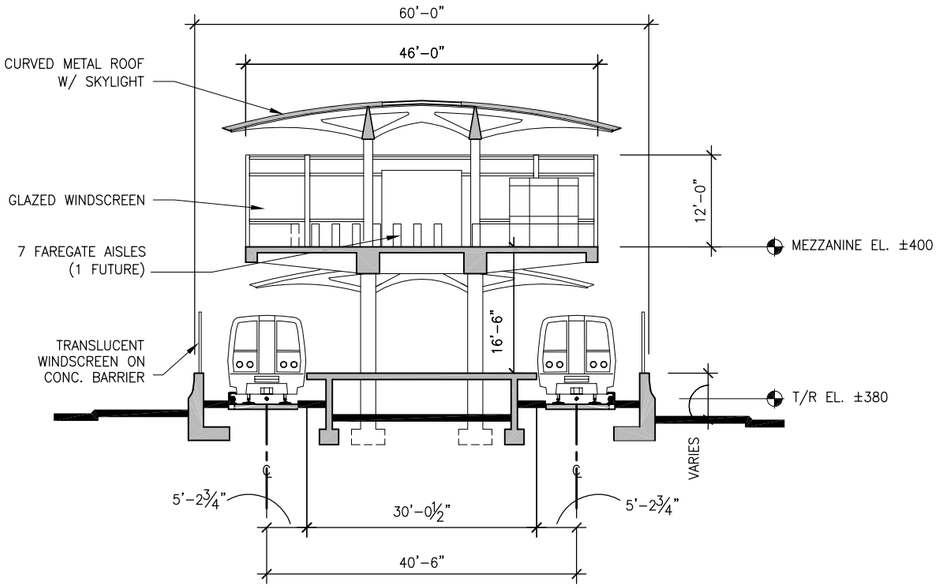
LONGITUDINAL SECTION
HERNDON MONROE STATION

SCALE: 1"=20' (10 0 10 20)
DRAWING NO.: GPN-A-301-HM
055

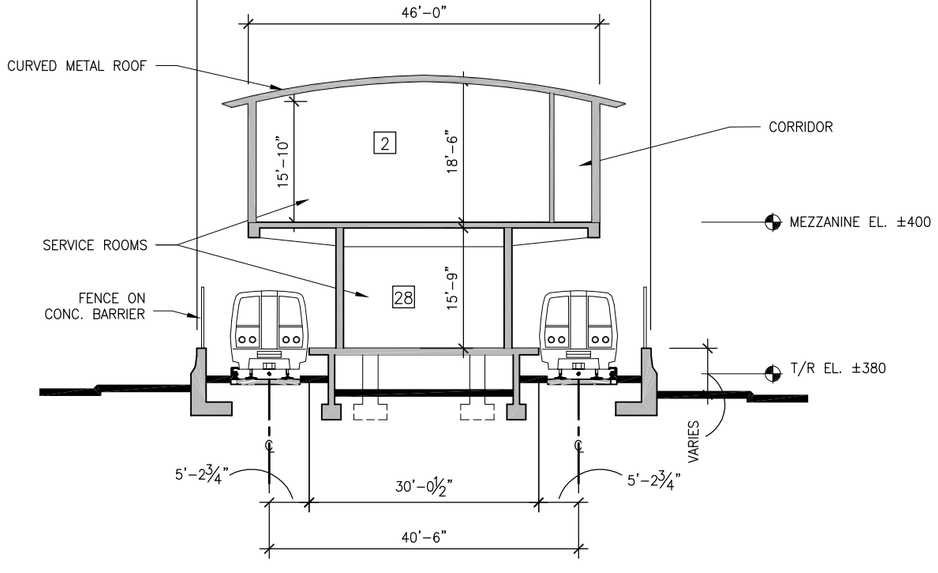
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1 PLATFORM TRANSVERSE SECTION



3 SERVICE ROOMS TRANSVERSE SECTION



2 MEZZANINE TRANSVERSE SECTION

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS,
SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02	REFERENCE DRAWINGS	REVISIONS
DRAWN: B. LIOANAG 3-15-02	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

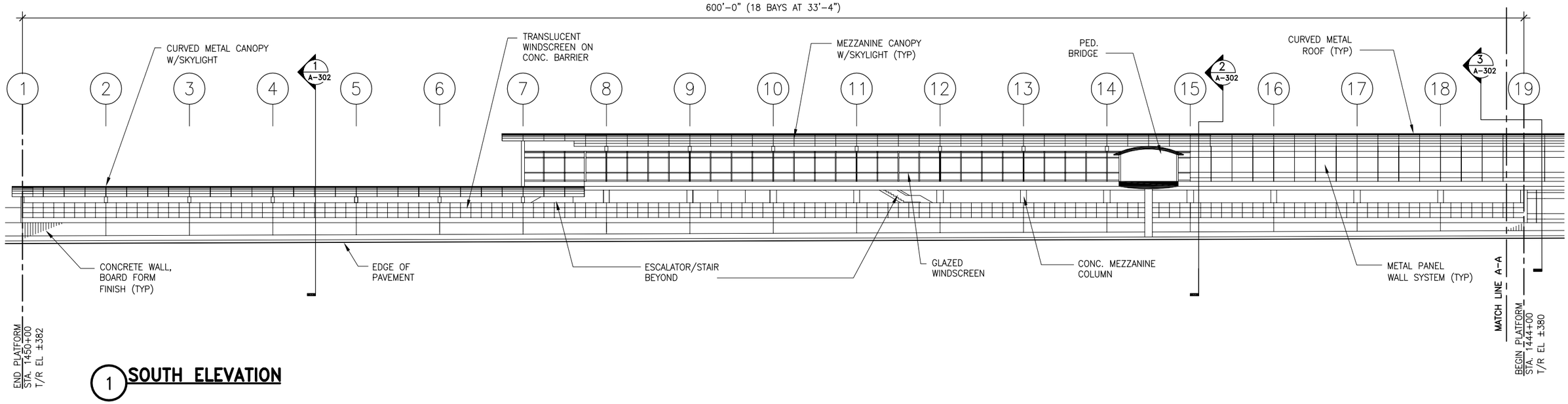
TRANSVERSE SECTIONS
HERNDON MONROE STATION

SCALE: 1"=10' (5 0 5 10)

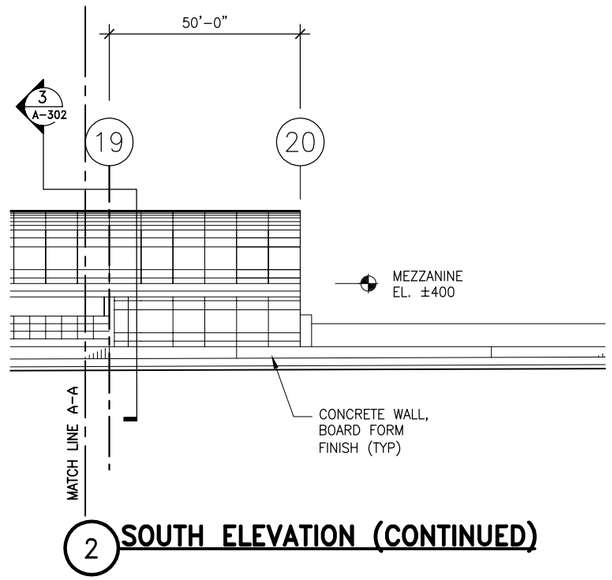
DRAWING NO.: GPN-A-302-HM

056

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1 SOUTH ELEVATION



2 SOUTH ELEVATION (CONTINUED)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: N. IBIEBELE 11-03 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: N. IBIEBELE 12-03 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

ELEVATIONS
HERNDON MONROE STATION

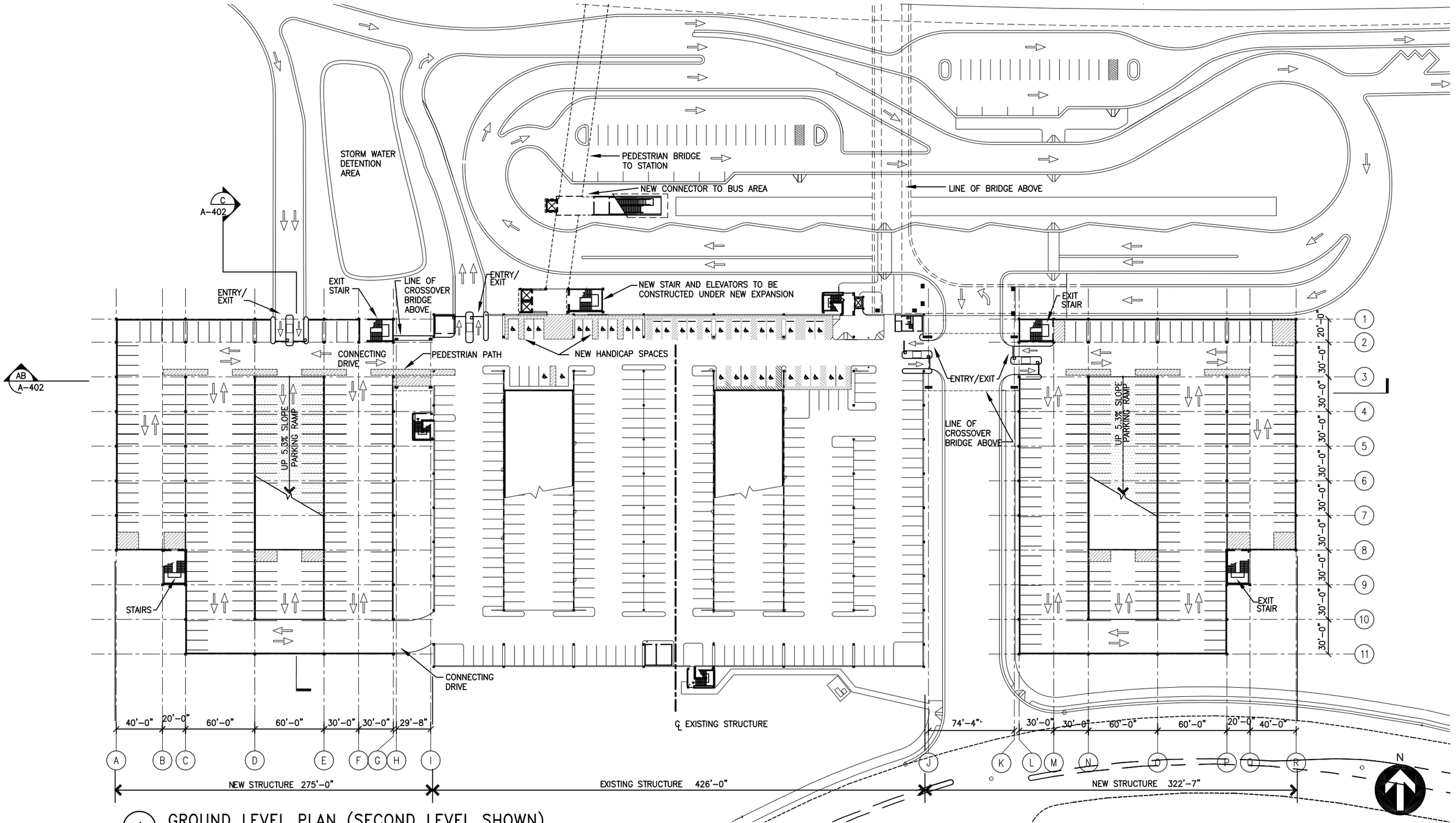
SCALE: 1"=20' (10 0 10 20)

DRAWING NO.: GPN-A-303-HM

057

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1 GROUND LEVEL PLAN (SECOND LEVEL SHOWN)

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: ROC/CRM 3-15-02 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: ROC/GP 3-15-02 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

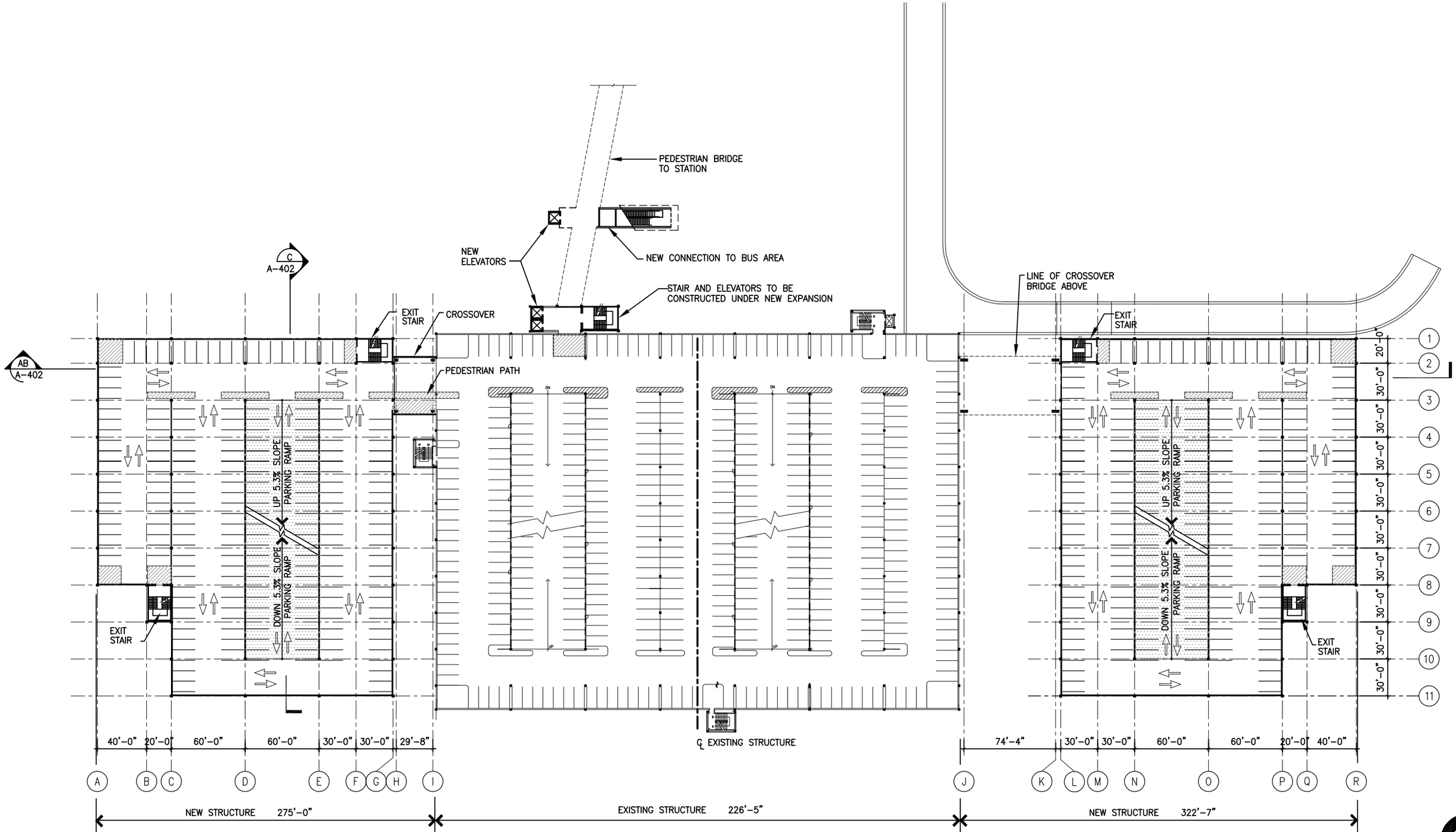
PARKING GARAGE GROUND LEVEL PLAN
HERNDON MONROE STATION

SCALE: 1"=40' (20 0 20 40)

DRAWING NO.: GPN-A-400-HM

058

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1 TYPICAL LEVEL PLAN

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: ROC/CRM 3-15-02 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: ROC/GP 3-15-02 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C. Mendes PROJECT MANAGER

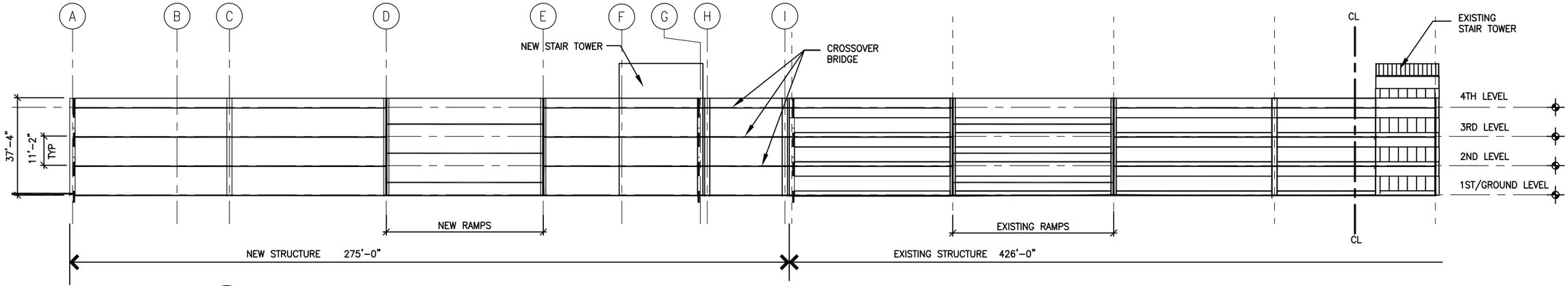
FINAL GENERAL PLANS
JULY 2004

PARKING GARAGE TYPICAL LEVEL PLAN
HERNDON MONROE STATION

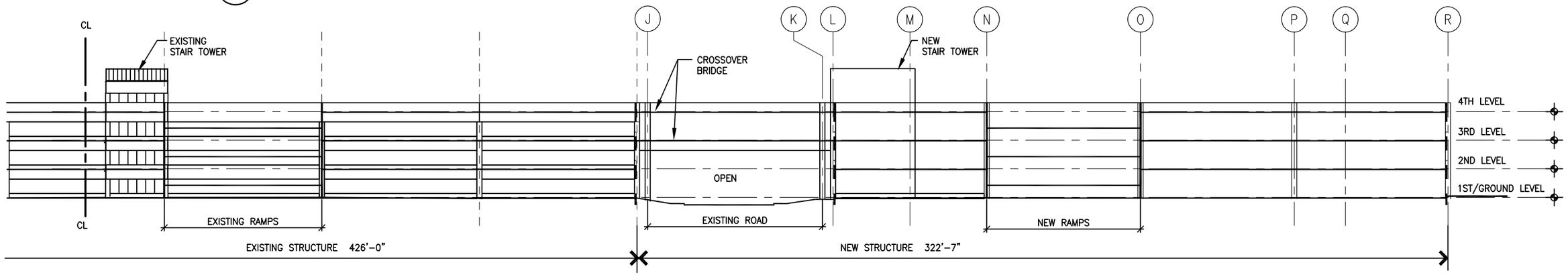
SCALE: 1"=40' 20 0 20 40

DRAWING NO.: GPN-A-401-HM

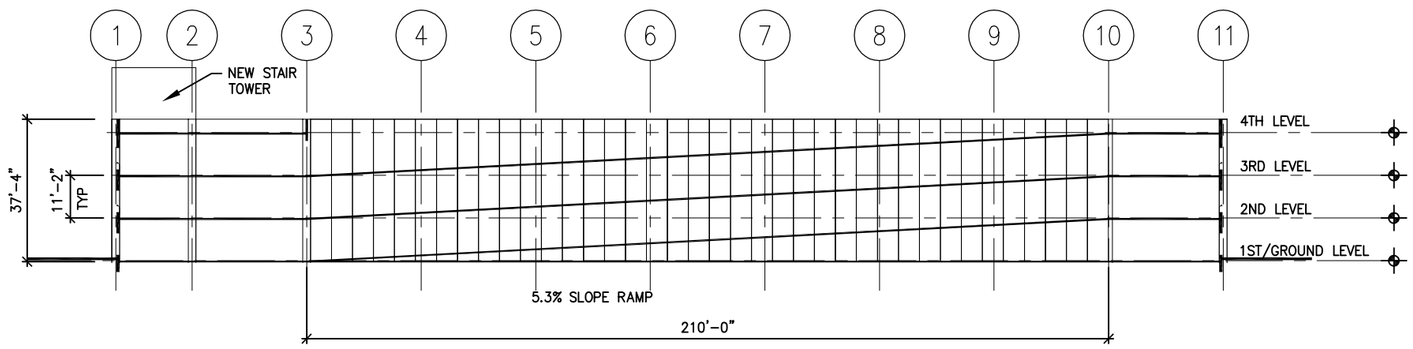
059



1 BUILDING SECTION A



2 BUILDING SECTION B



3 BUILDING SECTION C

N

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: ROC/CRM 3-15-02 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: ROC/GP 3-15-02 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

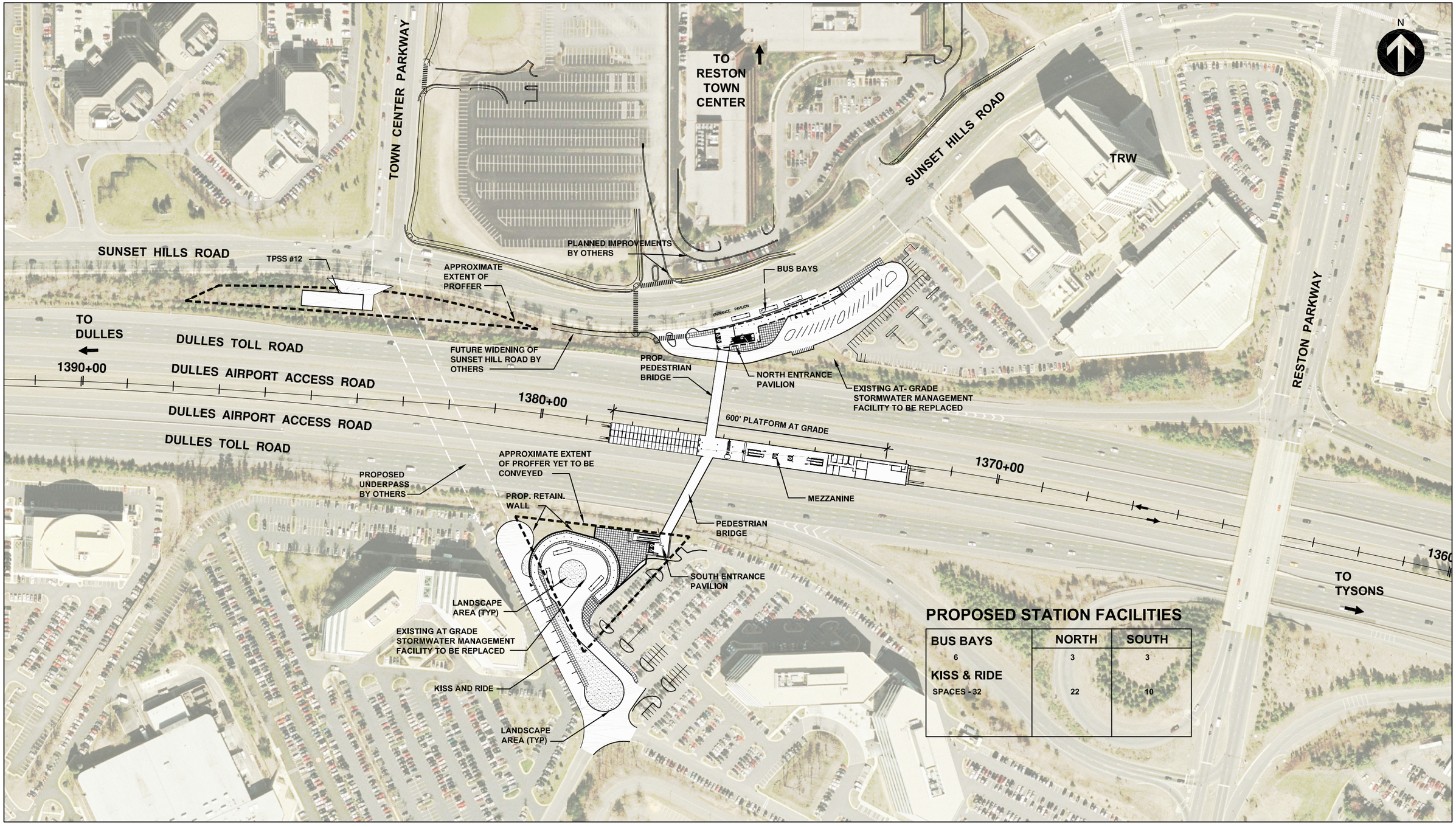
PARKING GARAGE BUILDING SECTIONS
HERNDON MONROE STATION

SCALE: 1"=20' (10 0 10 20)

DRAWING NO.: GPN-A-402-HM

060

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PROPOSED STATION FACILITIES

BUS BAYS	NORTH	SOUTH
6	3	3
KISS & RIDE		
SPACES - 32	22	10

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: GP	12–03 DATE	
DRAWN: GP	12–03 DATE	
CHECKED:	DATE	
APPROVED:	DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

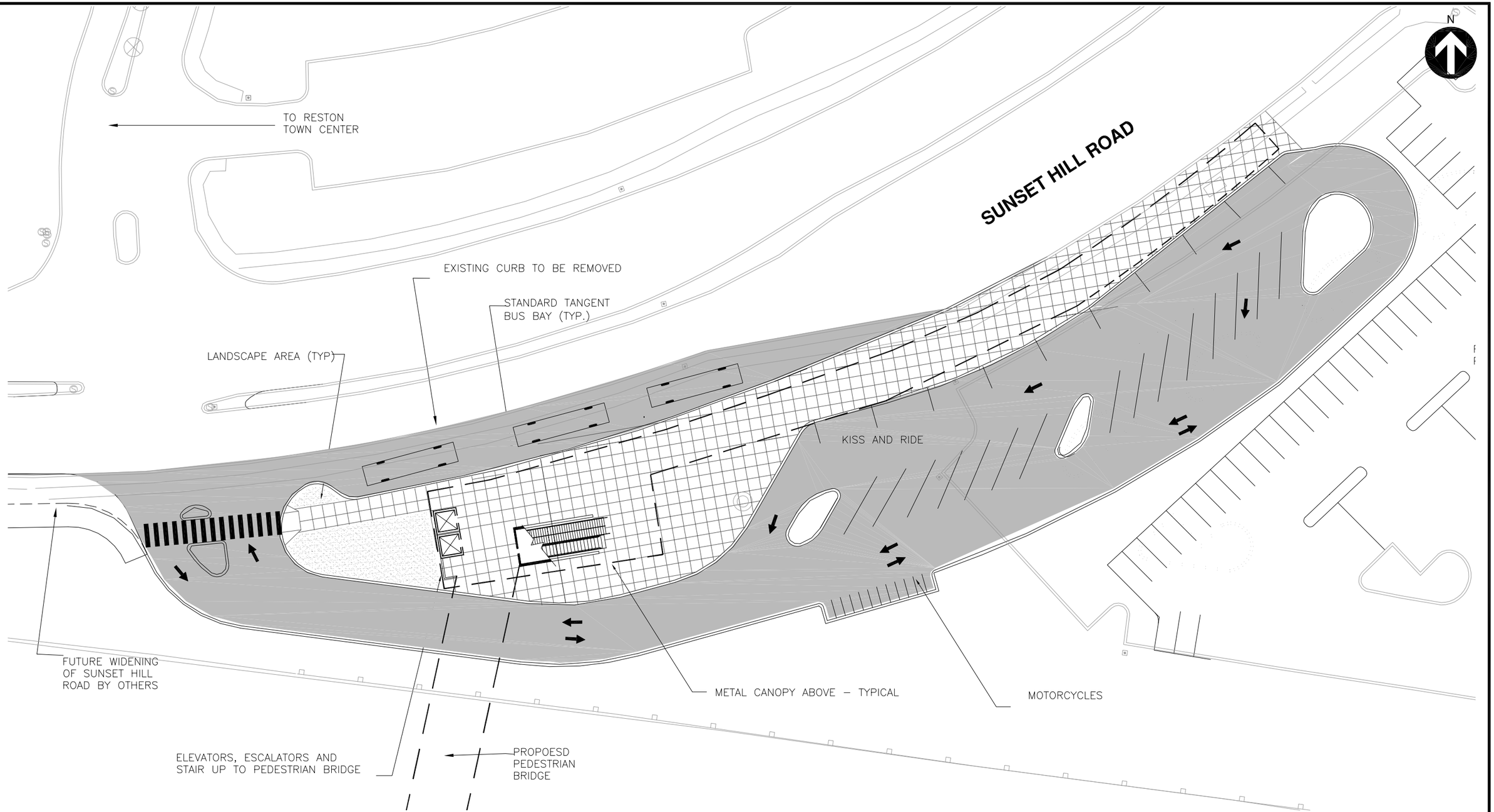
RESTON PARKWAY STATION
SITE PLAN

SCALE: 1"=100' (50 0 50 100)

DRAWING NO.: GPN–A–100–RP

061

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1 NORTH ENTRY PLAN

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: GP 12–03 DATE
DRAWN: GP 12–03 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

20 0 20 40

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

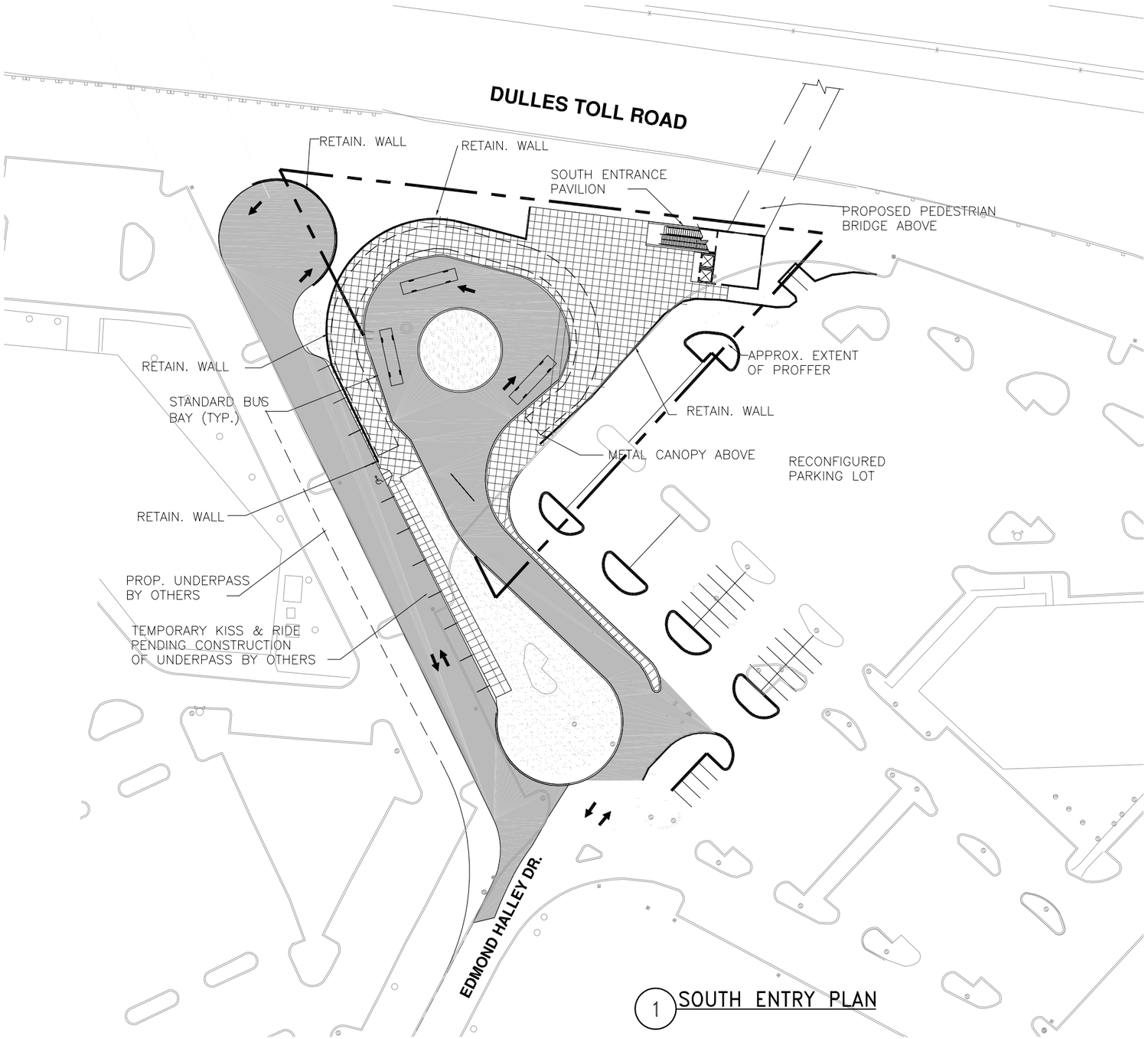
RESTON PARKWAY STATION
NORTH ENTRY PLAN

SCALE: 1"=40' 0 10 20 40

DRAWING NO.: GPN–A–101–RP

062

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1 SOUTH ENTRY PLAN

N

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: GP 12-03 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: GP 12-03 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
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DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

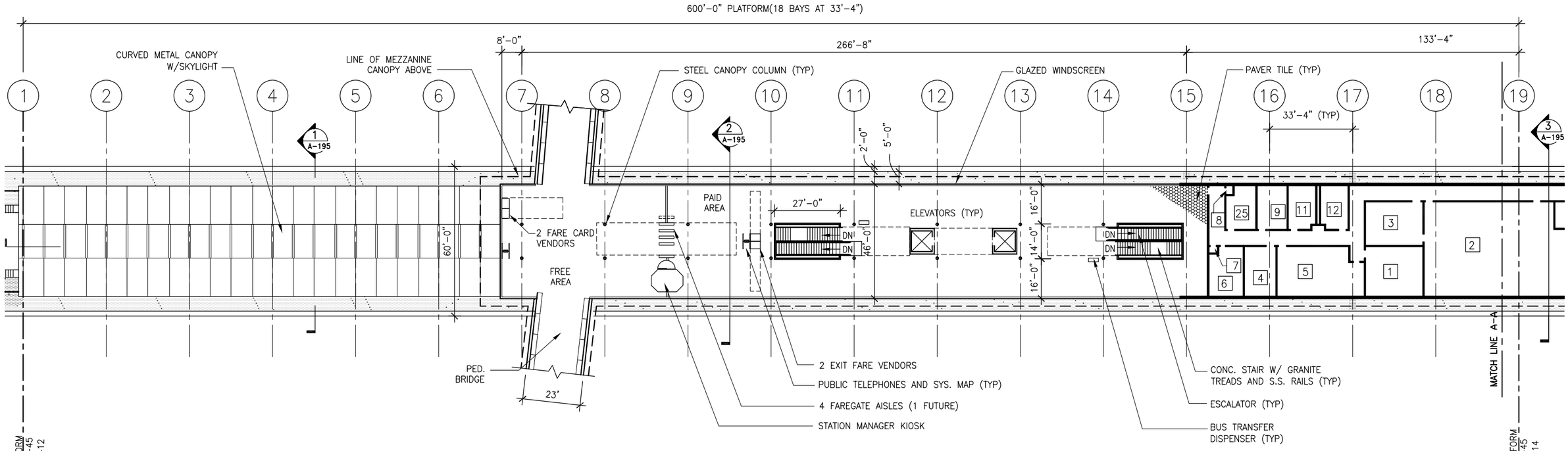
SOUTH ENTRY PLAN
RESTON PARKWAY STATION

SCALE: 1"=80' (0 20 40 60 80)

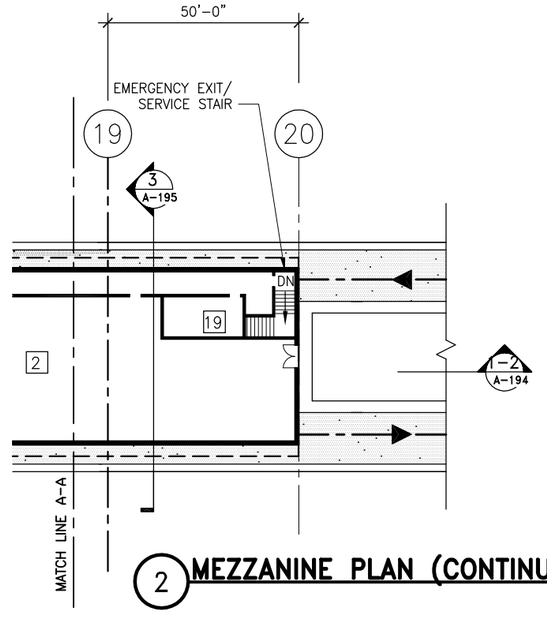
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063

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1 MEZZANINE PLAN



2 MEZZANINE PLAN (CONTINUED)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02	REFERENCE DRAWINGS	REVISIONS
DRAWN: B. LIOANAG 3-15-02	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

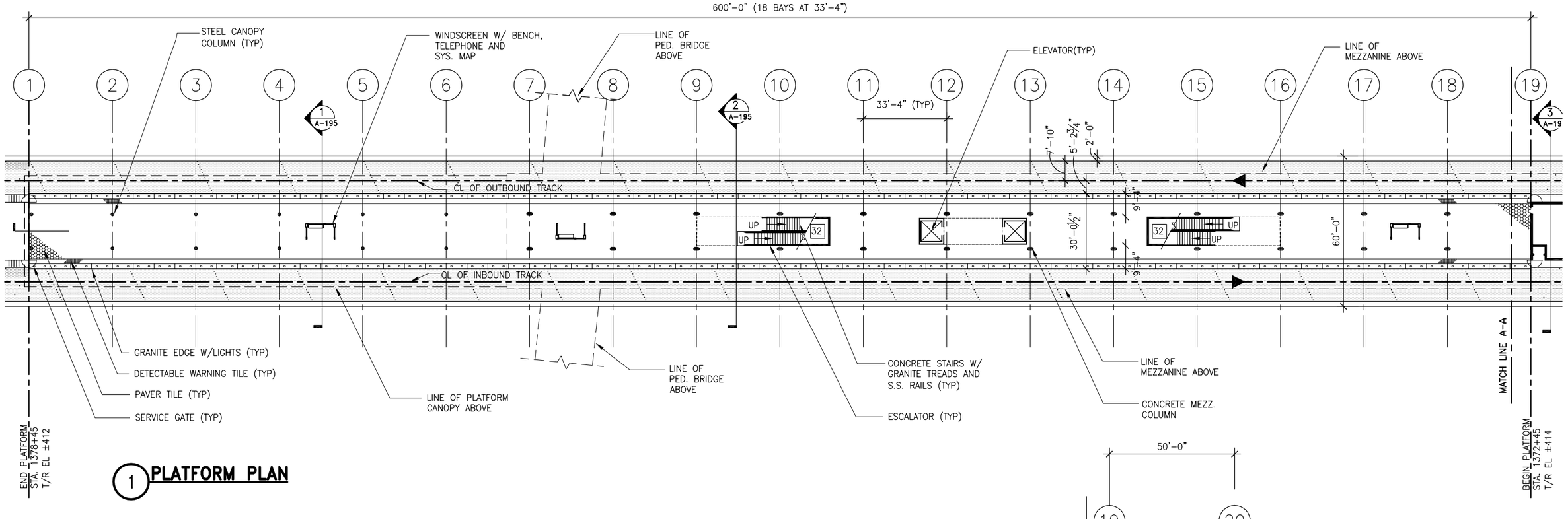
MEZZANINE PLAN
RESTON PARKWAY STATION

SCALE: 1"=20' (10 0 10 20)

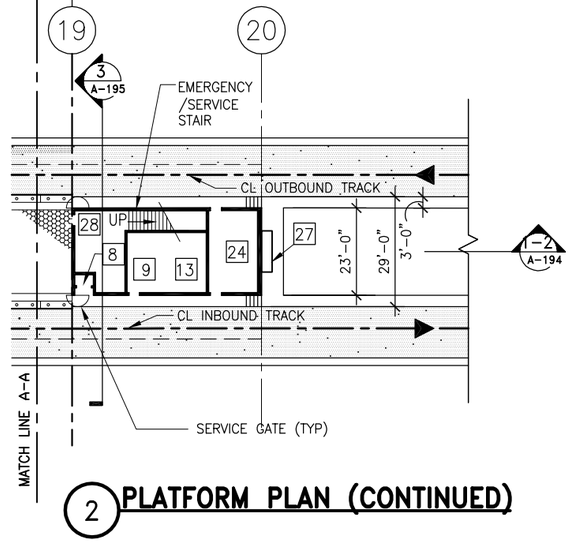
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1 PLATFORM PLAN



2 PLATFORM PLAN (CONTINUED)

N

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: B. LIOANAG 3-15-02 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
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DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS
SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

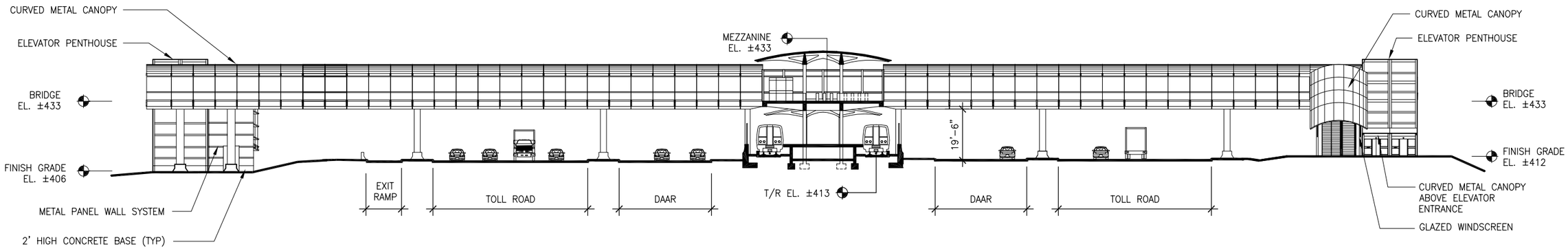
PLATFORM PLAN
RESTON PARKWAY STATION

SCALE: 1"=20' (10 0 10 20)

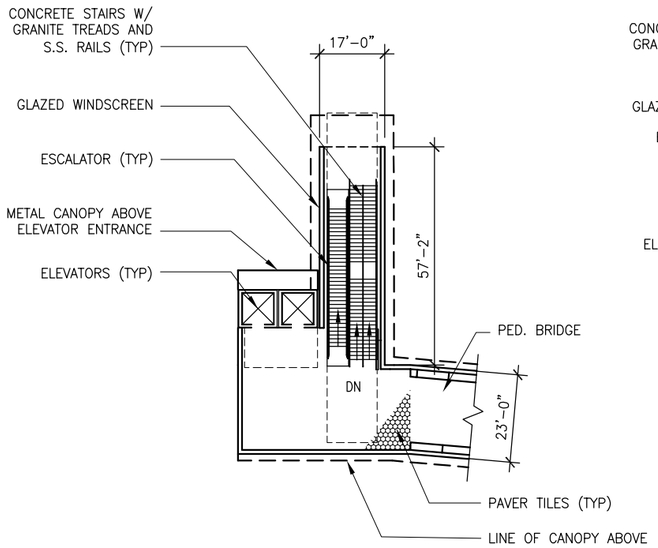
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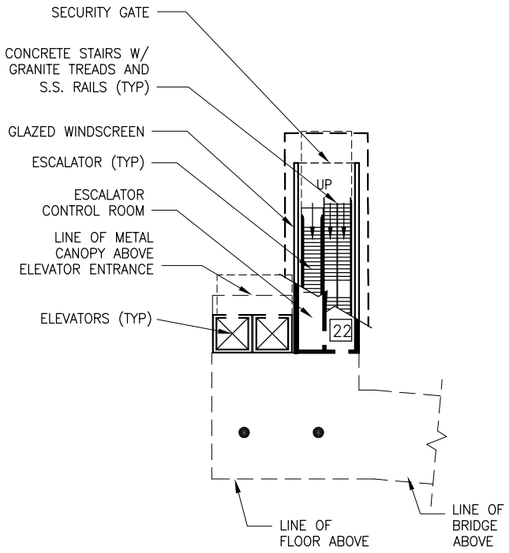
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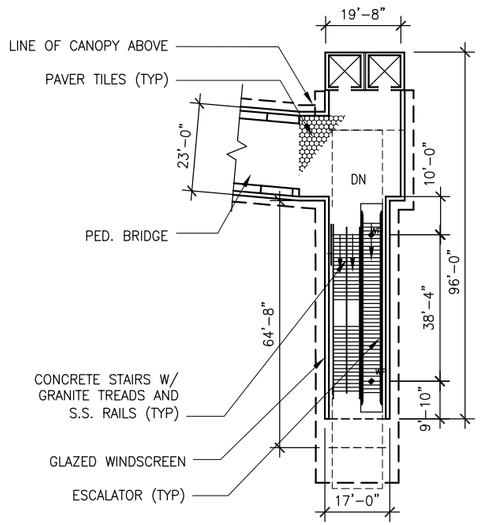
1 SITE SECTION LOOKING WEST



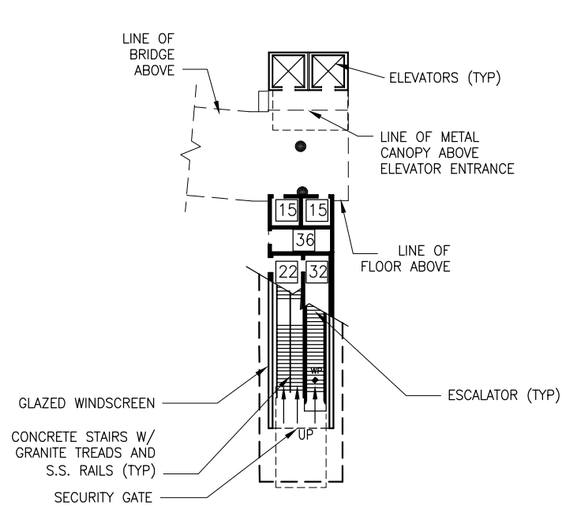
2 SOUTH ENTRY PLAN (BRIDGE LEVEL)



3 SOUTH ENTRY PLAN (GROUND LEVEL)



4 NORTH ENTRY PLAN (BRIDGE LEVEL)



5 NORTH ENTRY PLAN (GROUND LEVEL)

N

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02	DULLES CORRIDOR RAPID TRANSIT PROJECT	SITE SECTION / ENTRY PLANS RESTON PARKWAY STATION
DRAWN: B. LIOANAG 3-15-02	CAPITAL TRANSIT CONSULTANTS	FINAL GENERAL PLANS JULY 2004
CHECKED: DATE	SUBMITTED Diana C Mendes PROJECT MANAGER	SCALE: 1"=20' (10 0 10 20)
APPROVED: DATE		DRAWING NO.: GPN-A-300-RP
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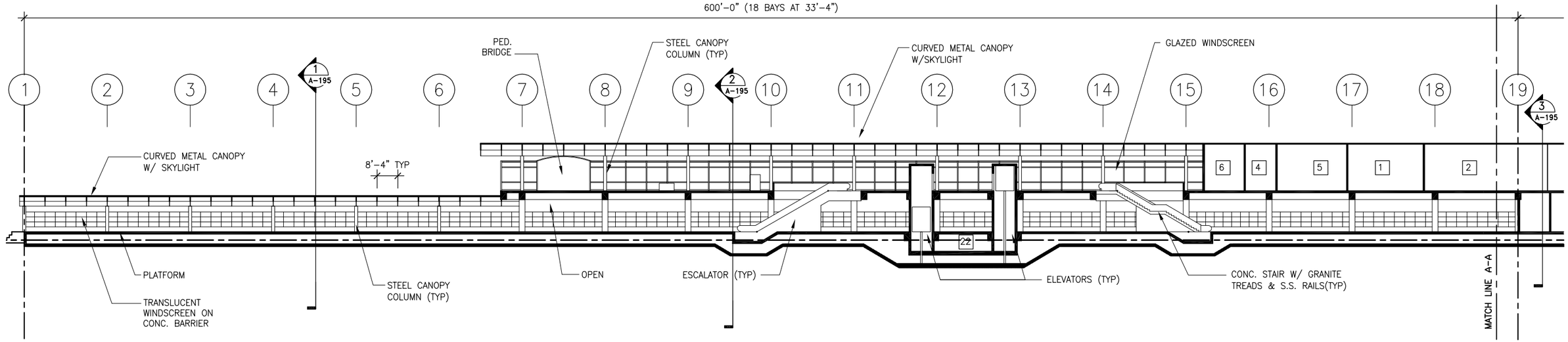
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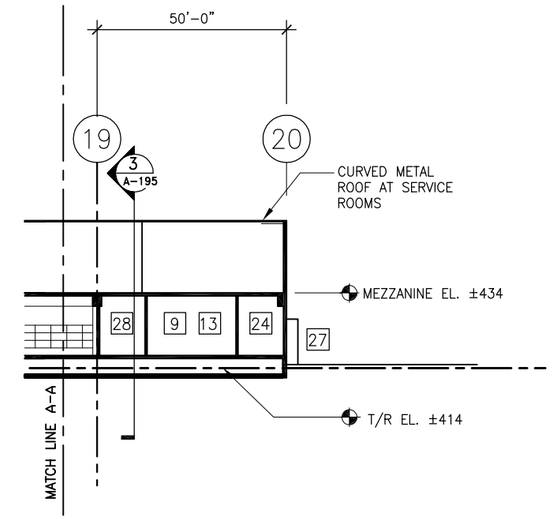
REVISIONS

DATE	BY	DESCRIPTION

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1 LONGITUDINAL SECTION



2 LONGITUDINAL SECTION (CONTINUED)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02 DATE
DRAWN: B. LIOANAG 3-15-02 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

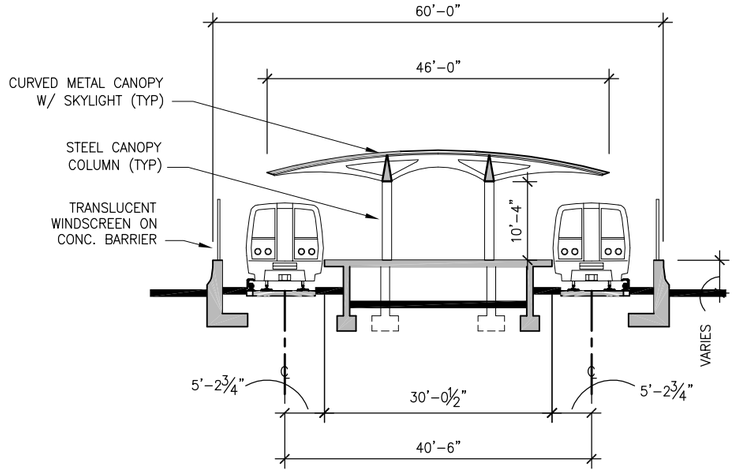
CAPITAL TRANSIT CONSULTANTS
SUBMITTED
Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

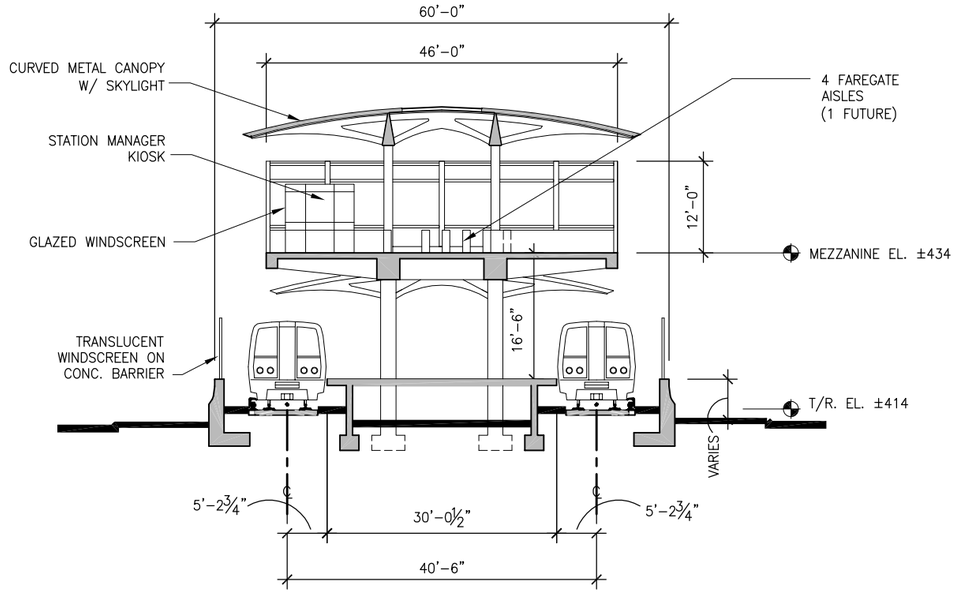
LONGITUDINAL SECTION
RESTON PARKWAY STATION

SCALE: 1"=20' (10 0 10 20)
DRAWING NO.: GPN-A-301-RP
067

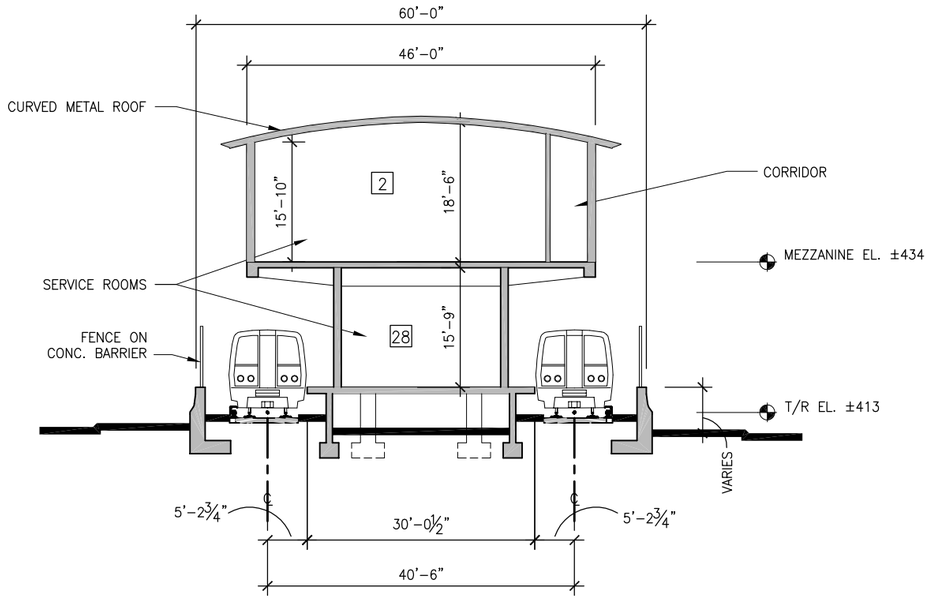
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1 PLATFORM TRANSVERSE SECTION



2 MEZZANINE TRANSVERSE SECTION



3 SERVICE ROOMS TRANSVERSE SECTION

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: B. LIOANAG 3-15-02 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

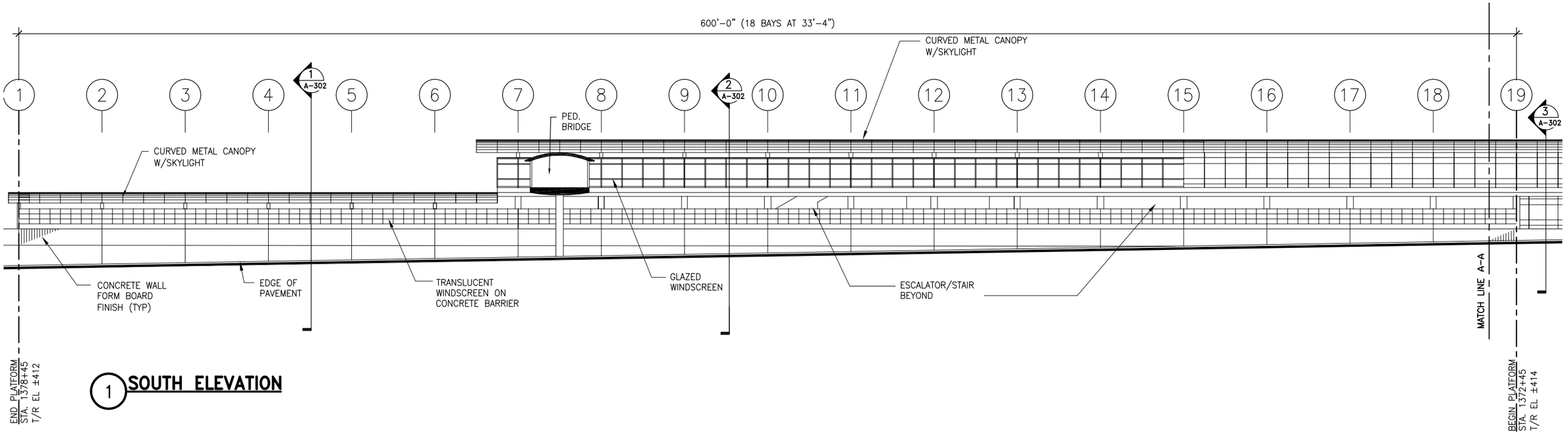
TRANSVERSE SECTIONS
RESTON PARKWAY STATION

SCALE: 1"=10' (5 0 5 10)

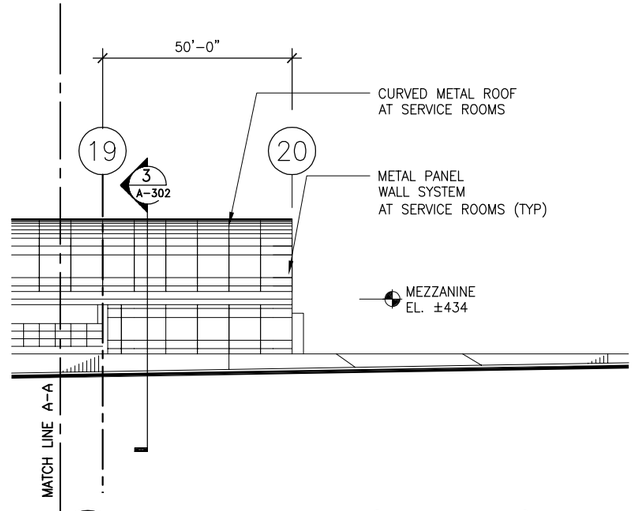
DRAWING NO.: GPN-A-302-RP

068

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1 SOUTH ELEVATION



2 SOUTH ELEVATION (CONTINUED)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02	
DRAWN: B. LIOANAG 3-15-02	
CHECKED:	
APPROVED:	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

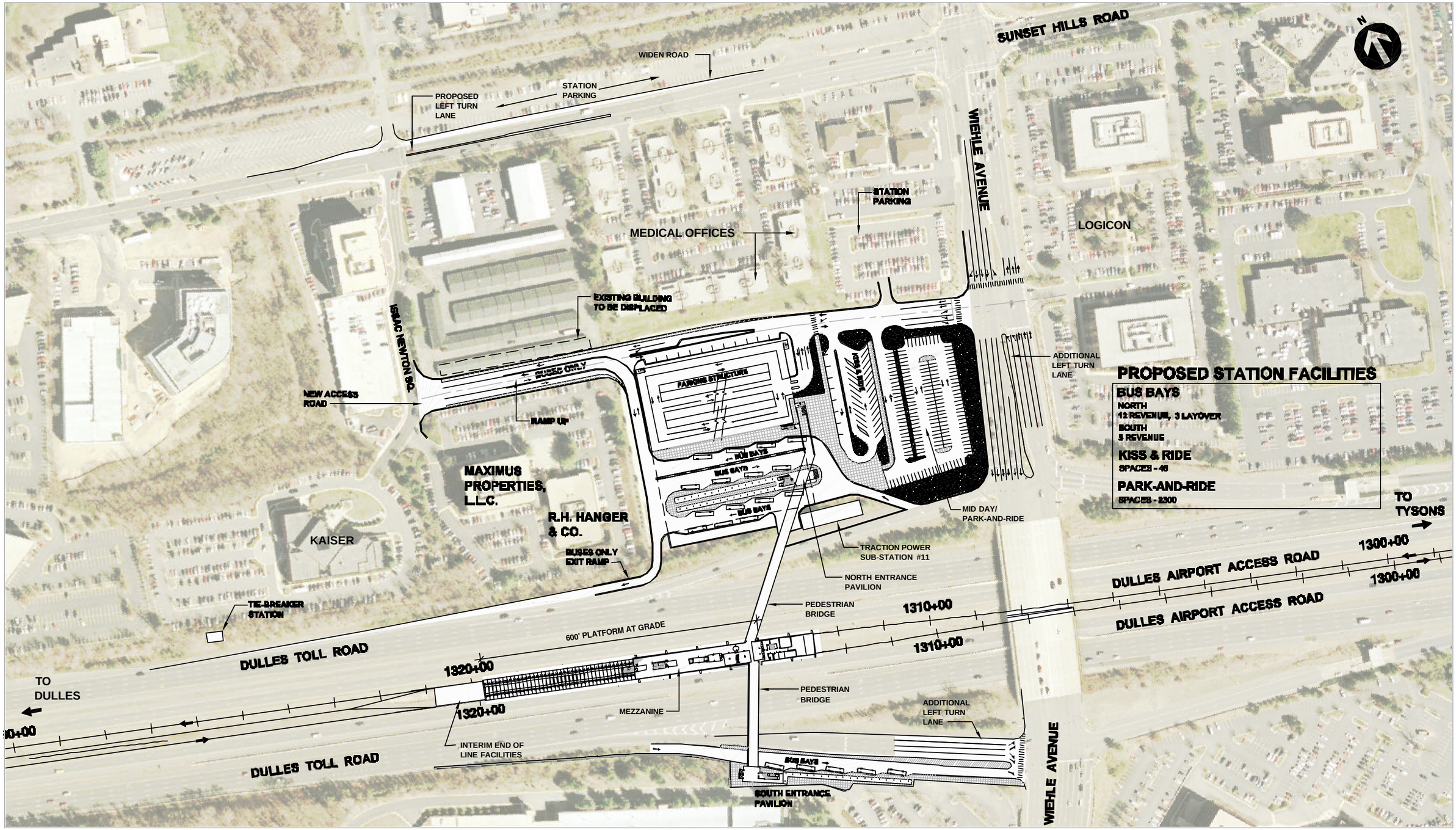
ELEVATIONS
RESTON PARKWAY STATION

SCALE: 1"=20' (10 0 10 20)

DRAWING NO.: GPN-A-303-RP

069

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PROPOSED STATION FACILITIES

BUS BAYS
NORTH
12 REVENUE, 3 LAYOVER
SOUTH
5 REVENUE

KISS & RIDE
SPACES - 46

PARK-AND-RIDE
SPACES - 2300

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: HAK	06-04 DATE		
DRAWN: NJK	06-04 DATE		
CHECKED:	DATE		
APPROVED:	DATE		

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Manders
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

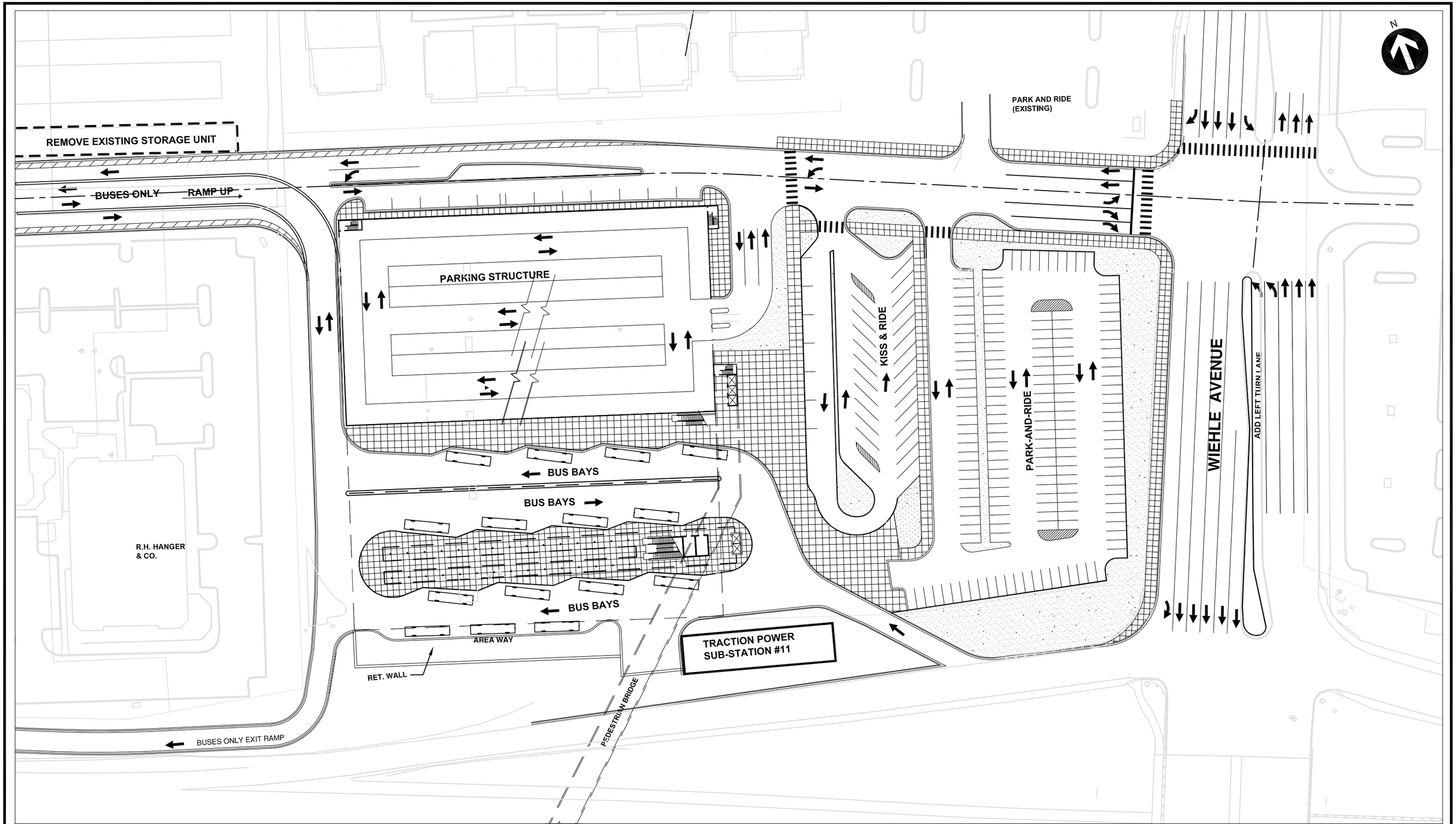
SITE PLAN
WIEHLE AVENUE STATION

SCALE: 1"=100' (30 0 50 100)

DRAWING NO.: GPN-A-100-WA

070

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: REB 12-03 DATE
DRAWN: 12-03 DATE
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REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

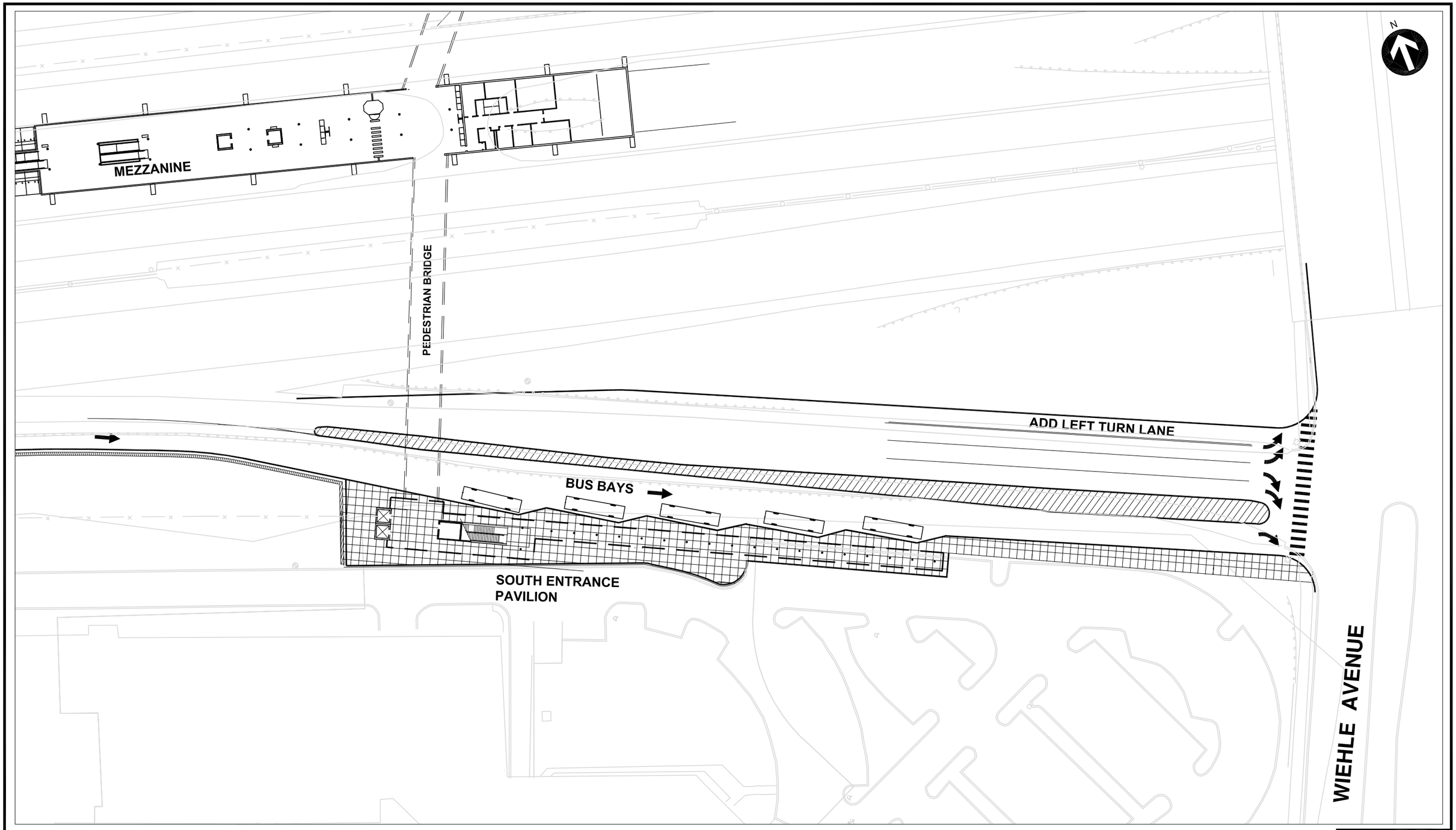
WIEHLE AVENUE STATION
ENLARGED NORTH SITE PLAN

SCALE: 1"=40' 20 0 20 40

DRAWING NO.: GPN-A-101-WA

071

\\D2psvr02\CTC CAD\002_dulles\FEIS GenPlans 06-04\Facilities\WA\Wiehle-site Plan.dwg, North Site Plan, 08/02/04 10:02:32 AM, IbiebdeN



HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: REB 12-03 DATE		
DRAWN: 12-03 DATE		
CHECKED: HK 12-03 DATE		
APPROVED: DATE		

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

WIEHLE AVENUE STATION
ENLARGED SOUTH SITE PLAN

SCALE: 1"=30' 15 0 15 30

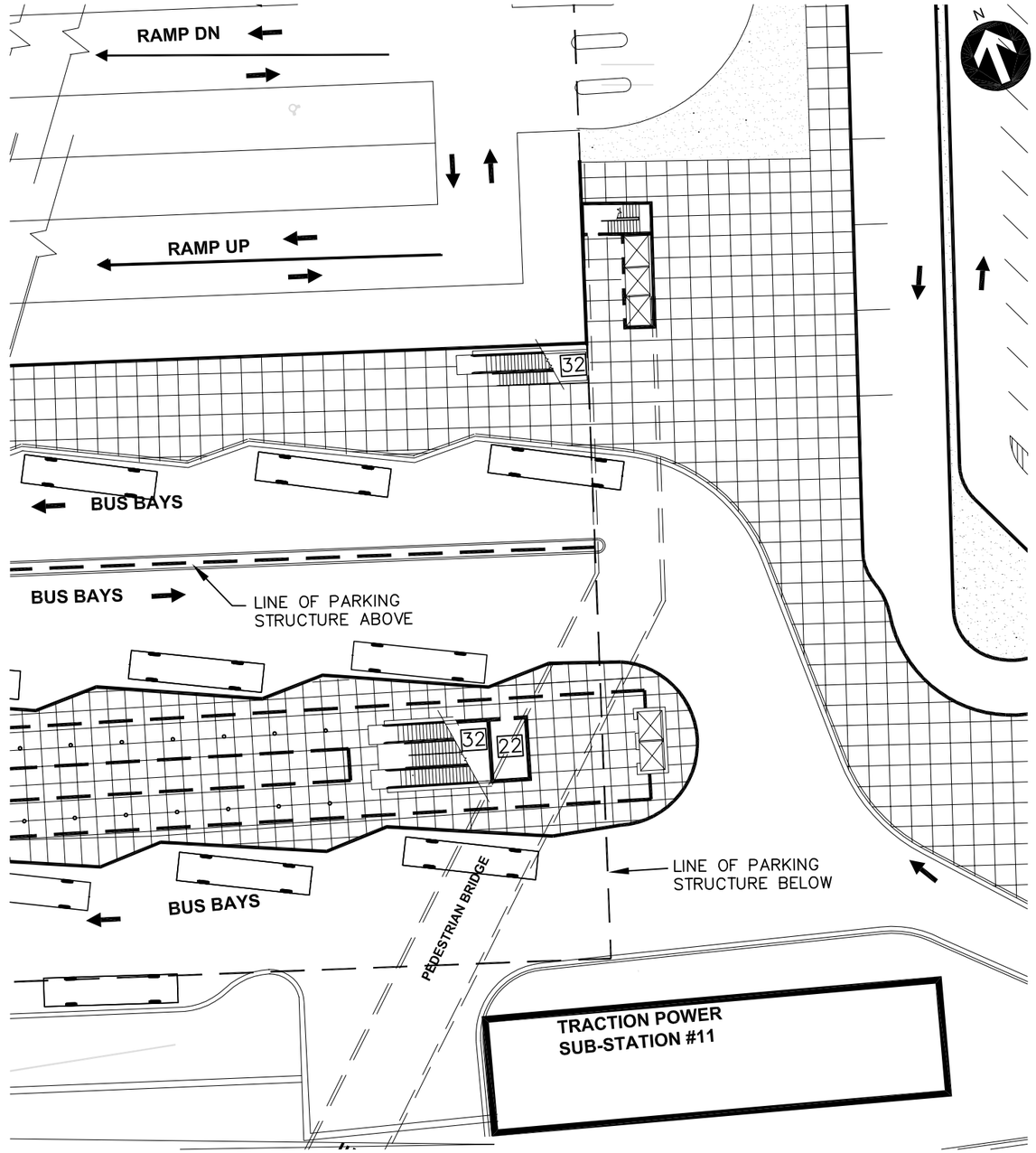
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072

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1 SOUTH ENTRY PLAN (GRADE LEVEL)



2 NORTH ENTRY PLAN (GRADE LEVEL)

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: REB 12-03 DATE
DRAWN: 12-03 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS
SUBMITTED Diana C Mendes PROJECT MANAGER

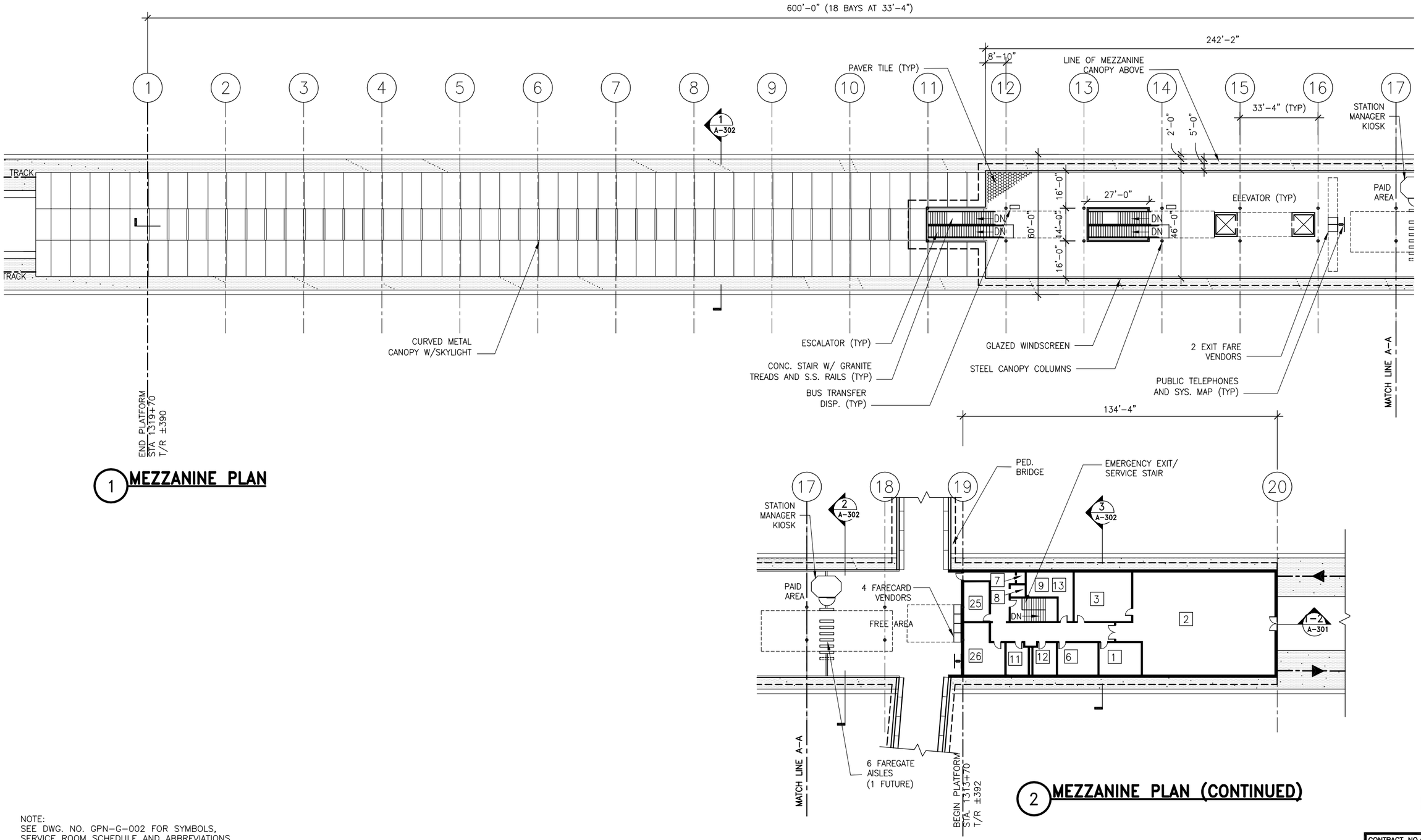
FINAL GENERAL PLANS
JULY 2004

WIEHLE AVENUE STATION
NORTH AND SOUTH ENTRY PLAN

SCALE: 1"=20' 20 0 20 40

DRAWING NO.: GPN-A-103-WA 073

\\D2psvr02\CTC CAD\002_dulles\FEIS GenPlans 06-04\Facilities\Wa\Wiehle-north & south entry.dwg, North Site Plan, 08/02/04 10:22:28 AM, lbiebeleN



1 MEZZANINE PLAN

2 MEZZANINE PLAN (CONTINUED)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: N. IBIEBELE 11-03 DATE	REFERENCE DRAWINGS	REVISIONS	DULLES CORRIDOR RAPID TRANSIT PROJECT
DRAWN: N. IBIEBELE 12-03 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION	CAPITAL TRANSIT CONSULTANTS
CHECKED: DATE			SUBMITTED Diana C. Mendes PROJECT MANAGER
APPROVED: DATE			FINAL GENERAL PLANS JULY 2004

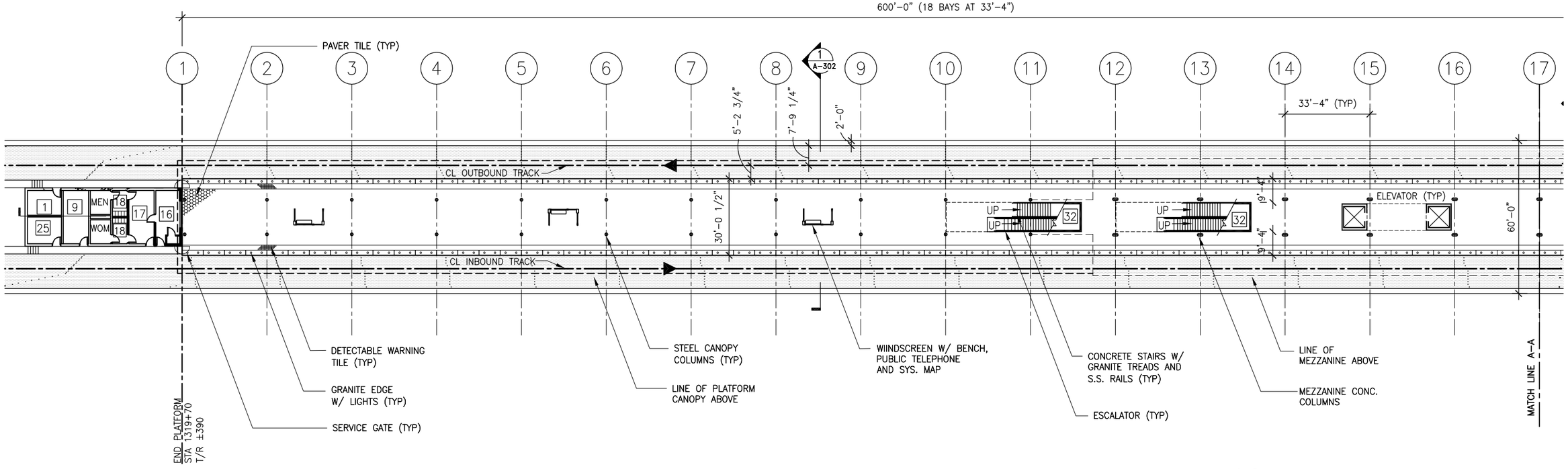
MEZZANINE PLAN
WIEHLE AVENUE STATION

SCALE: 1"-20' (10 0 10 20)

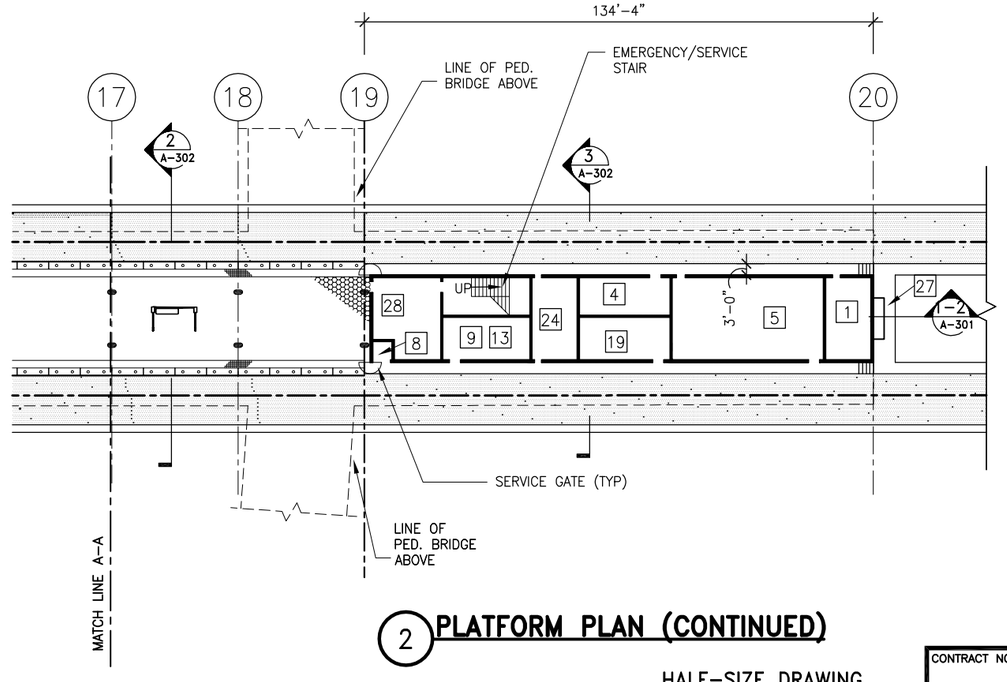
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074

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1 PLATFORM PLAN



2 PLATFORM PLAN (CONTINUED)

HALF-SIZE DRAWING

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

DESIGNED: N. IBIEBELE	3-15-02 DATE	
DRAWN: N. IBIEBELE	12-03 DATE	
CHECKED:	DATE	
APPROVED:	DATE	

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

PLATFORM PLAN
WIEHLE AVENUE STATION

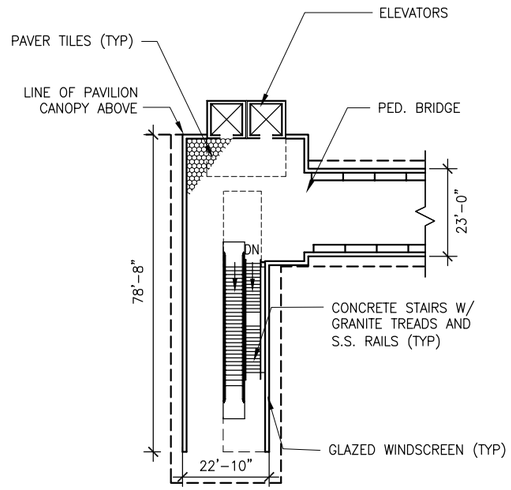
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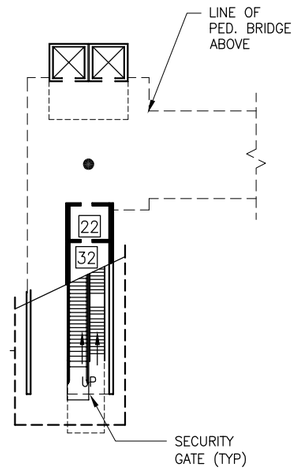
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075

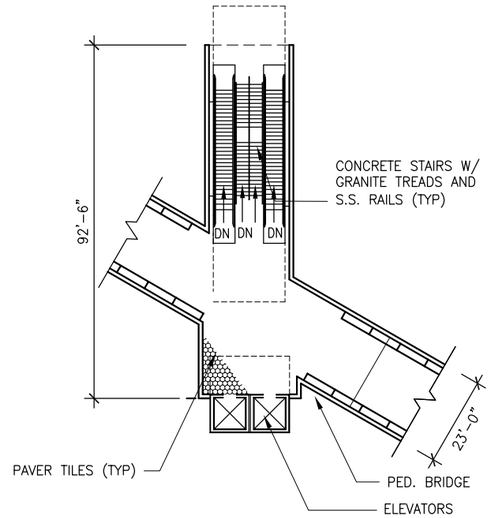
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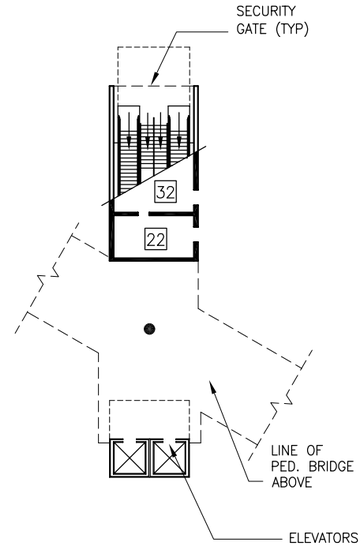
1 SOUTH ENTRY PLAN (BRIDGE LEVEL)



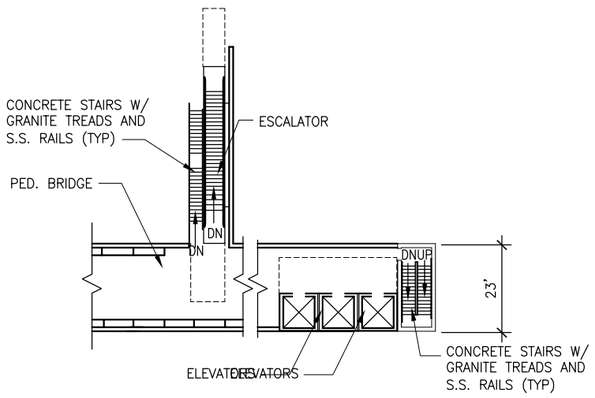
2 SOUTH ENTRY PLAN (GROUND LEVEL)



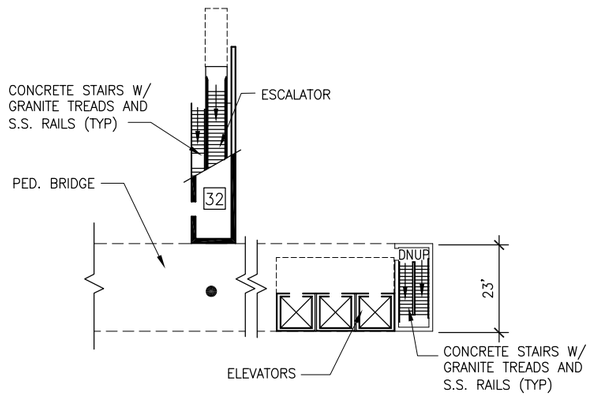
3 NORTH (CENTER) ENTRY PLAN (BRIDGE LEVEL)



4 SOUTH (CENTER) ENTRY PLAN (GROUND LEVEL)



5 NORTH (END) ENTRY PLAN (BRIDGE LEVEL)



6 NORTH (END) ENTRY PLAN (GROUND LEVEL)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: N. IBIEBELE 3-15-02	REFERENCE DRAWINGS	REVISIONS
DRAWN: N. IBIEBELE 12-03	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED:		
APPROVED:		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

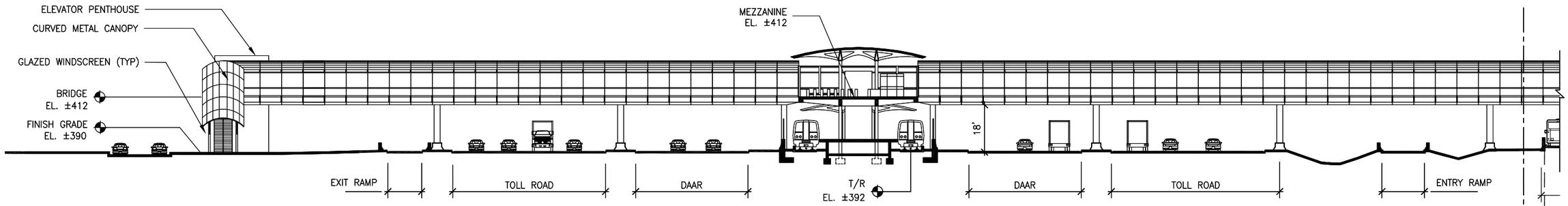
SITE SECTION / ENTRY PLANS
WIEHLE AVENUE STATION

SCALE: 1"-20' (10 0 10 20)

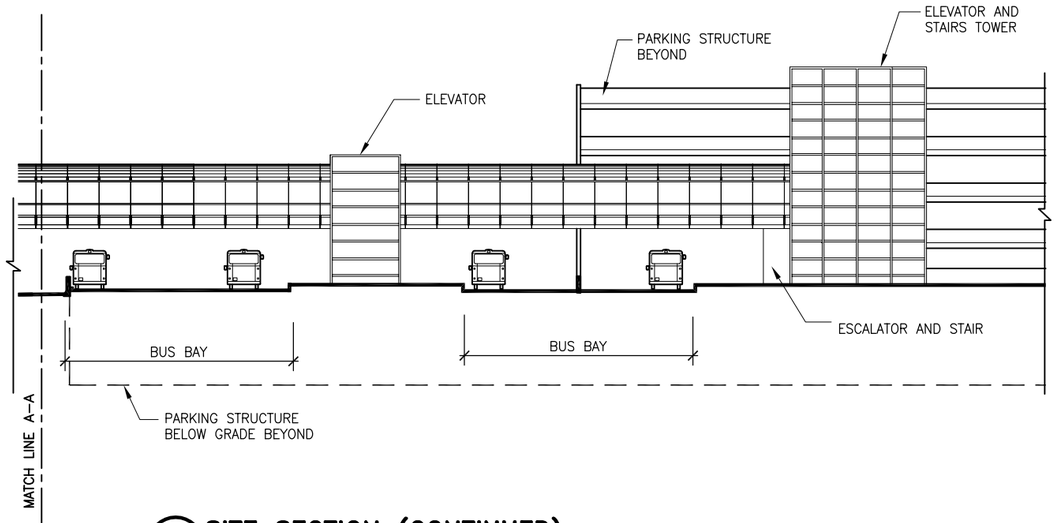
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1 SITE SECTION LOOKING WEST



2 SITE SECTION (CONTINUED)

NOTE:
SEE DWG. NO. GPN–G–002 FOR SYMBOLS,
SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3–15–02 DATE
DRAWN: N. IBIEBELE 12–03 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

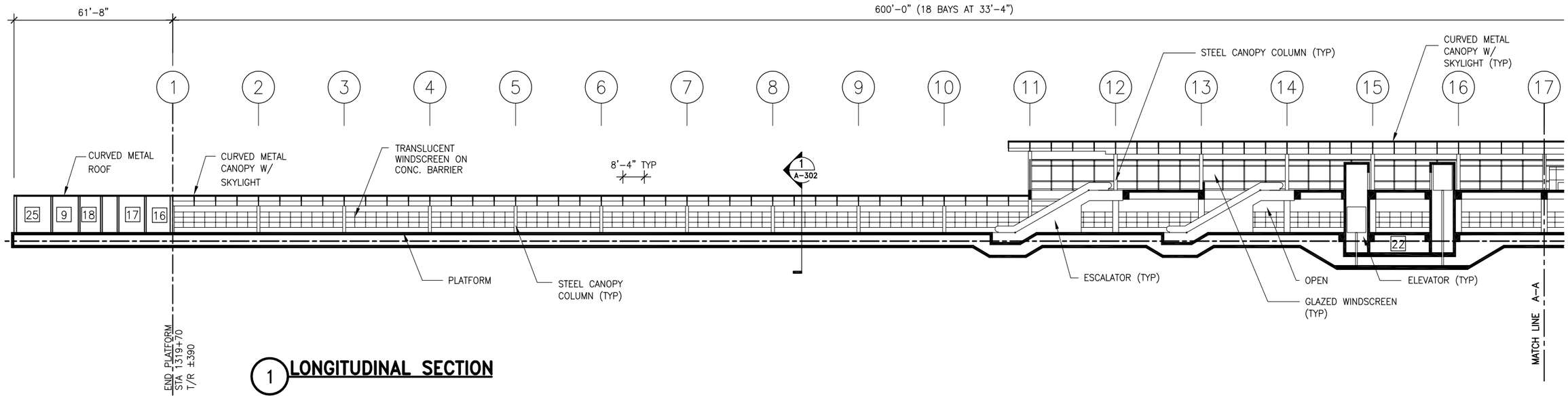
SITE SECTION
WIEHLE AVENUE STATION

SCALE: 1"–20' 10 0 10 20

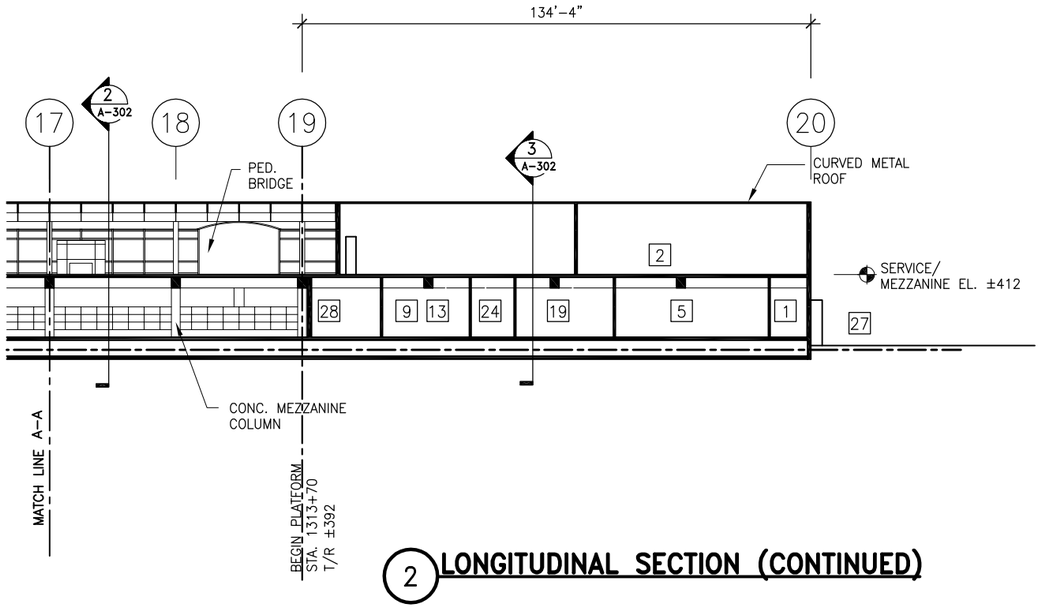
DRAWING NO.: GPN–A–300–WA

077

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1 LONGITUDINAL SECTION



2 LONGITUDINAL SECTION (CONTINUED)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: N. IBIEBELE 3-15-02 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: N. IBIEBELE 11-03 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

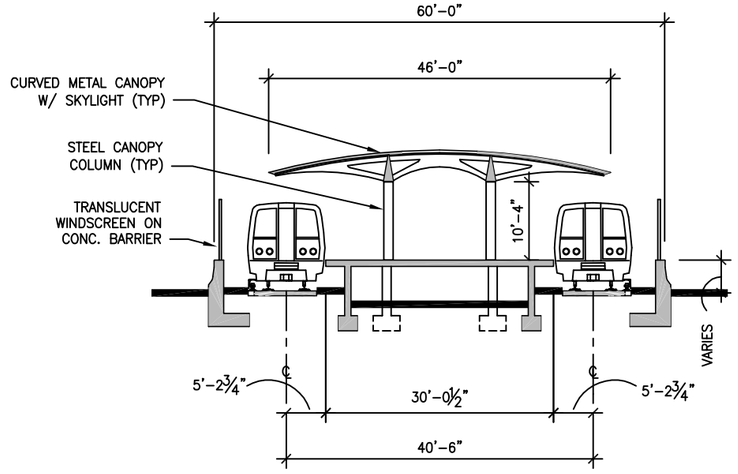
LONGITUDINAL SECTION
WIEHLE AVENUE STATION

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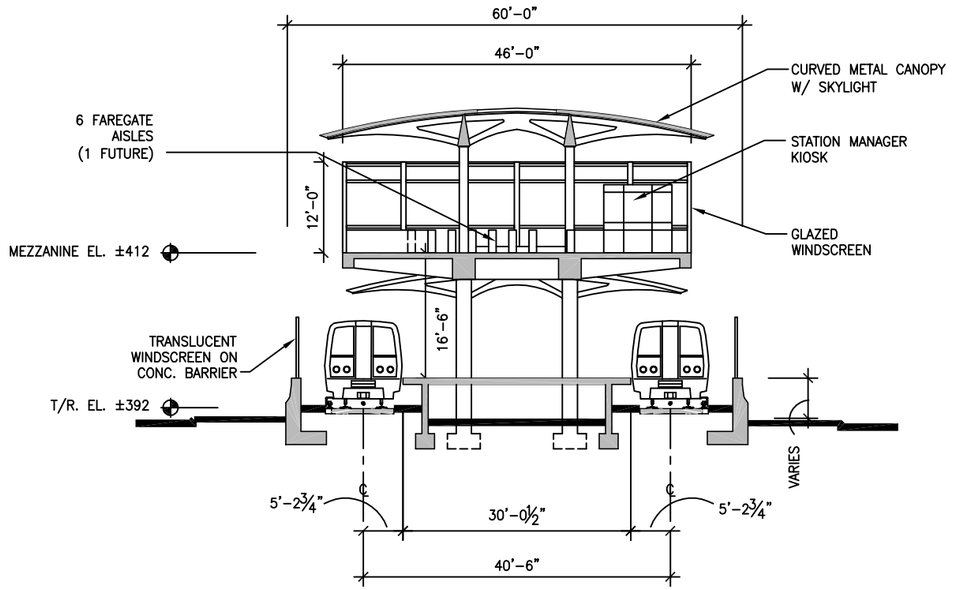
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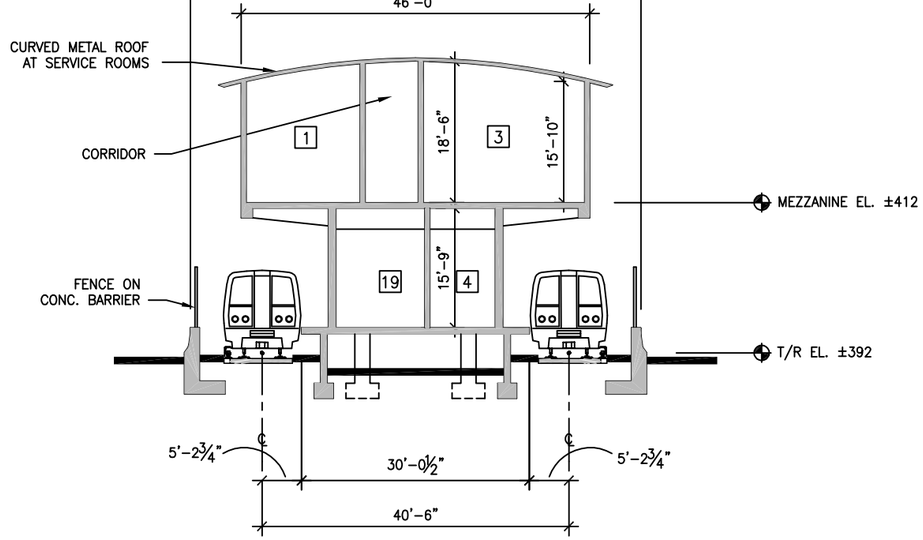
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1 PLATFORM TRANSVERSE SECTION



2 MEZZANINE TRANSVERSE SECTION



3 SERVICE ROOMS TRANSVERSE SECTION

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS,
SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02 DATE
DRAWN: B. LIOANAG 3-15-02 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

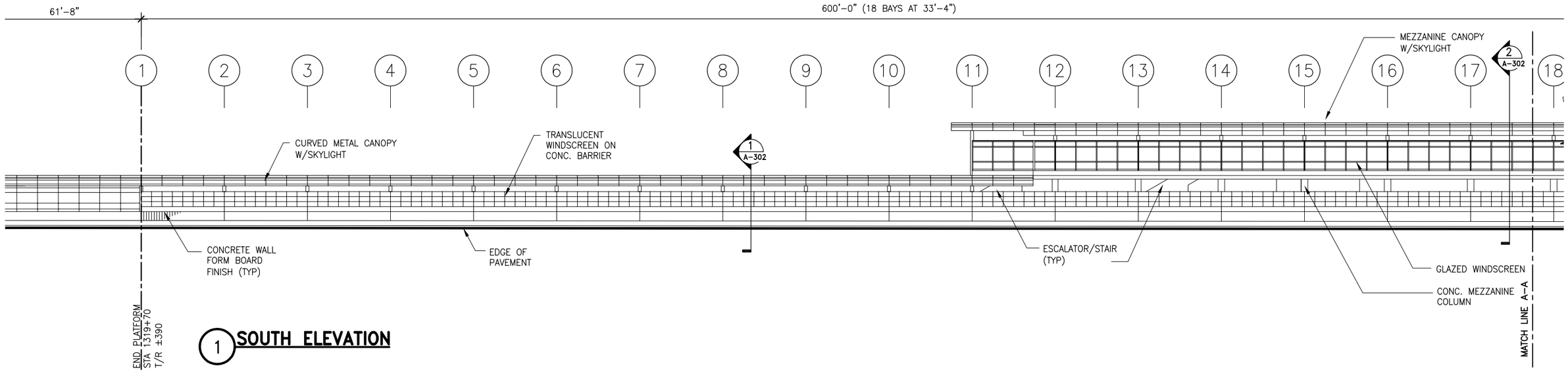
TRANSVERSE SECTIONS
WIEHLE AVENUE STATION

SCALE: 1"-10' (5 0 5 10)

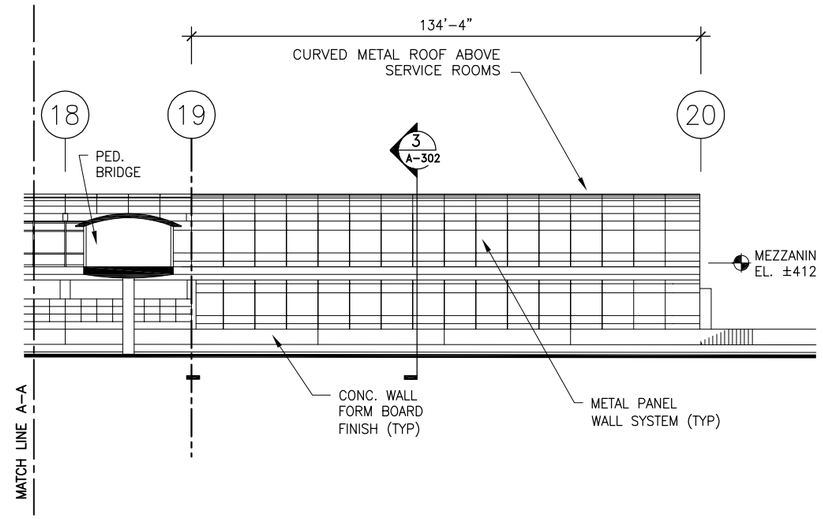
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1 SOUTH ELEVATION



2 SOUTH ELEVATION (CONTINUED)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: N. IBIEBELE 11-03 DATE
DRAWN: N. IBIEBELE 12-03 DATE
CHECKED: DATE
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REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

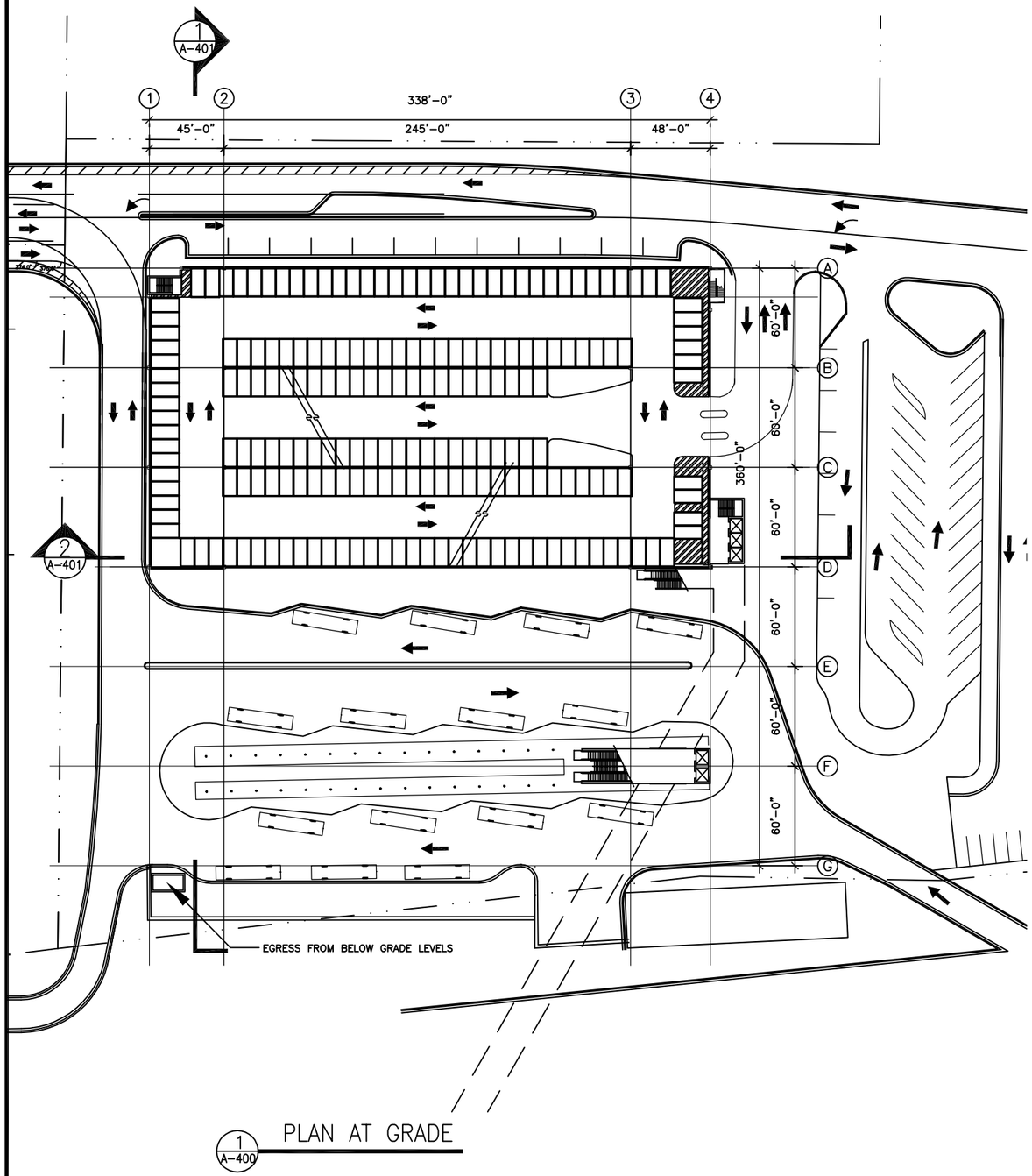
CAPITAL TRANSIT CONSULTANTS
SUBMITTED
Diana C Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

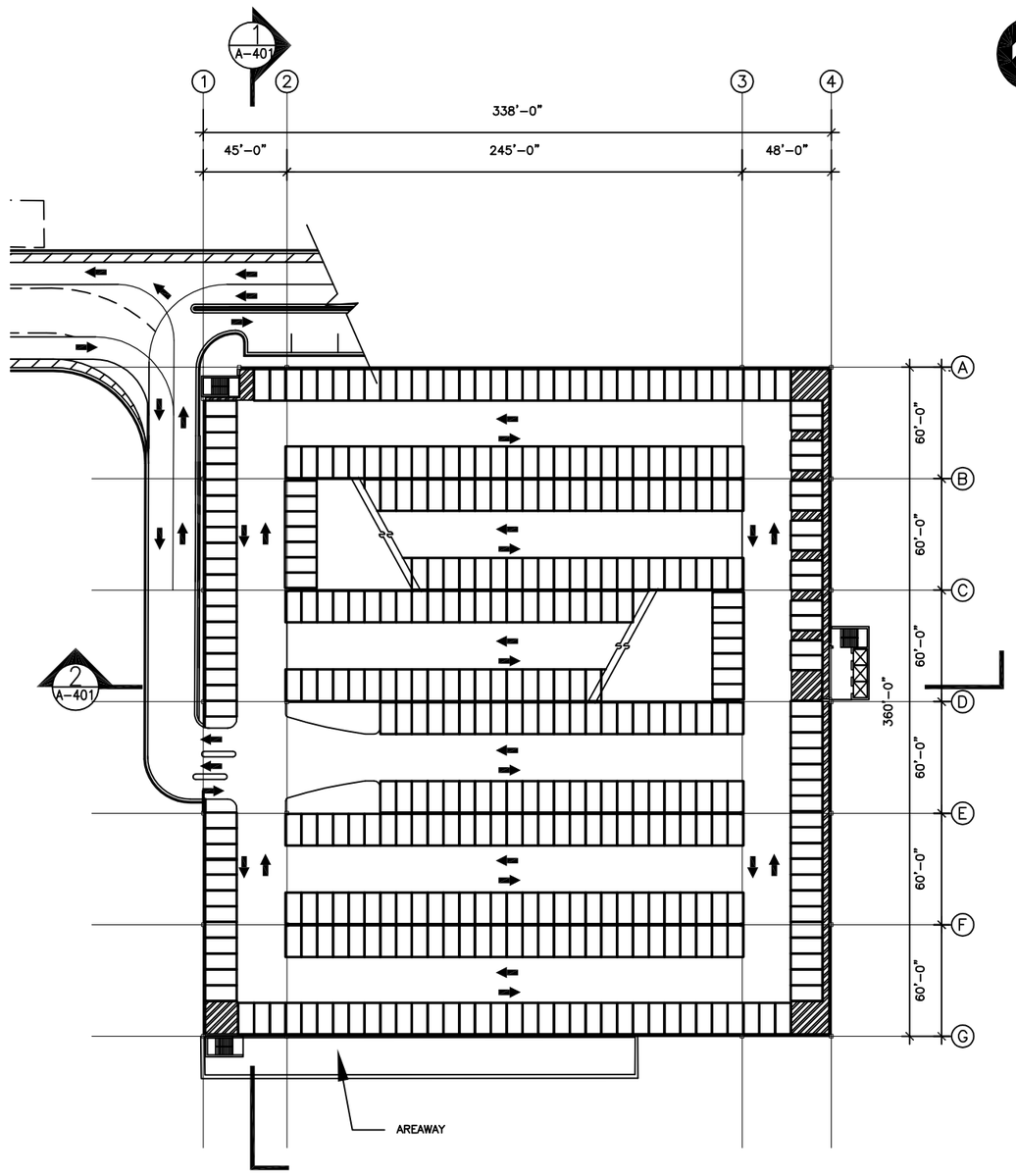
ELEVATIONS
WIEHLE AVENUE STATION

SCALE: 1"-20' (10 0 10 20)
DRAWING NO.: GPN-A-303-WA
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1 A-400 PLAN AT GRADE



2 A-400 PLAN AT LEVEL B-2

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: S. SROUJI 06-17-04 DATE	DULLES CORRIDOR RAPID TRANSIT PROJECT	GRADE AND LOVER LEVEL B-2 PLAN WIEHLE AVENUE PARKING FACILITY
DRAWN: M. DUONG 06-17-04 DATE	CAPITAL TRANSIT CONSULTANTS	FINAL GENERAL PLANS JULY 2004
CHECKED: DATE	SUBMITTED Diana C Mendes PROJECT MANAGER	SCALE: 1"=40' (20 0 20 40)
APPROVED: DATE		DRAWING NO.: GPN-A-400-WA 81

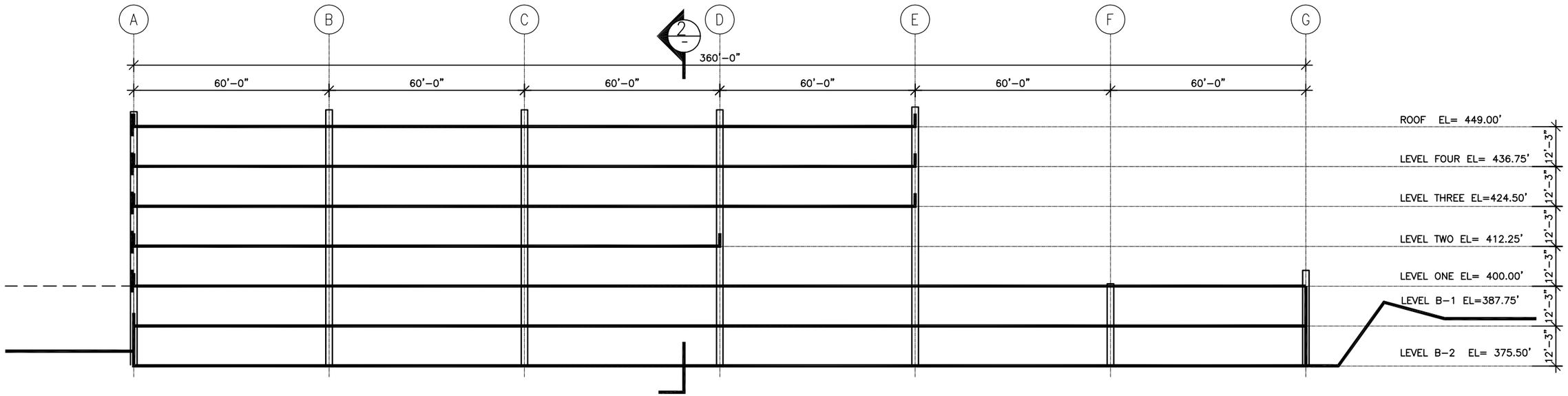
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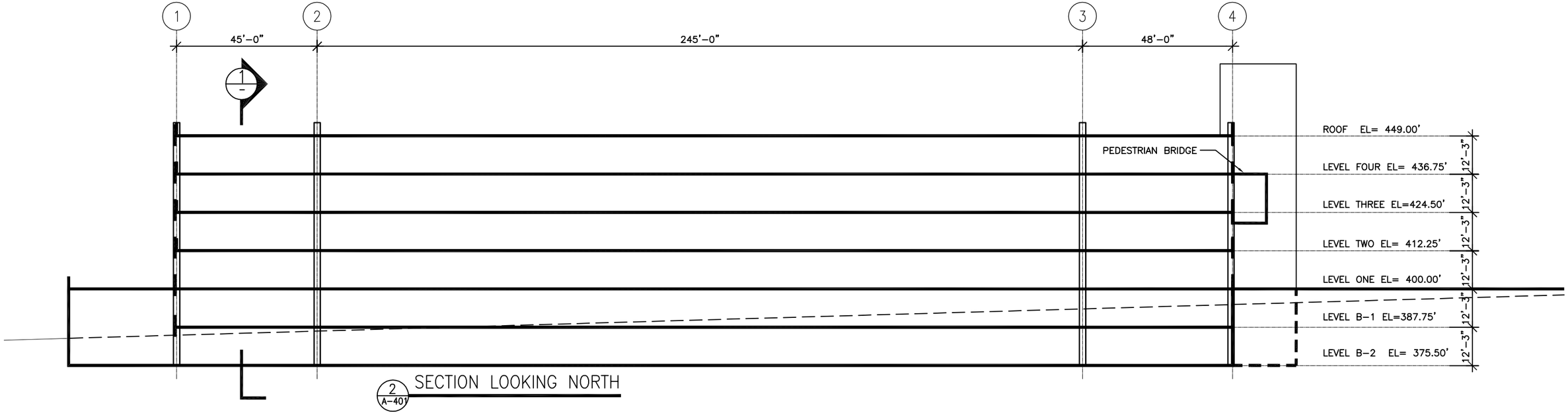
REVISIONS

DATE	BY	DESCRIPTION

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1 A-401 SECTION LOOKING EAST



2 A-401 SECTION LOOKING NORTH

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: S. SROUJI 06-17-04 DATE
DRAWN: M. DUONG 06-17-04 DATE
CHECKED: _____ DATE
APPROVED: _____ DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

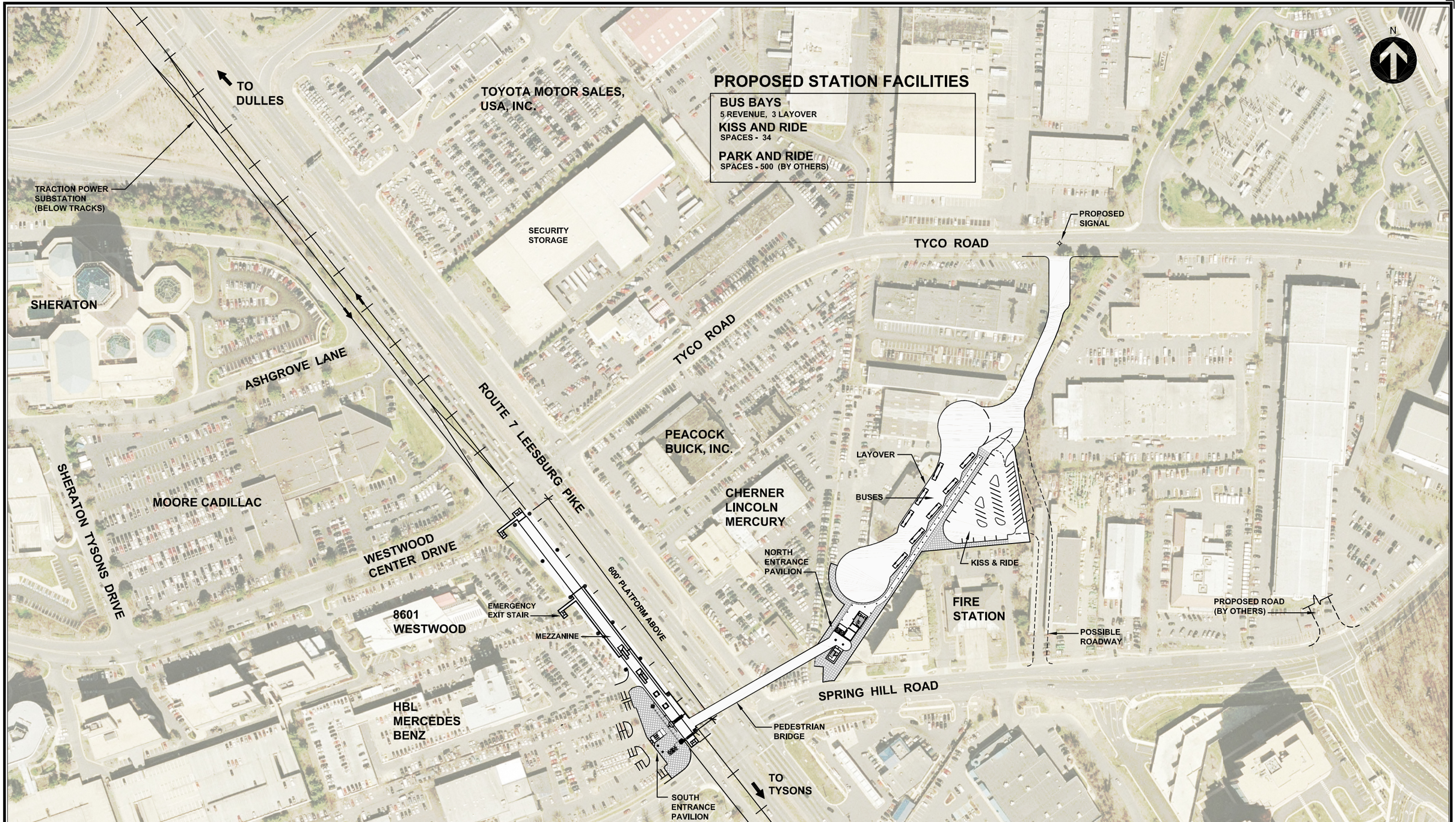
SECTIONS
WIEHLE AVENUE PARKING FACILITY

SCALE: 1/16"=1'-0" 4 0 4 8 12 16 20

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82

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CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

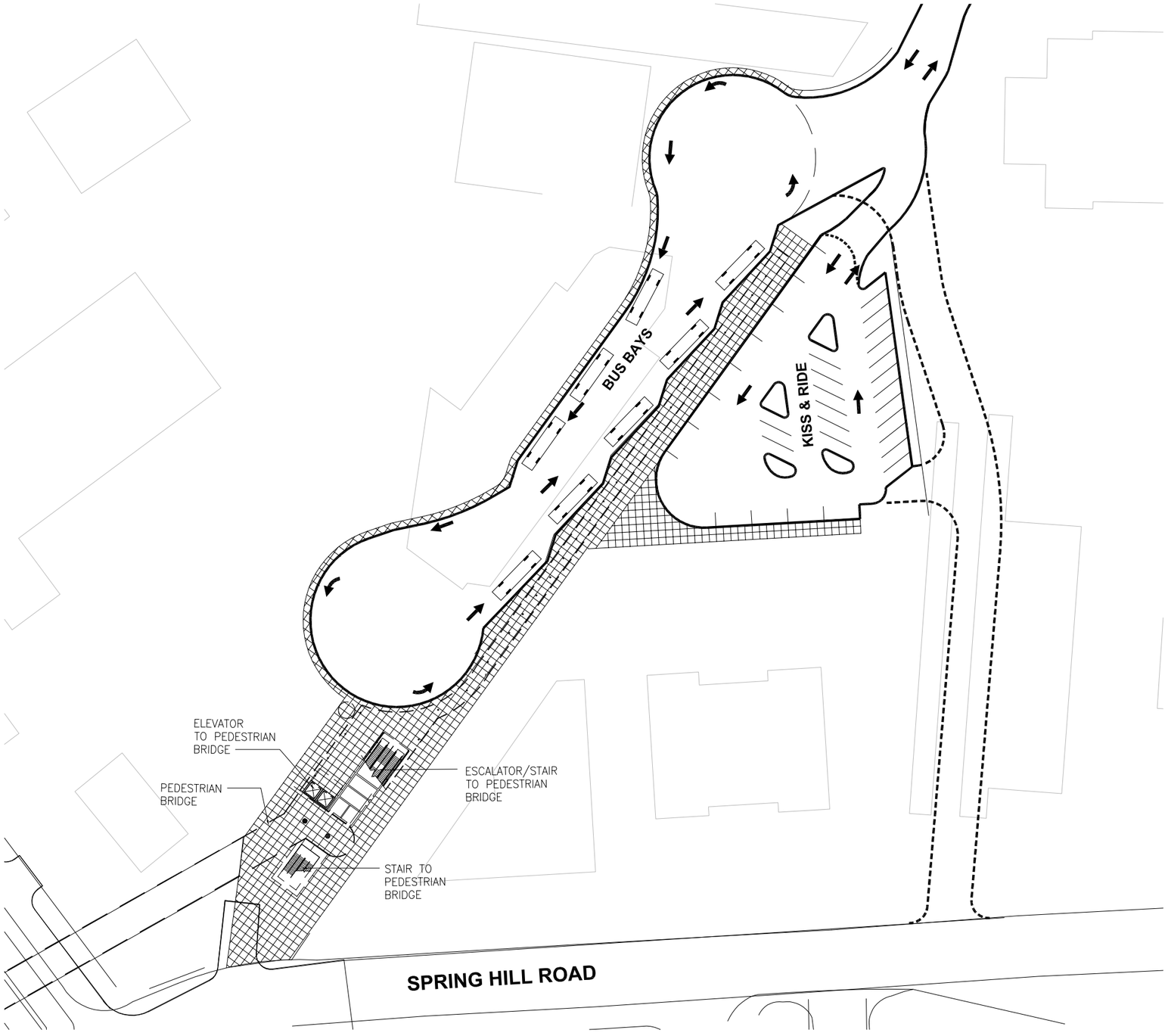
SITE PLAN
TYSONS WEST STATION

SCALE: 1"=100' (50 0 50 100)

DRAWING NO.: GPN-A-100-TW

83

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HALF-SIZE DRAWING

CONTRACT NO.:

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APPROVED: DATE

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NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

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SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

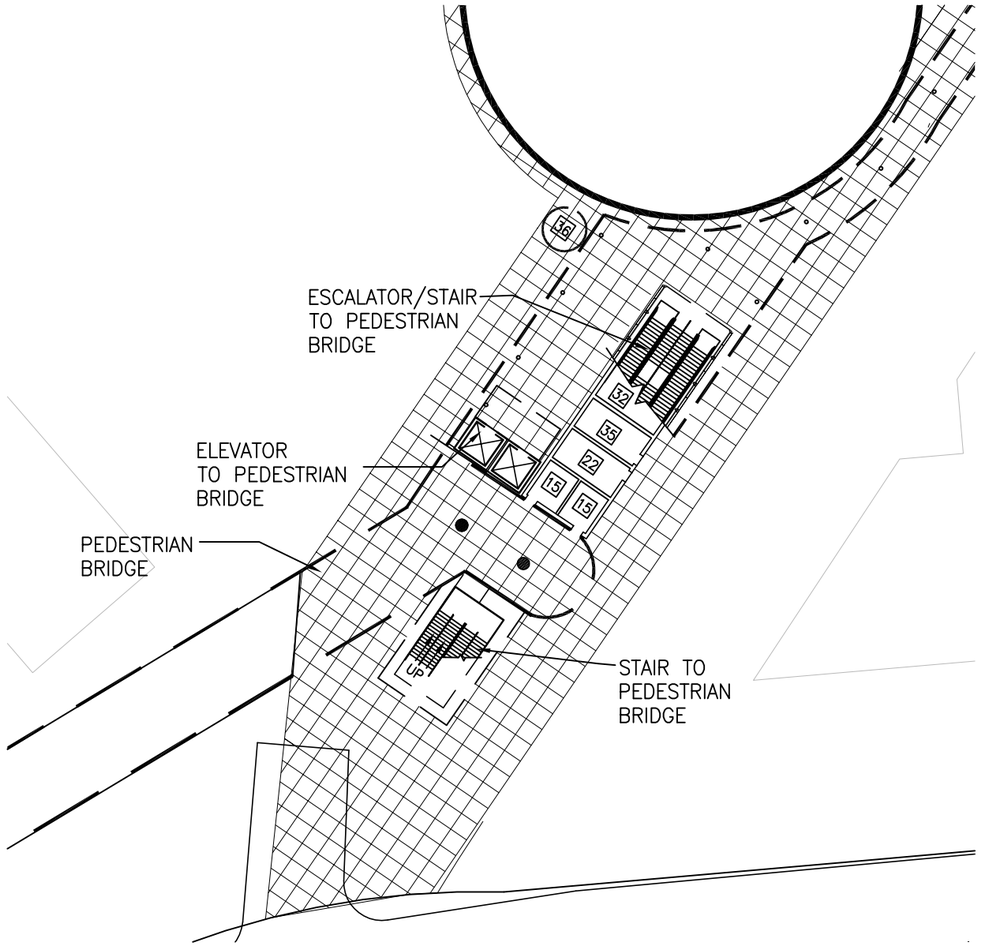
ENLARGED SITE PLAN
TYSONS WEST STATION

SCALE: 1"=40' 20 0 20 40

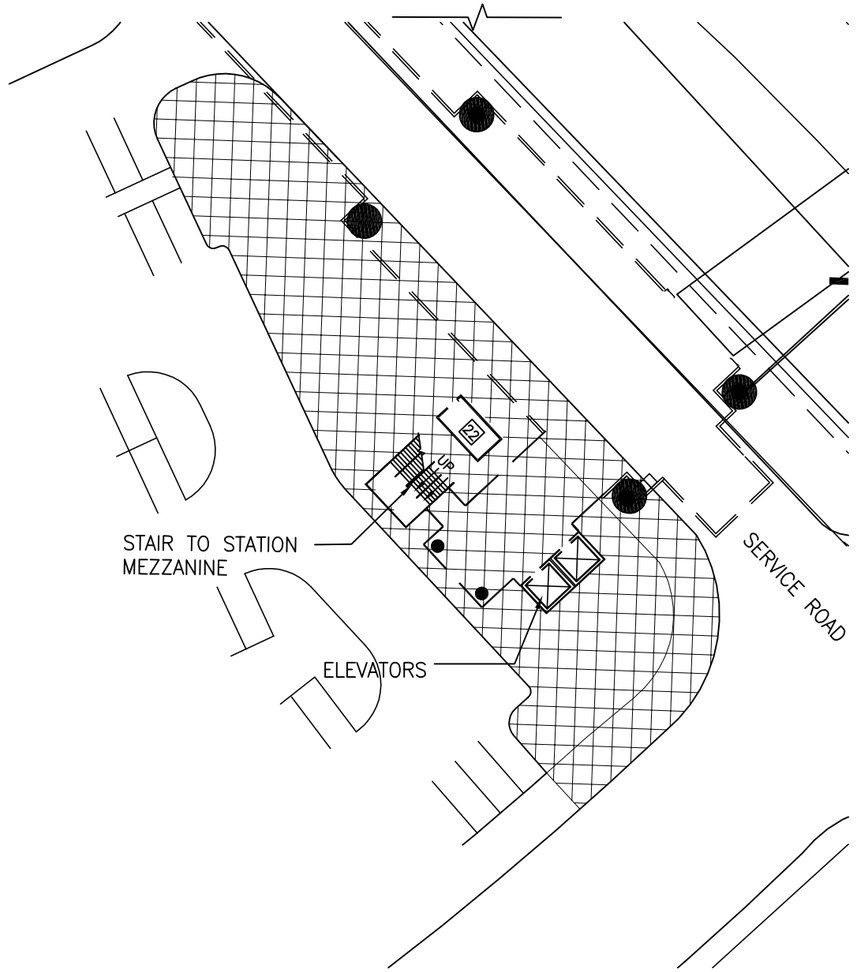
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084

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1 NORTH ENTRY PLAN (GROUND LEVEL)



2 SOUTH ENTRY PLAN (GROUND LEVEL)

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: FP 12-03 DATE
DRAWN: F.P 12-03 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS
SUBMITTED
Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

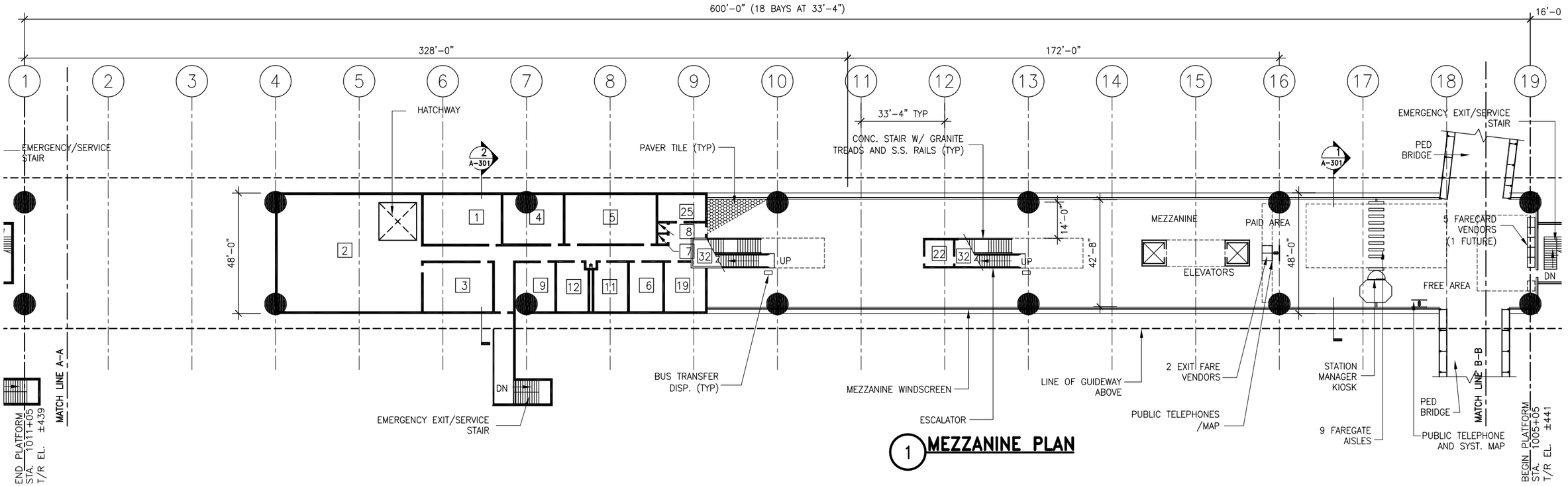
NORTH & SOUTH ENTRY PLANS
TYSONS WEST STATION

SCALE: 1"=20' (10 0 10 20)

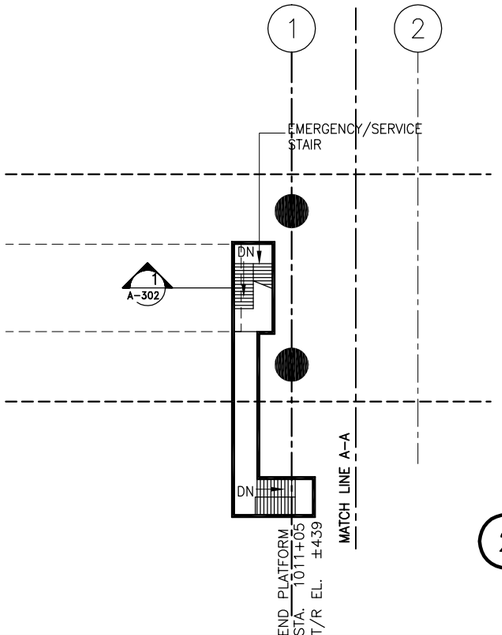
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085

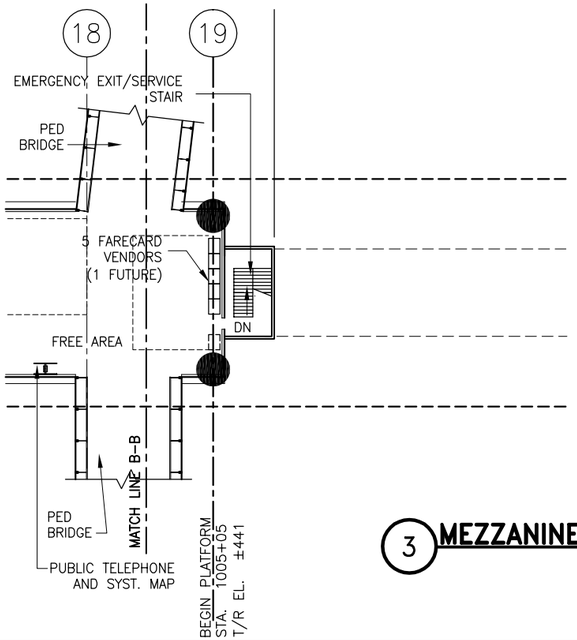
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1 MEZZANINE PLAN



2 MEZZANINE PLAN (CONTINUED)



3 MEZZANINE PLAN (CONTINUED)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W.GALLAGHER 01-31-02 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: T.LIN 12-19-03 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

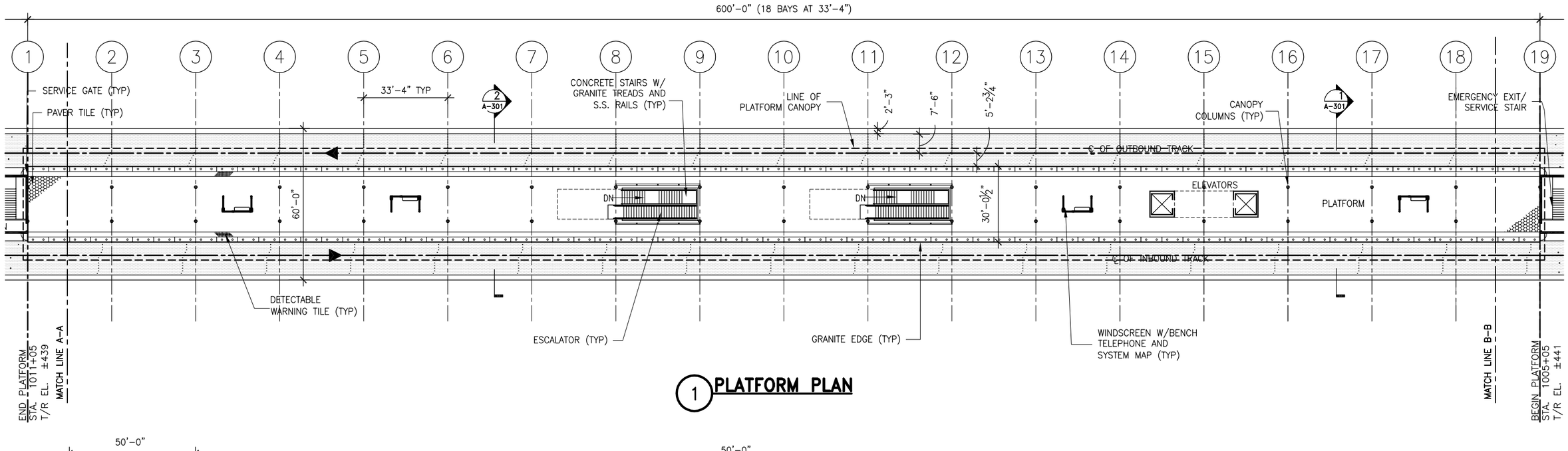
MEZZANINE PLAN
TYSONS WEST STATION

SCALE: 1"=20' (10 0 10 20)

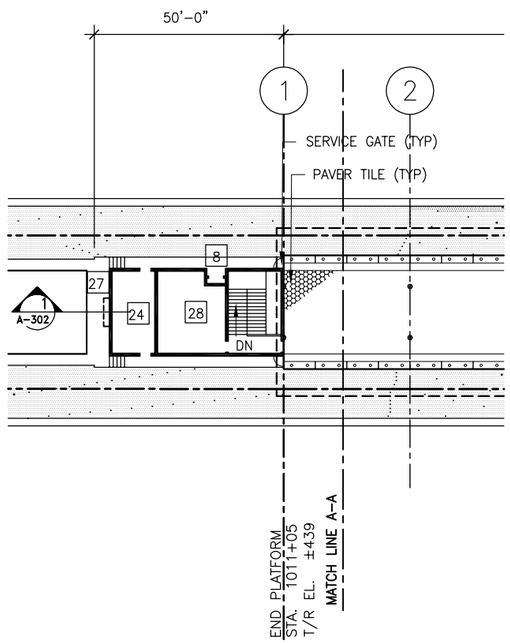
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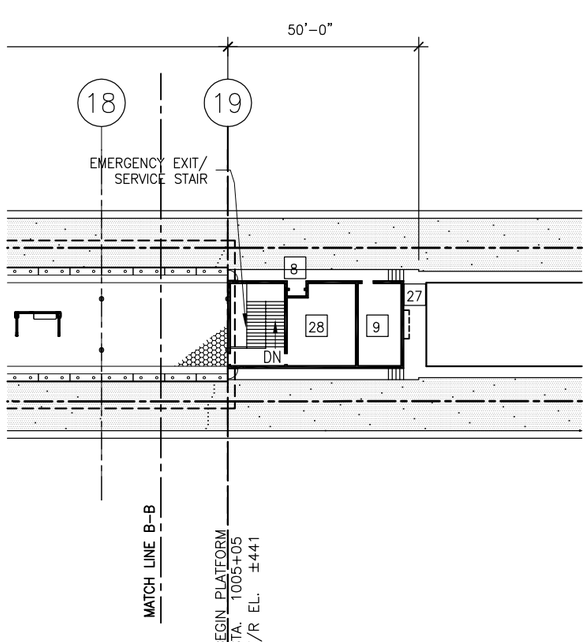
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1 PLATFORM PLAN



2 PLATFORM PLAN (CONTINUED)



3 PLATFORM PLAN (CONTINUED)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W.GALLAGHER 01-31-02 DATE	REFERENCE DRAWINGS	REVISIONS	
DRAWN: T.LIN 12-19-03 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION	DULLES CORRIDOR RAPID TRANSIT PROJECT
CHECKED: DATE			CAPITAL TRANSIT CONSULTANTS
APPROVED: DATE			SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

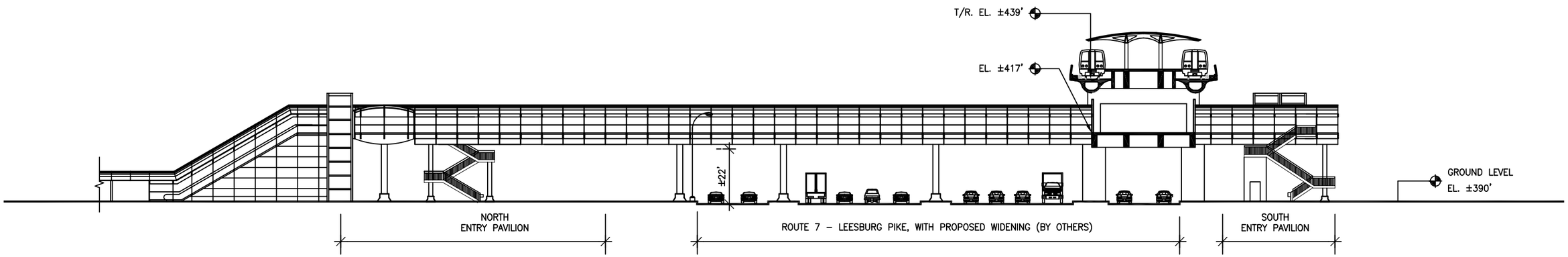
PLATFORM PLAN
TYSONS WEST STATION

SCALE: 1"=20' (10 0 10 20)

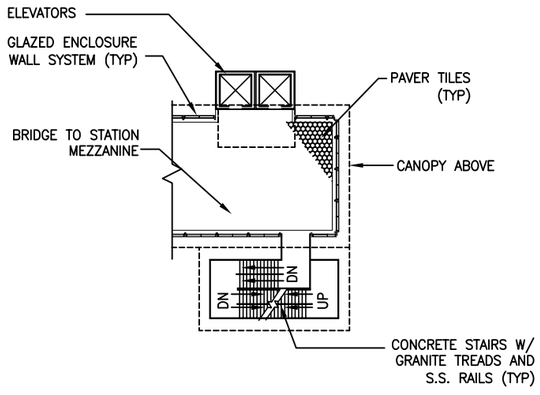
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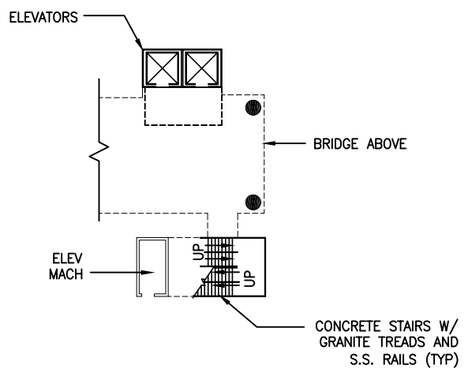
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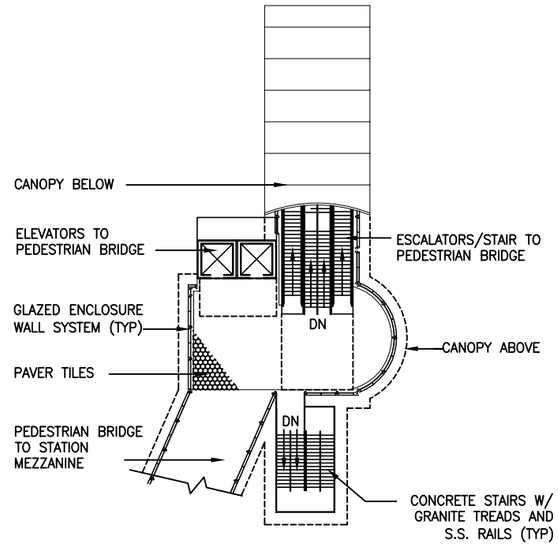
1 SITE SECTION LOOKING EAST



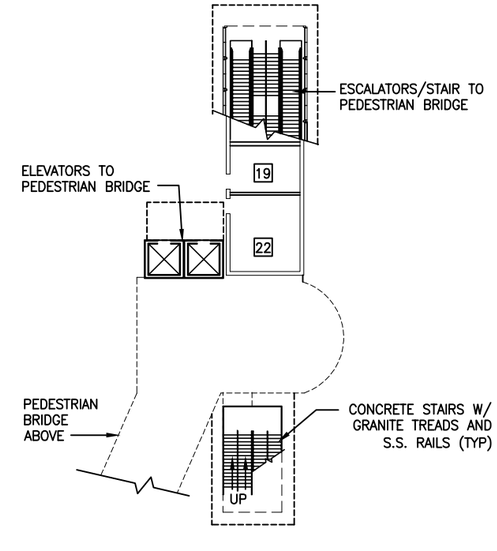
2 SOUTH ENTRY – BRIDGE LEVEL



3 SOUTH ENTRY – GROUND LEVEL



4 NORTH ENTRY – BRIDGE LEVEL



5 NORTH ENTRY – GROUND LEVEL

NOTE:
SEE DWG. NO. GPN–G–002 FOR SYMBOLS,
SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: W.GALLAGHER 01–31–02 DATE
DRAWN: T.LIN, F.PARAON 12–19–03 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS
SUBMITTED
Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

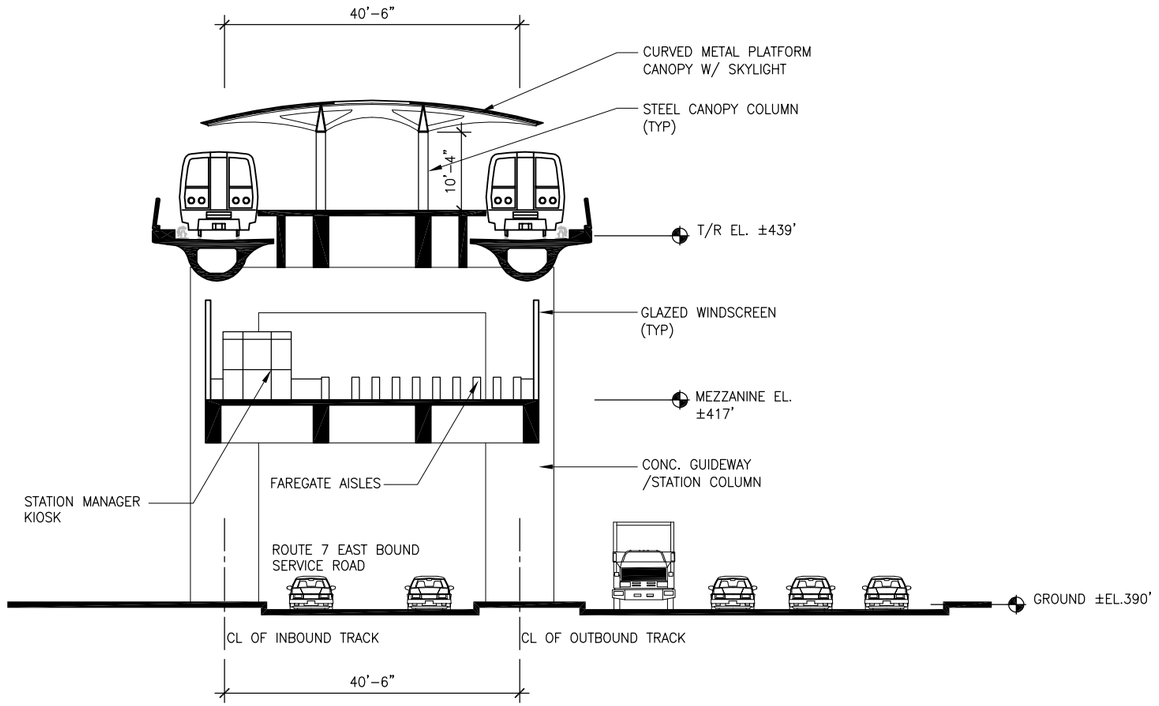
SITE SECTION, NORTH & SOUTH ENTRY PLANS
TYSONS WEST STATION

SCALE: 1"=20' 10 0 10 20

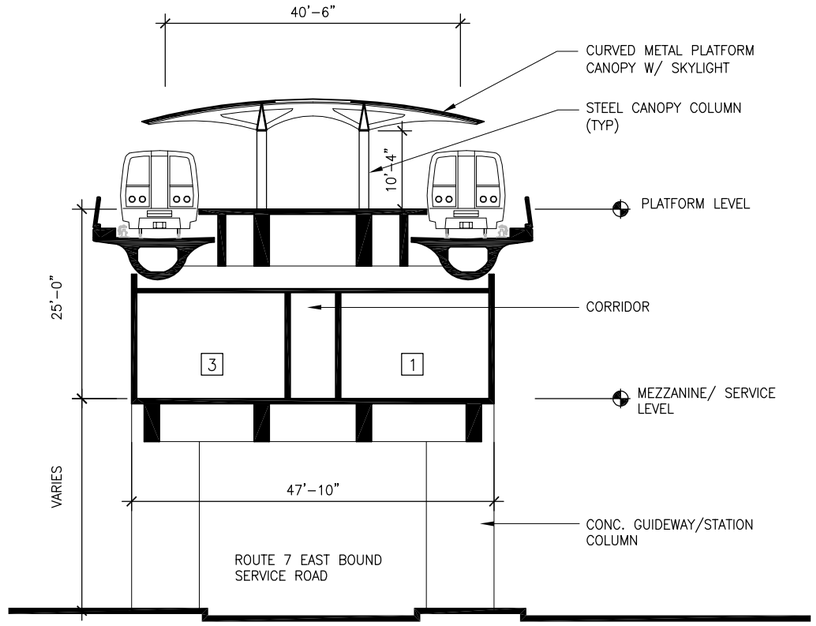
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1 MEZZANINE TRANSVERSE SECTION



2 SERVICE ROOMS TRANSVERSE SECTION

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W.GALLAGHER 01-31-02 DATE
DRAWN: T.LIN, F.PARAON 12-19-03 DATE
CHECKED: DATE
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REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

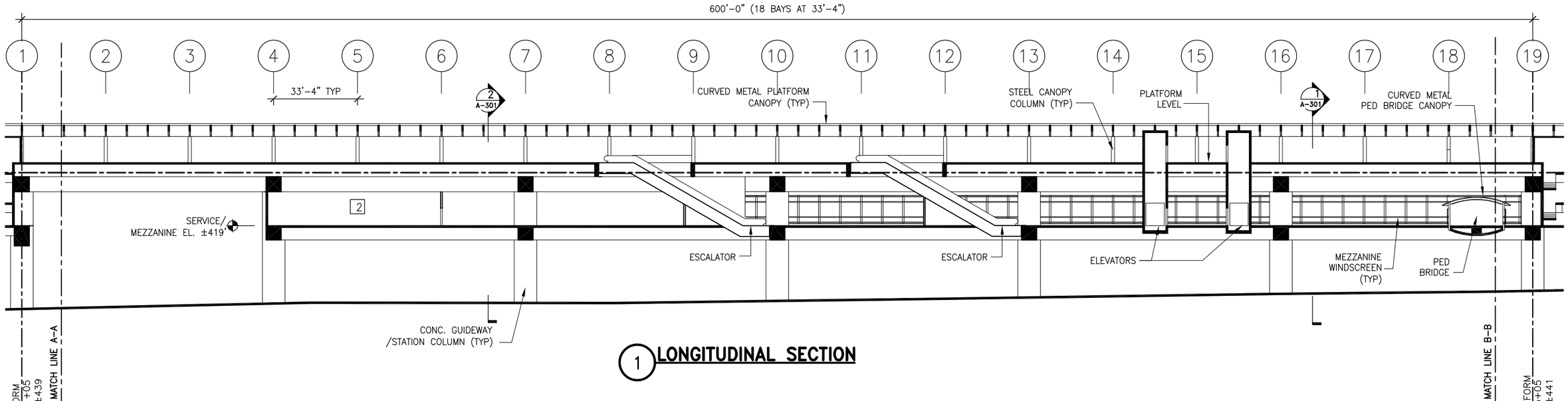
TRANSVERSE SECTIONS
TYSONS WEST STATION

SCALE: 1"=10' 5 0 5 10

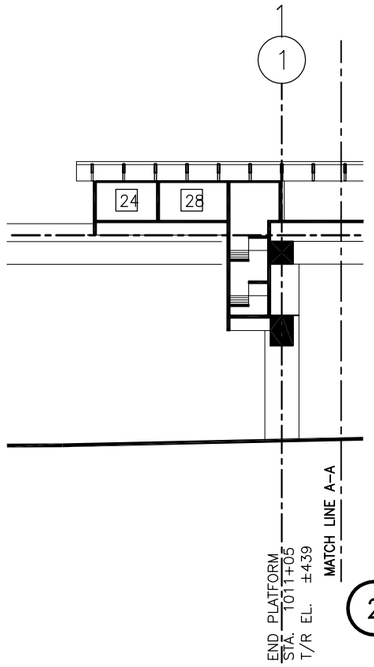
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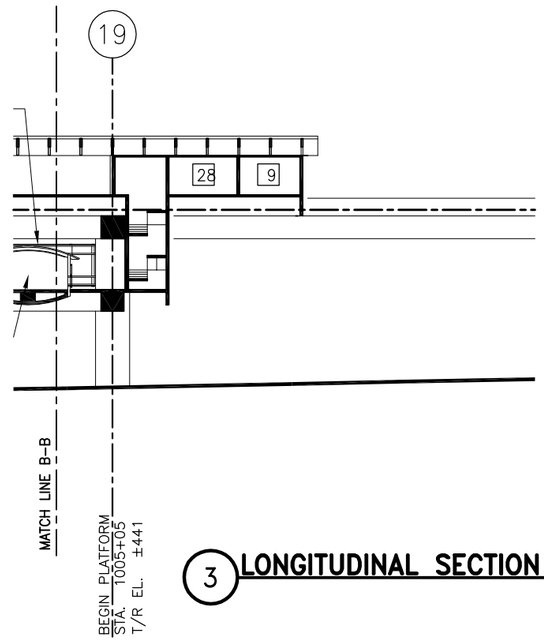
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1 LONGITUDINAL SECTION



2 LONGITUDINAL SECTION (CONTINUED)



3 LONGITUDINAL SECTION (CONTINUED)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W.GALLAGHER 01-31-02 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: T.LIN 12-19-03 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
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DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

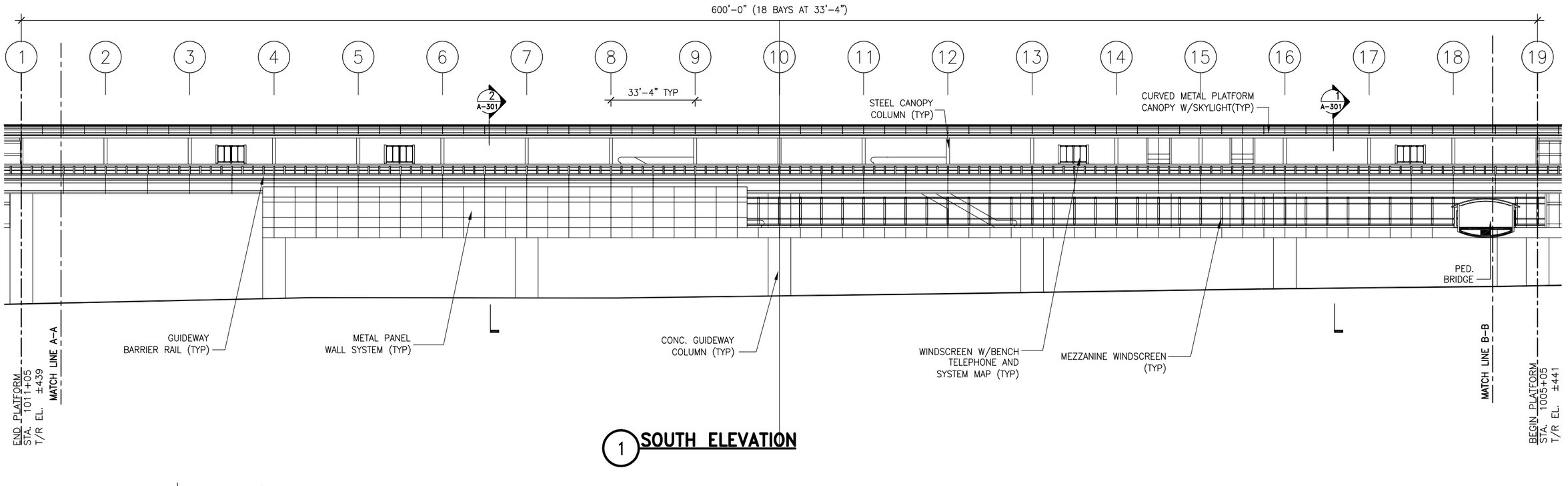
LONGITUDINAL SECTION
TYSONS WEST STATION

SCALE: 1"=20' (10 0 10 20)

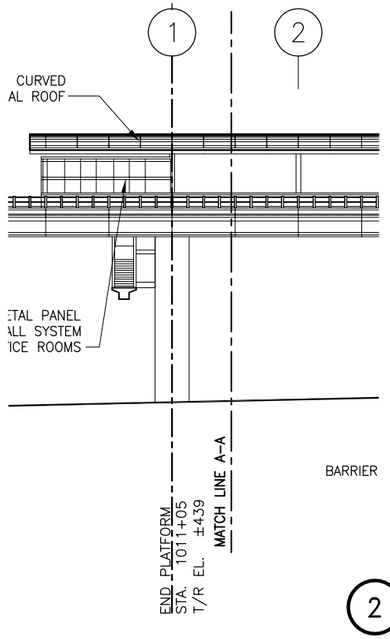
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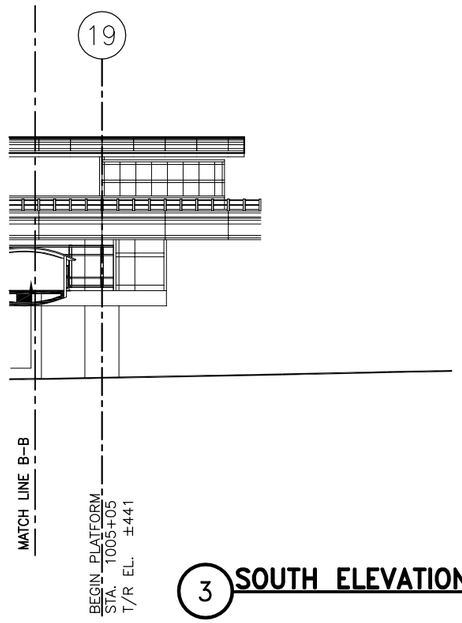
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1 SOUTH ELEVATION



2 SOUTH ELEVATION (CONTINUED)



3 SOUTH ELEVATION (CONTINUED)

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W.GALLAGHER 01-31-02 DATE	REFERENCE DRAWINGS	REVISIONS	
DRAWN: T.LIN 12-19-03 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION	DULLES CORRIDOR RAPID TRANSIT PROJECT
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APPROVED: DATE			SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

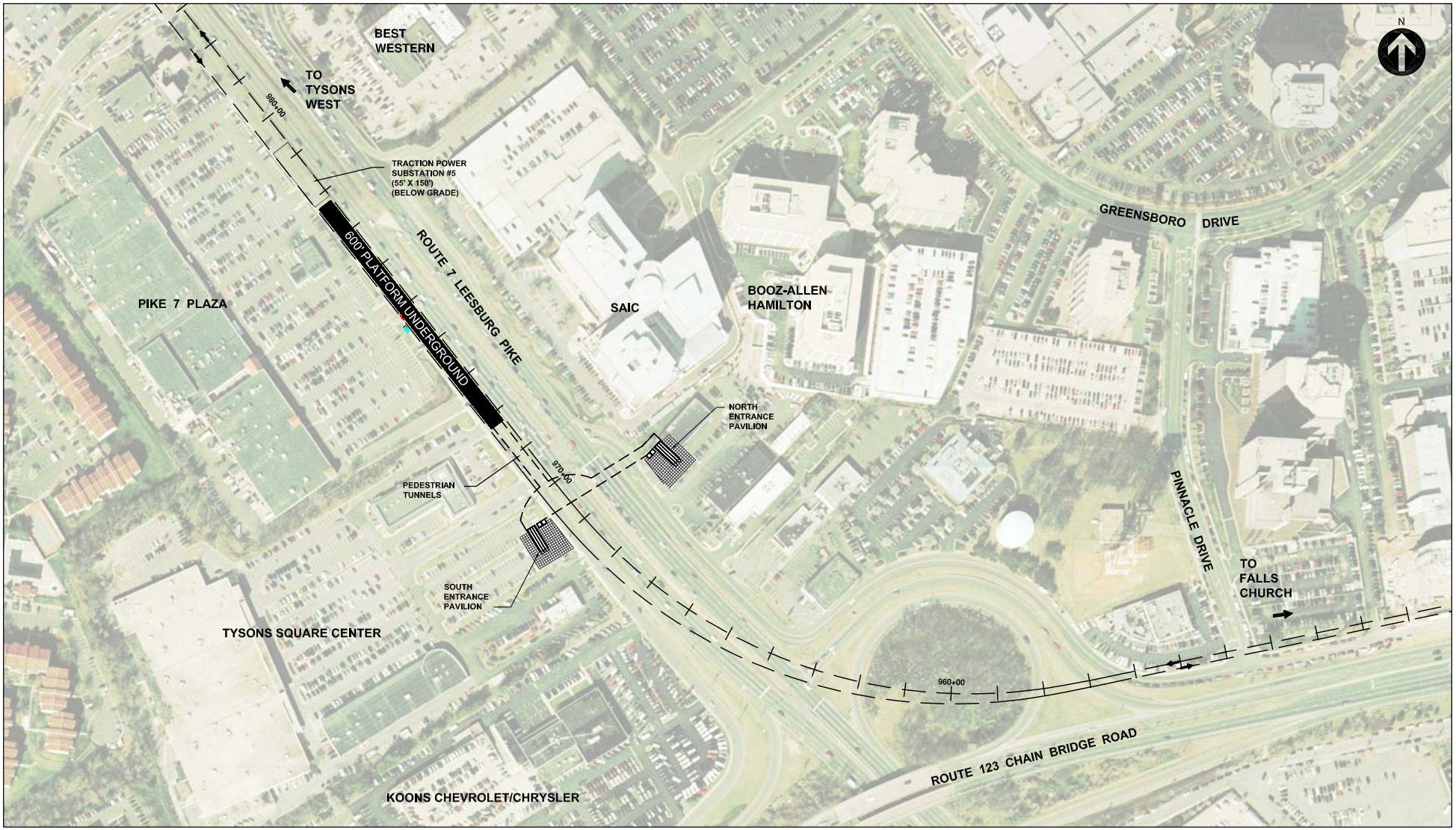
ELEVATION
TYSONS WEST STATION

SCALE: 1"=20' (10 0 10 20)

DRAWING NO.: GPN-A-303-TW

091

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HALF-SIZE DRAWING

CONTRACT NO.:

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APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

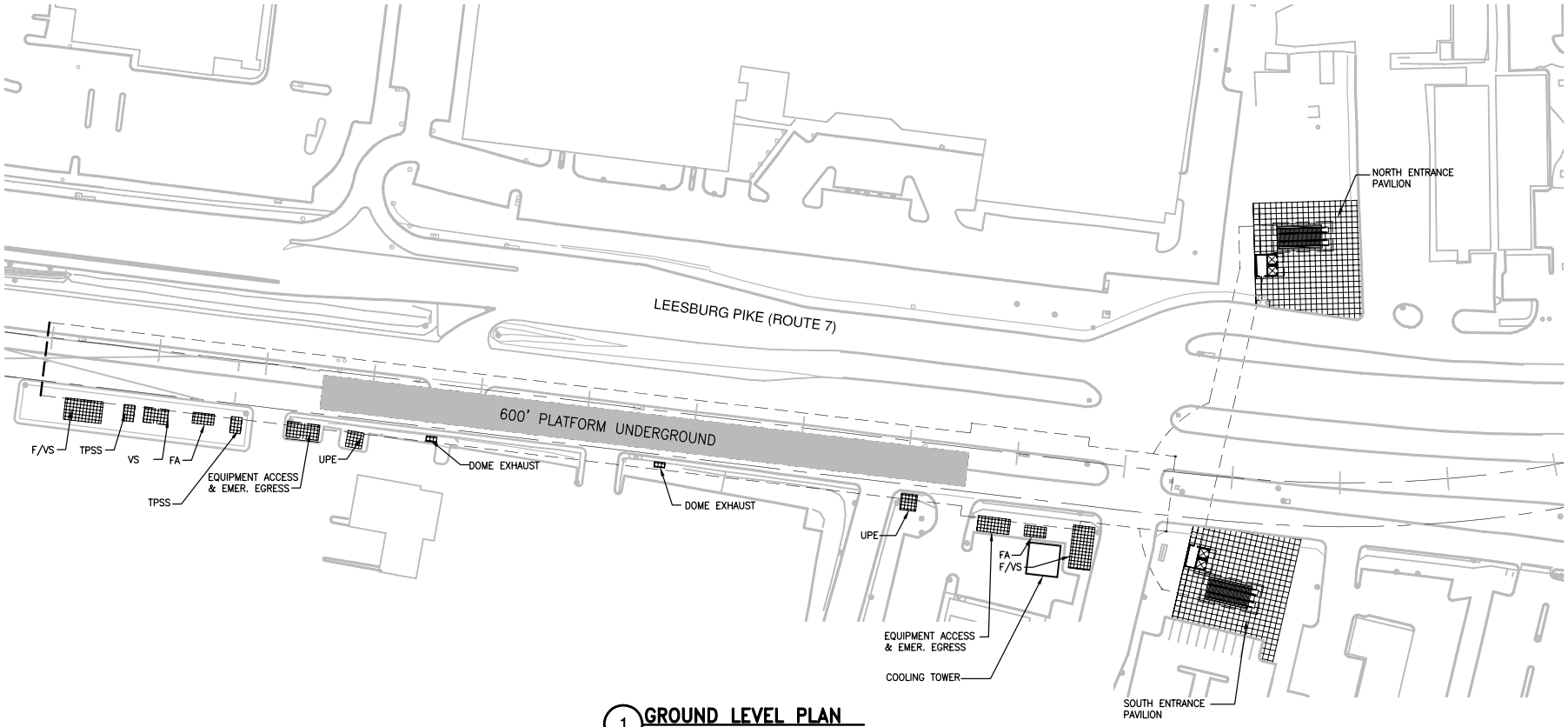
SITE PLAN
TYSONS CENTRAL 7 STATION

SCALE: 1"=100' (50 0 50 100)

DRAWING NO.: GPN-A-100-T7

092

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1 GROUND LEVEL PLAN

NOTE: ALL SURFACE PENETRATION LOCATIONS AND SIZES SUBJECT TO VERIFICATION DURING PE

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02 DATE
DRAWN: L.BRUNSON 12-19-03 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

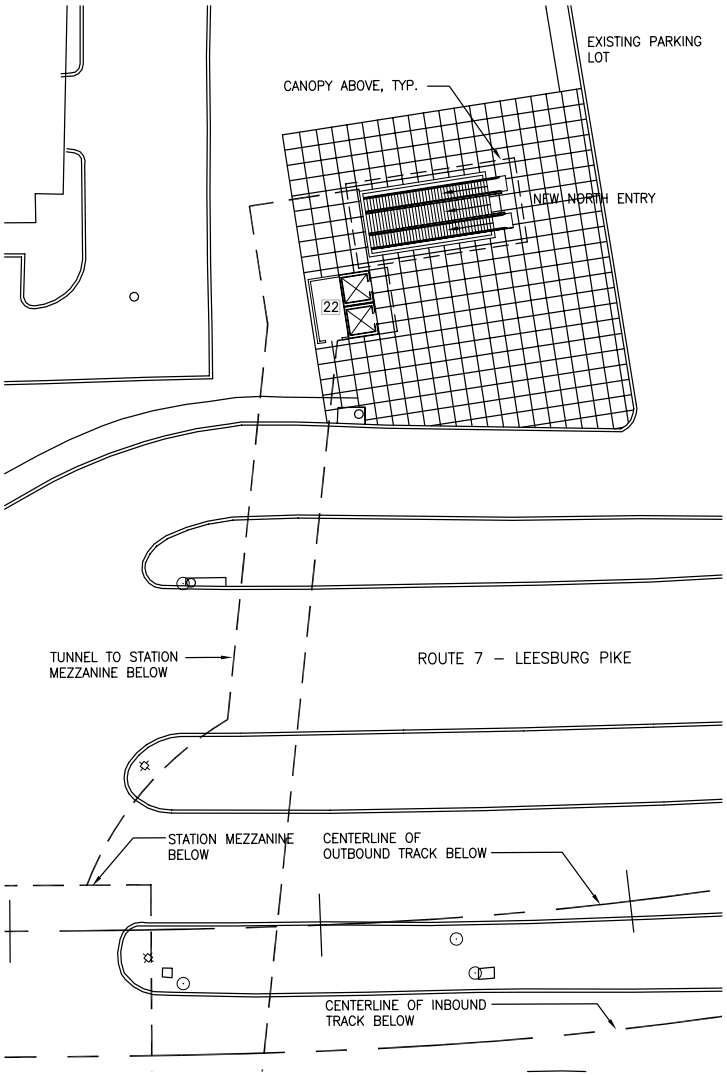
GROUND LEVEL PLAN
TYSONS CENTRAL 7 STATION

SCALE: 1"=50" 25 0 25 50

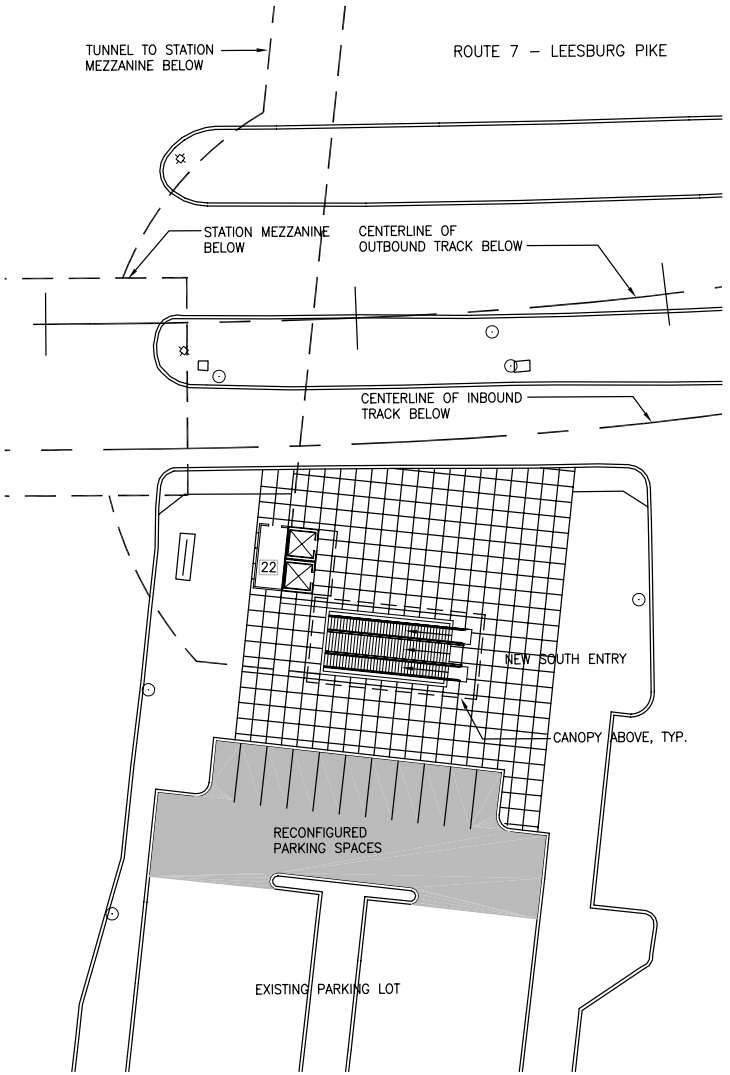
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1 NORTH ENTRY GROUND LEVEL PLAN



2 SOUTH ENTRY GROUND LEVEL PLAN

NOTE:

SEE DWG. NO. GPN–G–002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: FP 3–15–02 DATE
DRAWN: FP 12–03 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

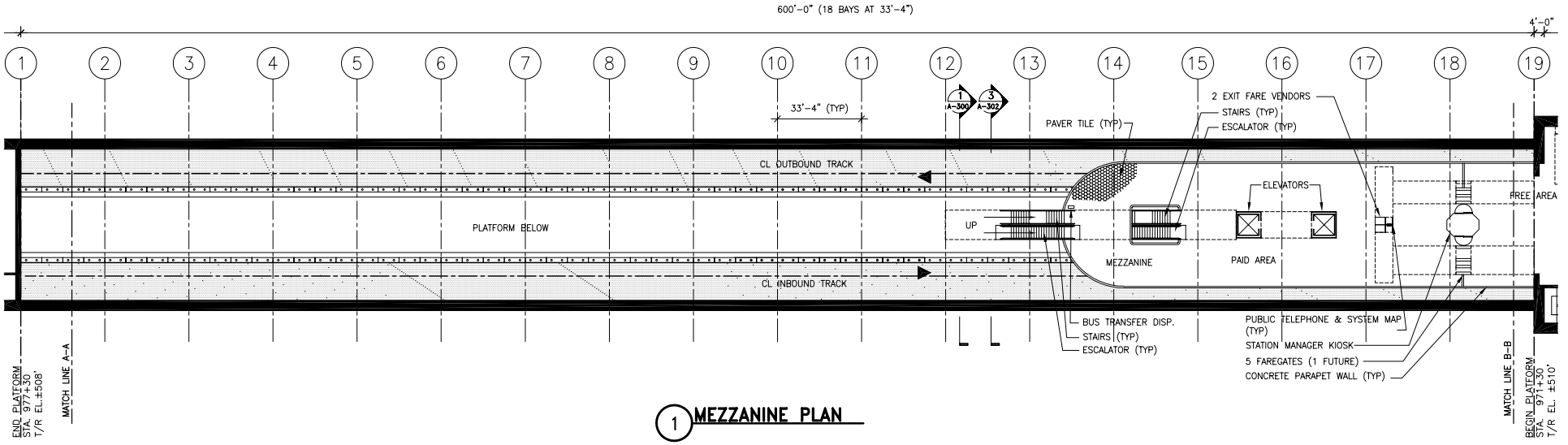
NORTH & SOUTH ENTRY GROUND LEVEL PLAN
TYSONS CENTRAL 7 STATION

SCALE: 1"=20' 10 0 10 20

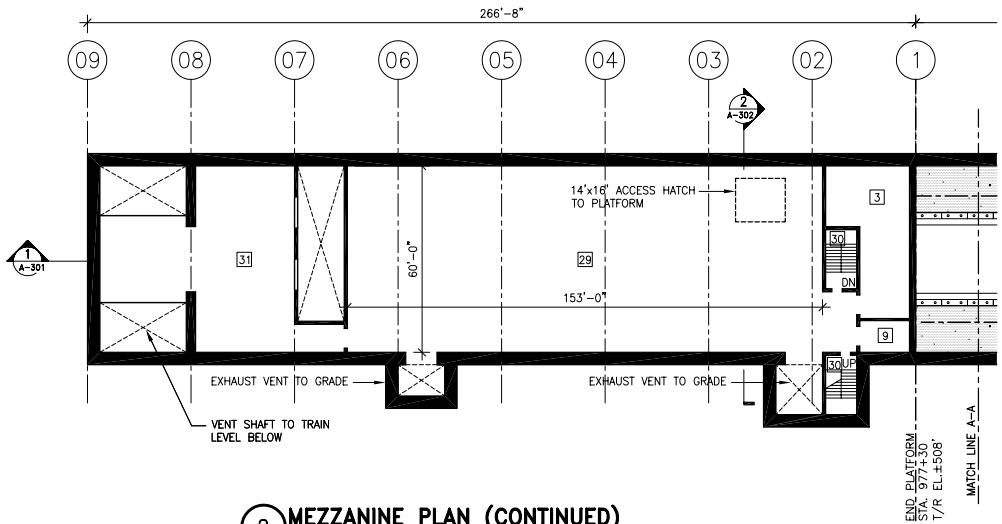
DRAWING NO.: GPN–A–102–T7

094

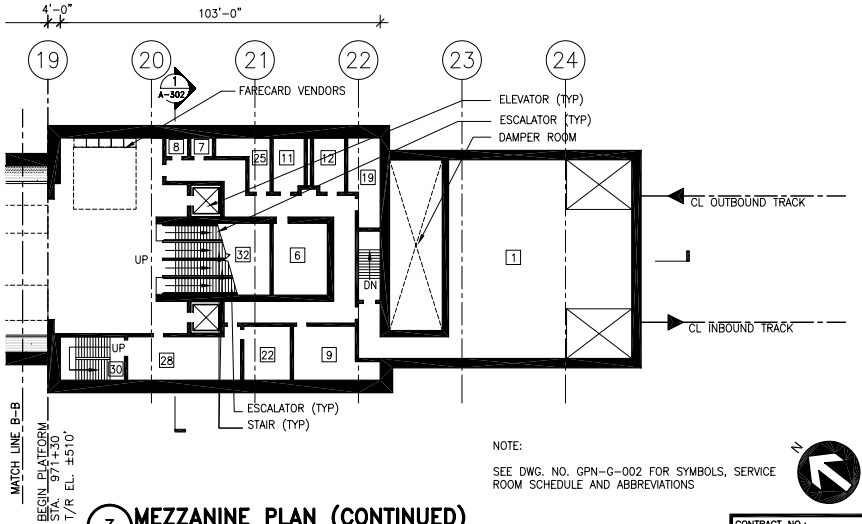
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1 MEZZANINE PLAN



2 MEZZANINE PLAN (CONTINUED)



3 MEZZANINE PLAN (CONTINUED)

NOTE:

SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS

N

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: F.PARAON 12-19-03 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

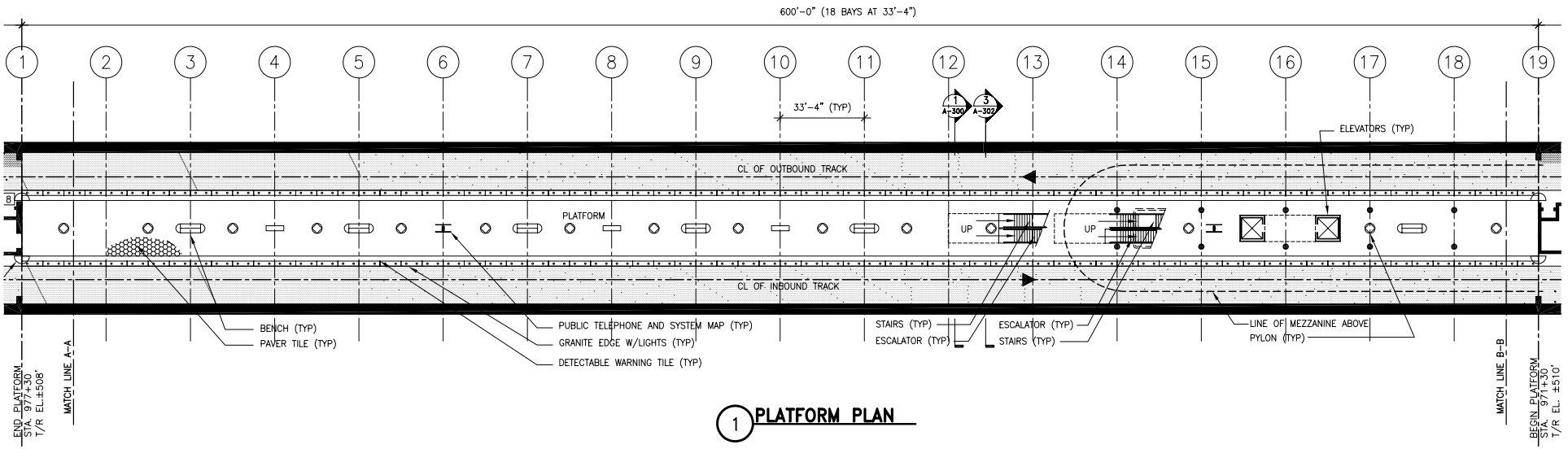
MEZZANINE PLANS
TYSONS CENTRAL 7 STATION

SCALE: 1"=20' (10 0 10 20)

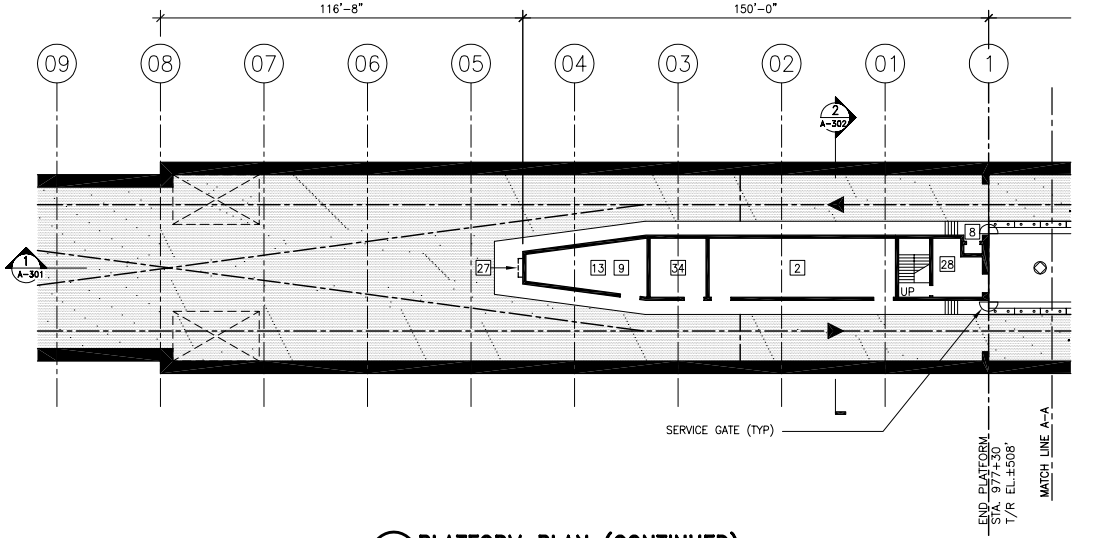
DRAWING NO.: GPN-A-200-T7

095

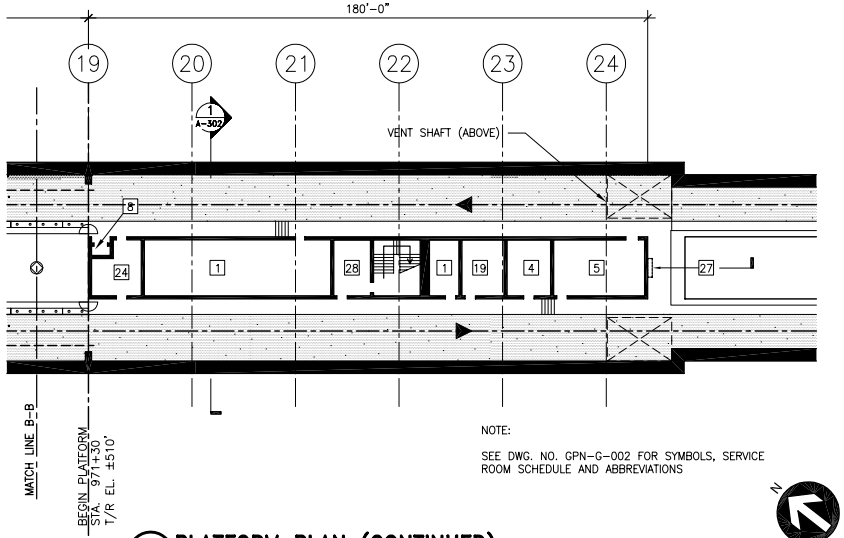
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1 PLATFORM PLAN



2 PLATFORM PLAN (CONTINUED)



NOTE:

SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS

3 PLATFORM PLAN (CONTINUED)

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02	REFERENCE DRAWINGS	REVISIONS
DRAWN: F.PARAON 12-19-03	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

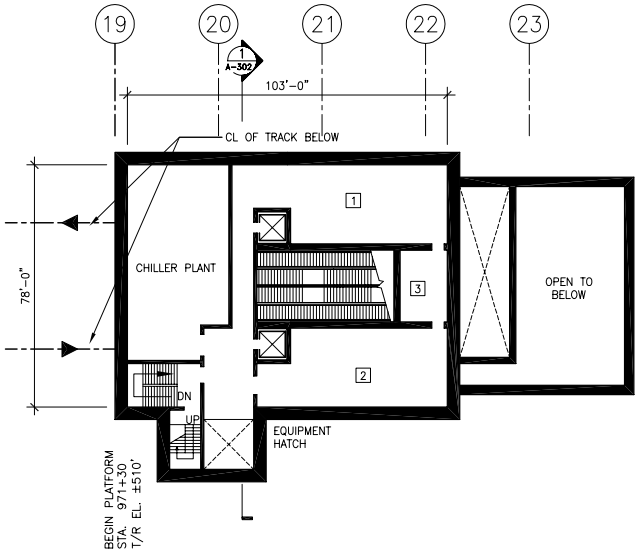
PLATFORM PLANS
TYSONS CENTRAL 7 STATION

SCALE: 1"=20' (10 0 10 20)

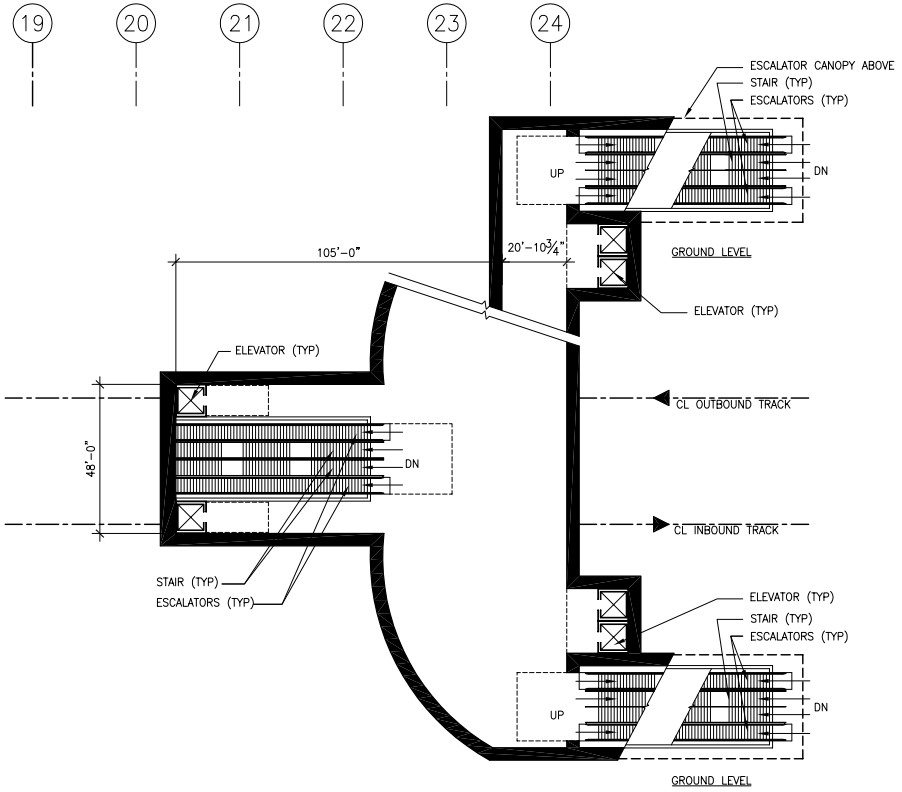
DRAWING NO.: GPN-A-201-T7

096

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1 INTERMEDIATE UPPER LEVEL EAST SERVICE ROOMS



2 PEDESTRIAN TUNNEL LEVEL

NOTE:

SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02
DRAWN: F.PARAON 12-19-03
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

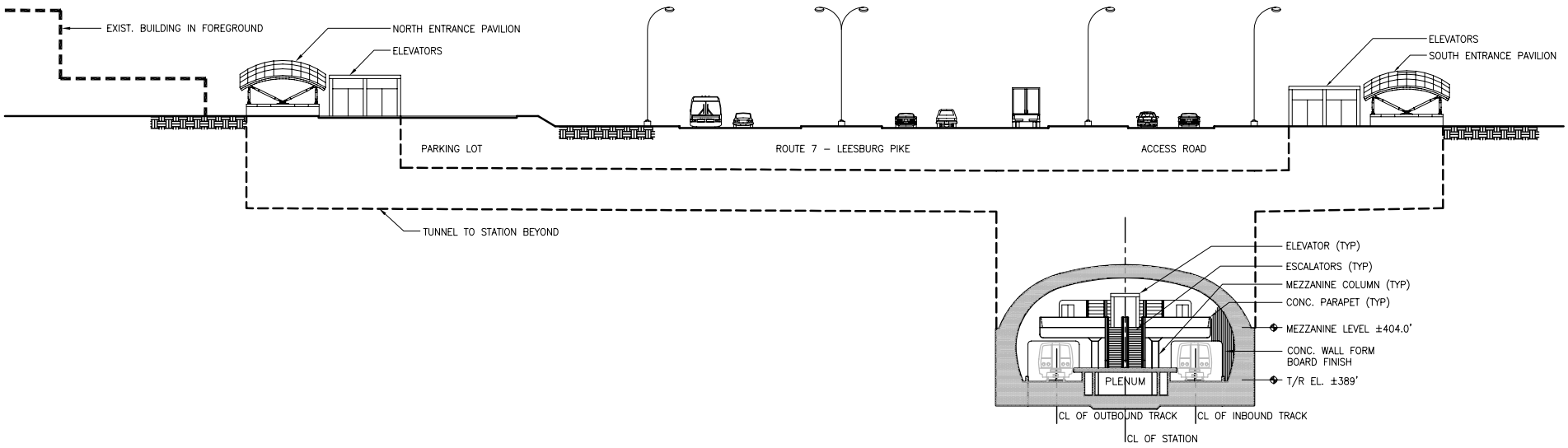
ENTRY PLANS & SERVICE ROOMS
TYSONS CENTRAL 7 STATION

SCALE: 1"=20' (10 0 10 20)

DRAWING NO.: GPN-A-202-T7

097

\\D2psvr02\CTC CAD\002_dulles\FEIS GenPlans 06-04\Facilities\Tysons Central-7\GPN-A-202-TC.dwg, SERVICE_ENTRY PLAN, 08/03/04 03:04:36 PM, lakeisN



1 CROSS SECTION THRU ROUTE 7 – LOOKING INBOUND

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W.GALLAGHER 10-22-01 DATE
DRAWN: F.PARAON 12-19-03 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

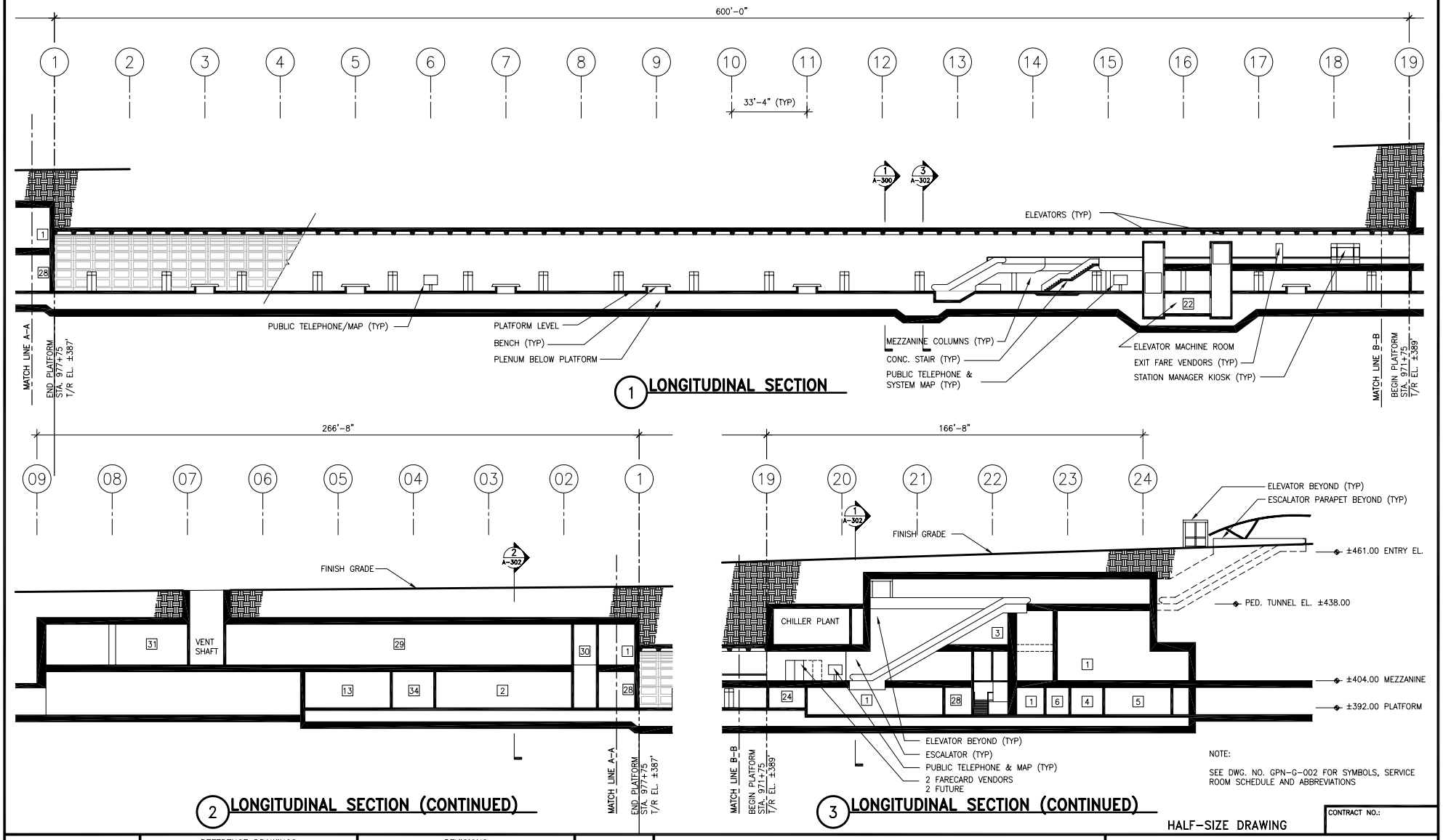
CROSS SECTION
TYSONS CENTRAL 7 STATION

SCALE: 1"=15' 5 0 5 15

DRAWING NO.: GPN-A-300-T7

098

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DESIGNED: W. GALLAGHER 3-15-02
DRAWN: F.PARAON 12-19-03
CHECKED: DATE
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REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

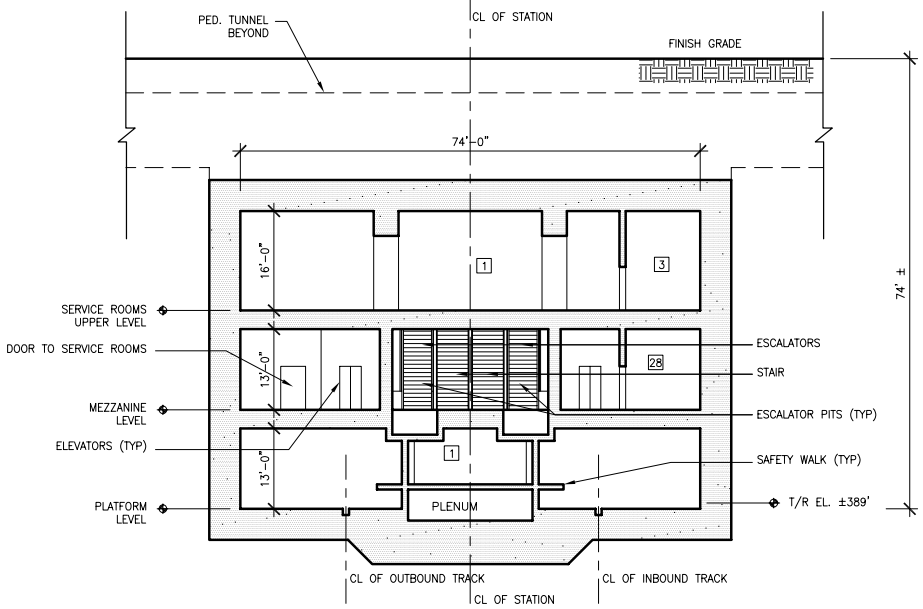
LONGITUDINAL SECTION
TYSONS CENTRAL 7 STATION

SCALE: 1"=20' (10 0 10 20)

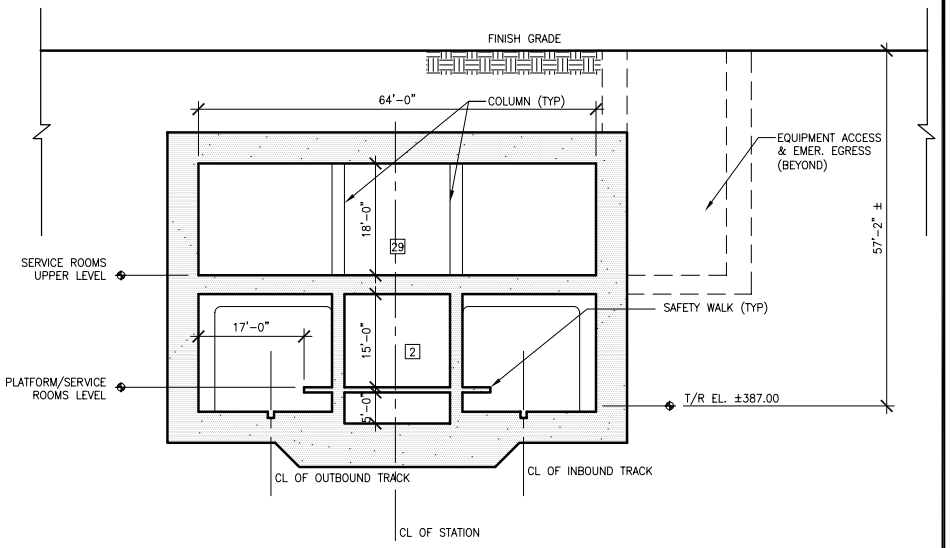
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099

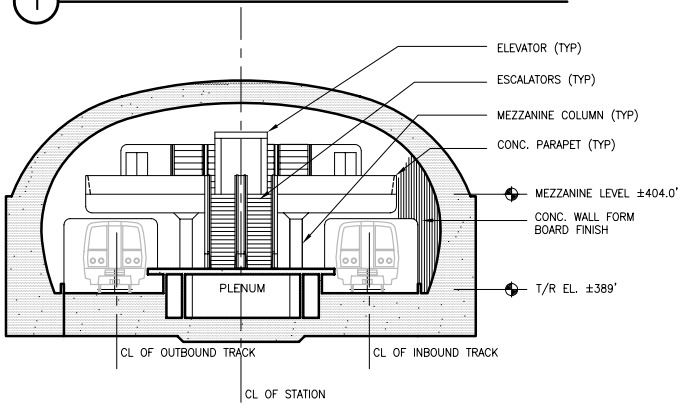
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1 EAST SERVICE ROOMS TRANSVERSE SECTION



2 WEST SERVICE ROOMS TRANSVERSE SECTION



3 PLATFORM TRANSVERSE SECTION

NOTE:

SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02
DRAWN: F.PARAON 12-19-03
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

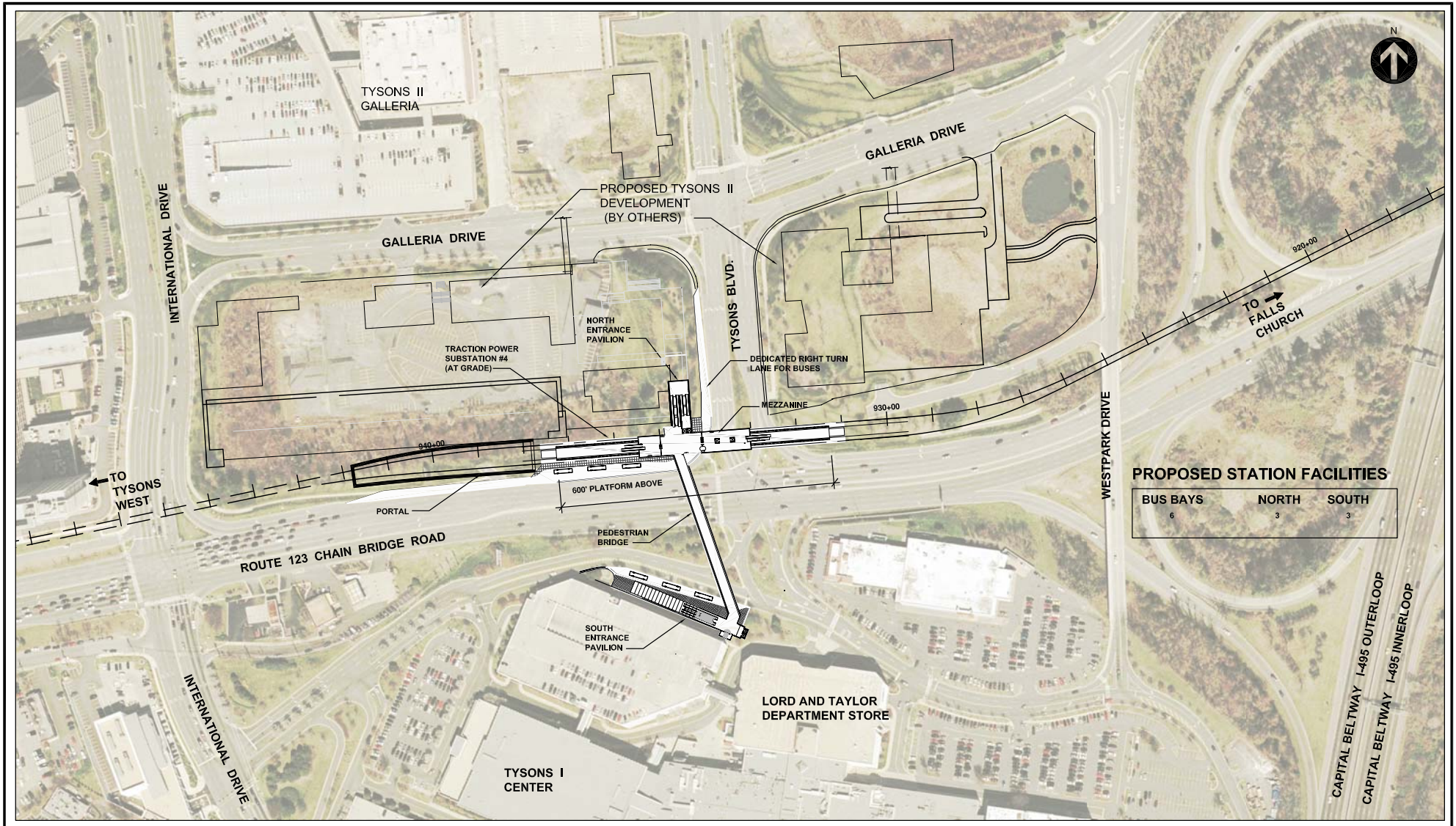
TRANSVERSE SECTIONS
TYSONS CENTRAL 7 STATION

SCALE: 1'=10' (5 0 5 10)

DRAWING NO.: GPN-A-302-TC

100

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PROPOSED STATION FACILITIES

BUS BAYS	NORTH	SOUTH
6	3	3

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: GP 12-03 DATE	REFERENCE DRAWINGS		REVISIONS		
DRAWN: GP 12-03 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
CHECKED: DATE					
APPROVED: DATE					

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

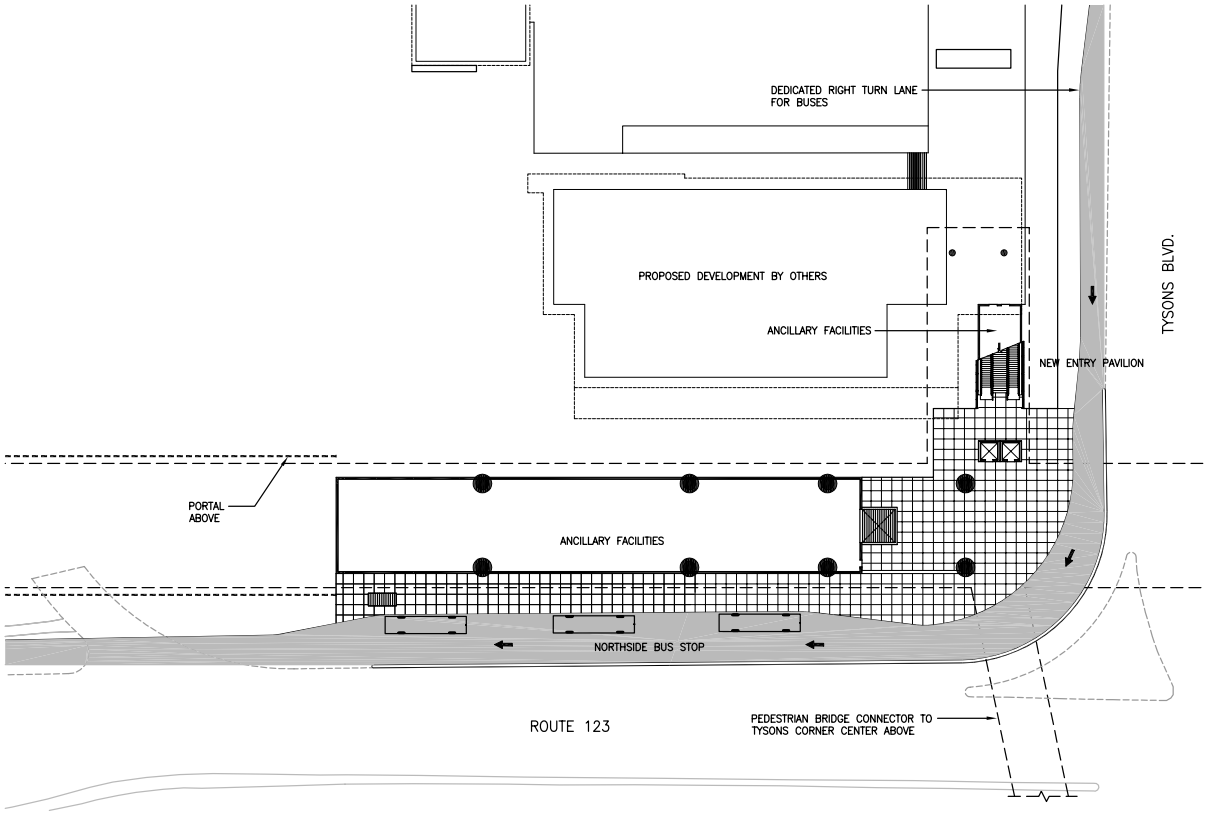
SITE PLAN
TYSONS CENTRAL STATION 123

SCALE: 1"=100' (50 0 50 100)

DRAWING NO.: GPN-A-100-T123

101

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N

1 GROUND LEVEL NORTH ENTRY PLAN

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: FP 12-03 DATE
DRAWN: FP 12-03 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

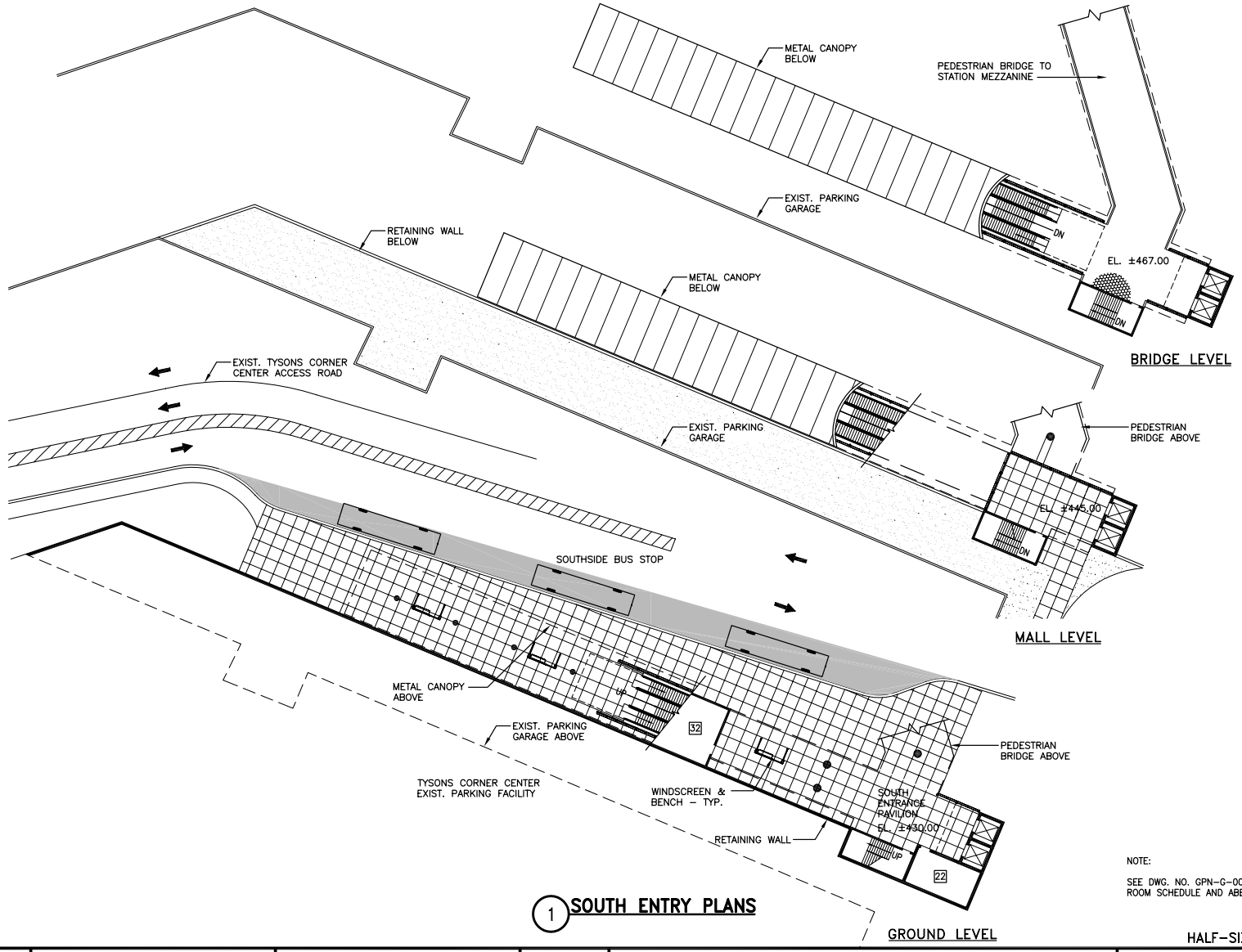
NORTH ENTRY PLAN
TYSONS CENTRAL 123 STATION

SCALE: 1"=30'-0" 10 0 10 20

DRAWING NO.: GPN-A-101-T123

102

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1 SOUTH ENTRY PLANS

NOTE:

SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS

N

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: FP 12-03 DATE
DRAWN: FP 12-03 DATE
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REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

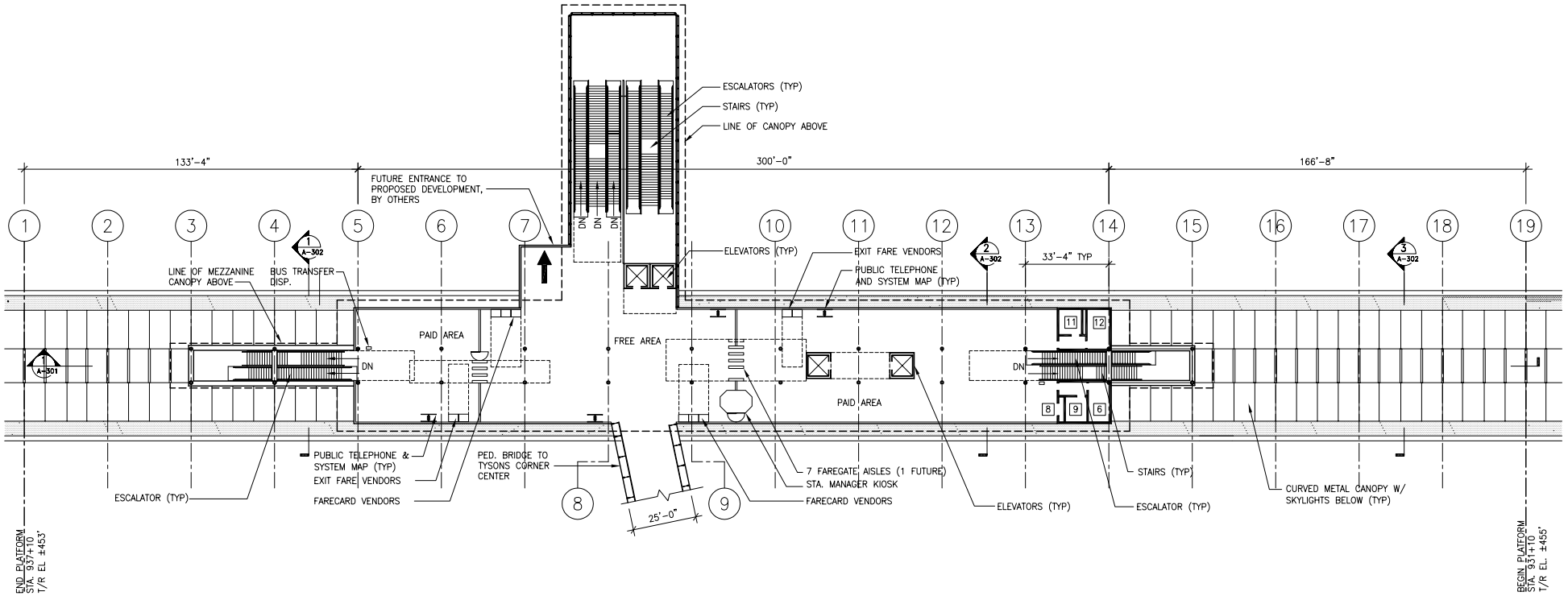
SOUTH ENTRY PLANS
TYSONS CENTRAL 123 STATION

SCALE: 1"=20'-0" 10 0 10 20

DRAWING NO.: GPN-A-102-T123

103

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1 MEZZANINE PLAN

NOTE:

SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02 DATE
DRAWN: F.PARAON 12-19-03 DATE
CHECKED: DATE
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REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

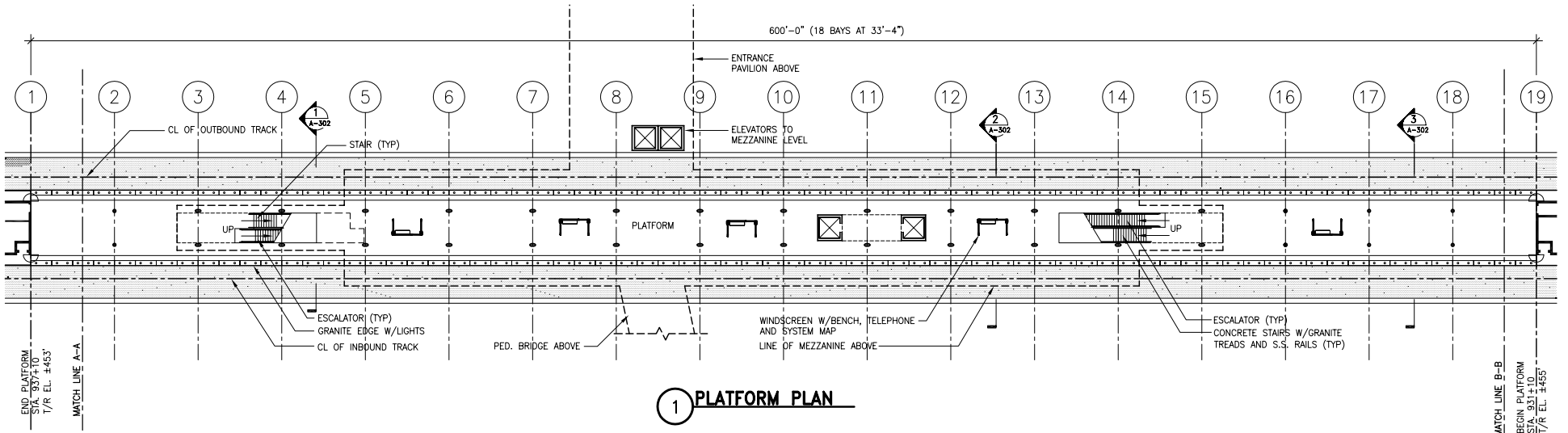
MEZZANINE PLAN
TYSONS CENTRAL 123 STATION

SCALE: 1"=20'-0" 10 0 10 20

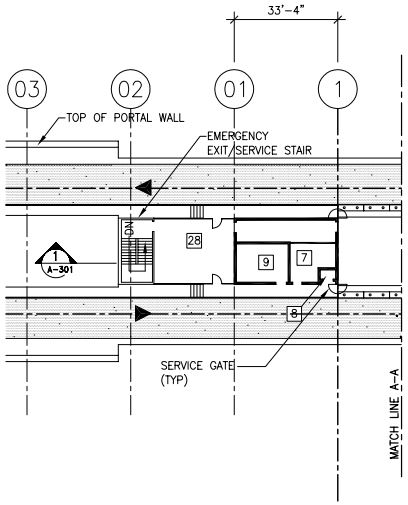
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104

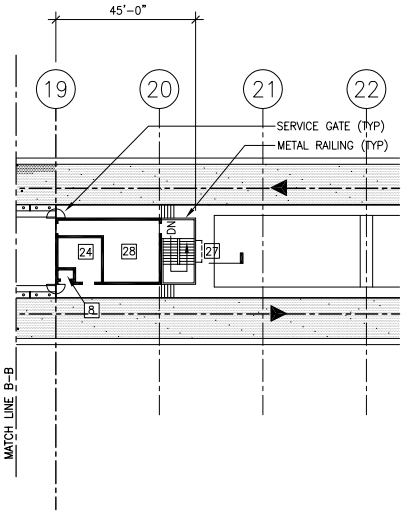
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1 PLATFORM PLAN



2 PLATFORM PLAN (CONTINUED)



3 PLATFORM PLAN (CONTINUED)

NOTE:

SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS

N

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02	REFERENCE DRAWINGS	REVISIONS
DRAWN: F.PARAON 12-19-03	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED:		
APPROVED:		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

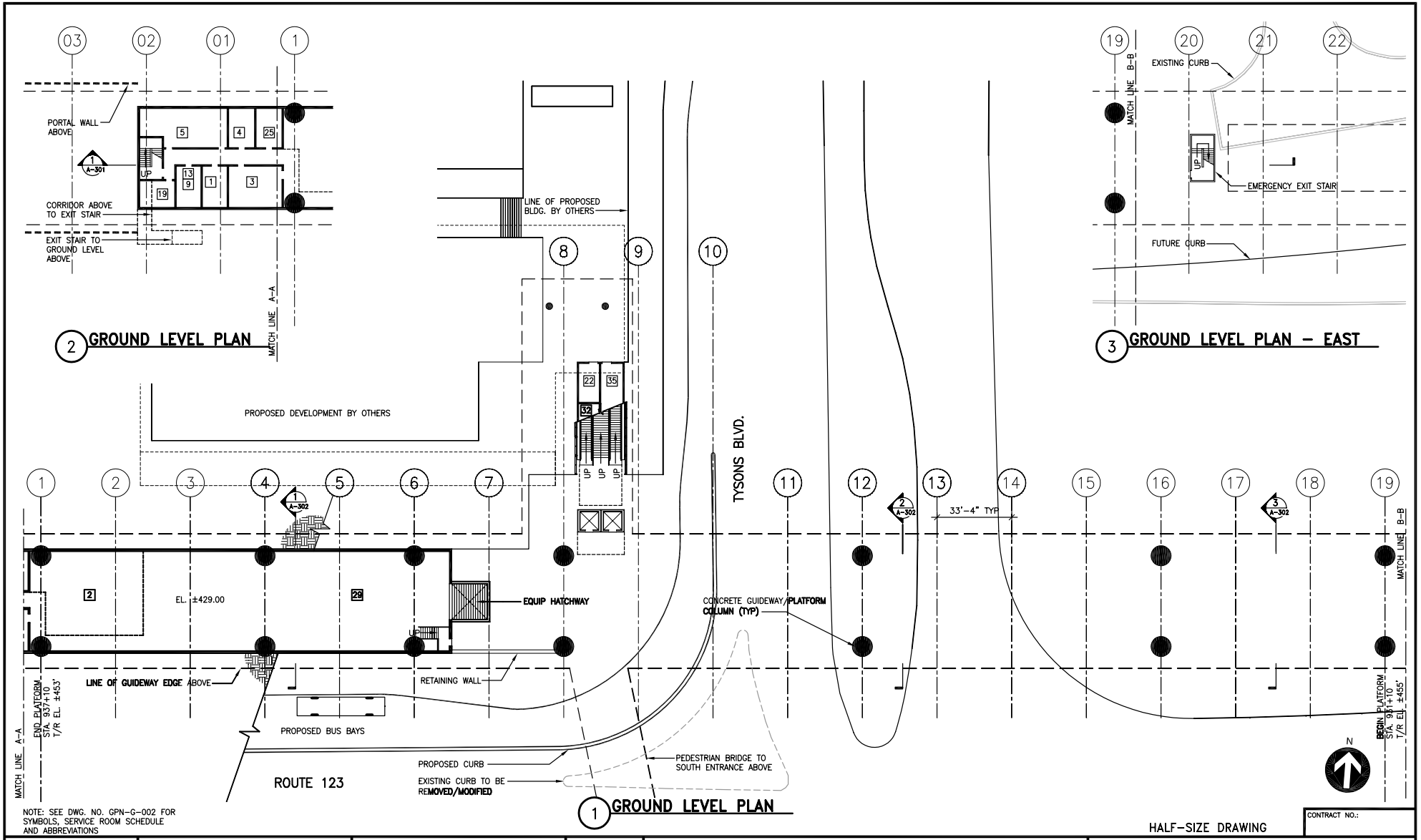
PLATFORM PLAN
TYSONS CENTRAL 123 STATION

SCALE: 1"=20'-0" (10 0 10 20)

DRAWING NO.: GPN-A-201-T123

105

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NOTE: SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02	REFERENCE DRAWINGS	REVISIONS
DRAWN: F.PARAON 12-19-03	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED:		
APPROVED:		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

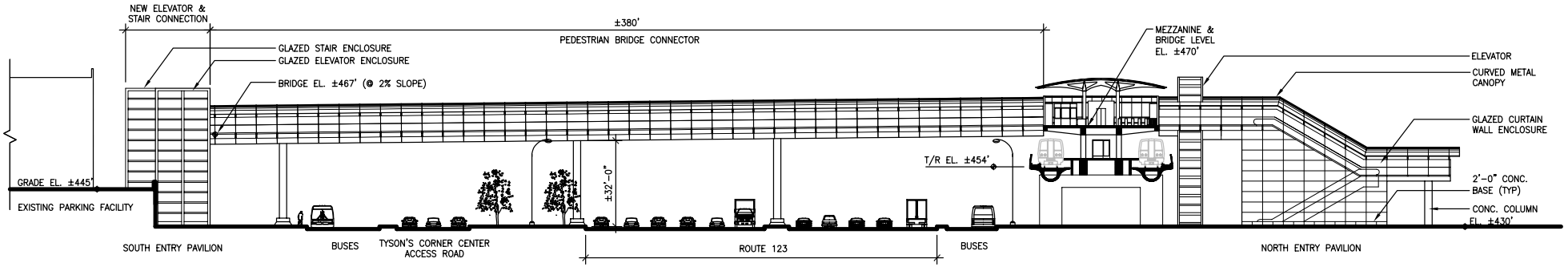
GROUND LEVEL PLAN
TYSONS CENTRAL 123 STATION

SCALE: 1"=20'-0" (10 0 10 20)

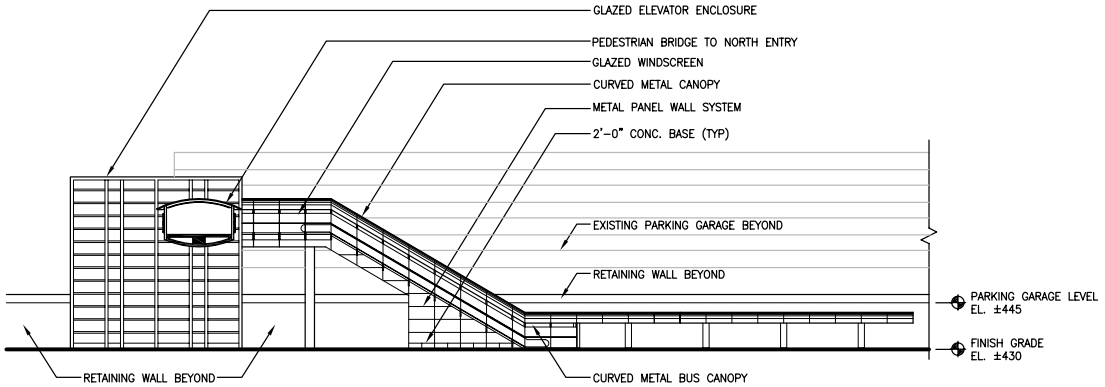
DRAWING NO.: GPN-A-202-T123

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1 SITE SECTION LOOKING WEST



2 SOUTH ENTRY ELEVATION

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02 DATE
DRAWN: F.PARAON 12-19-03 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

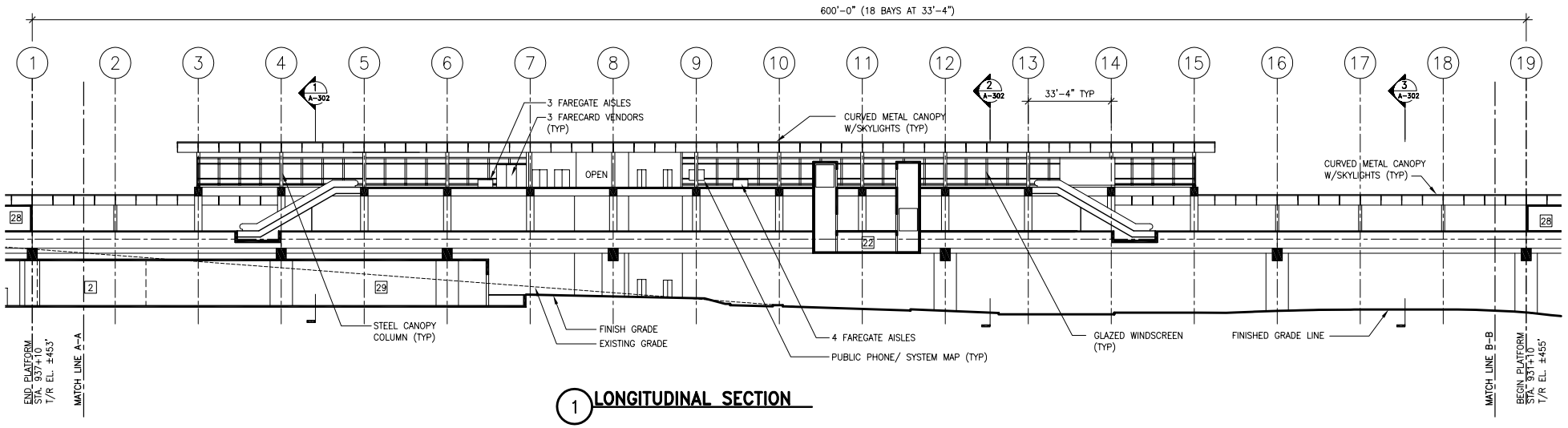
SITE SECTION
TYSONS CENTRAL 123 STATION

SCALE: 1"=20'-0" 10 0 10 20

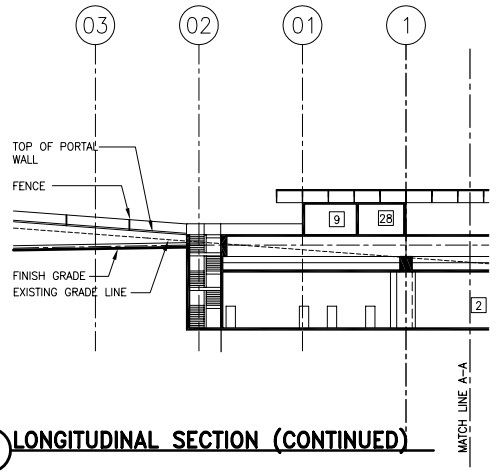
DRAWING NO.: GPN-A-300-T123

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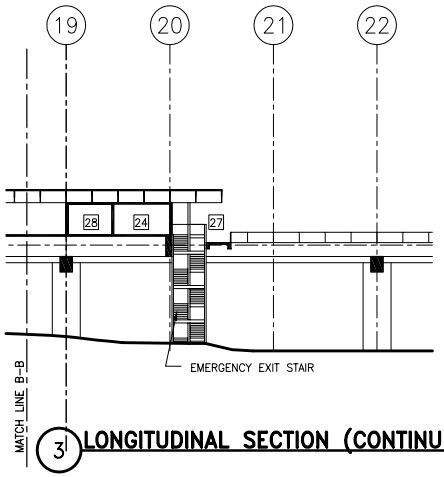
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1 LONGITUDINAL SECTION



2 LONGITUDINAL SECTION (CONTINUED)



3 LONGITUDINAL SECTION (CONTINUED)

NOTE:

SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02 DATE
DRAWN: F.PARAON 12-19-03 DATE
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REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

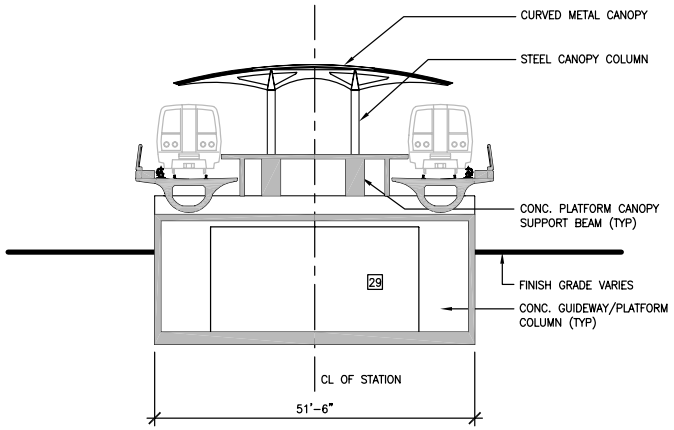
LONGITUDINAL SECTION
TYSONS CENTRAL 123 STATION

SCALE: 1"=20'-0" 10 0 10 20

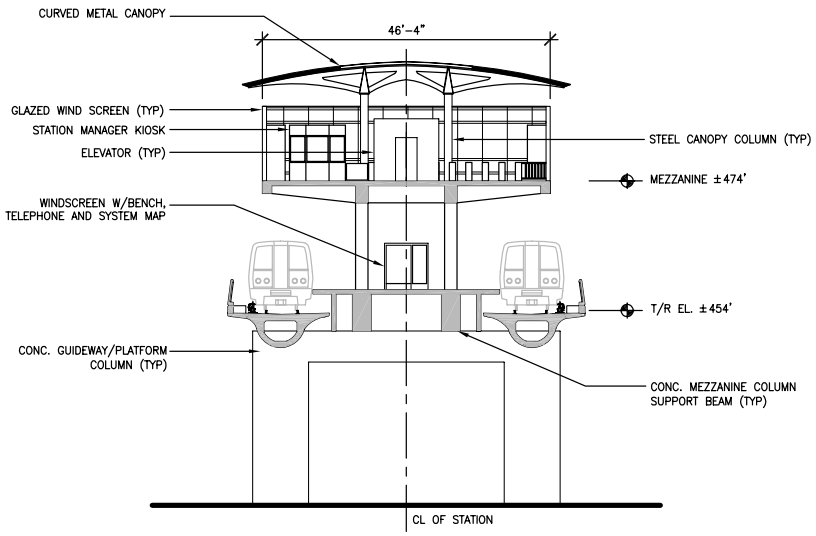
DRAWING NO.: GPN-A-301-T123

108

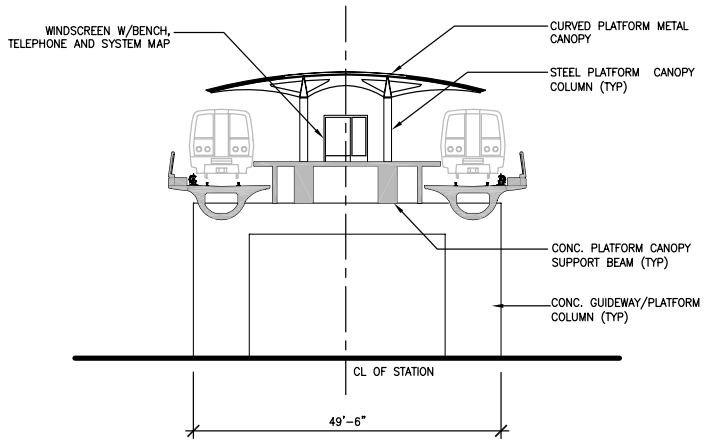
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1 PLATFORM & SERVICE TRANSVERSE SECTION



2 MEZZANINE & PLATFORM TRANSVERSE SECTION



3 PLATFORM TRANSVERSE SECTION

NOTE:

SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W. GALLAGHER 3-15-02 DATE
DRAWN: F.PARAON 12-19-03 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

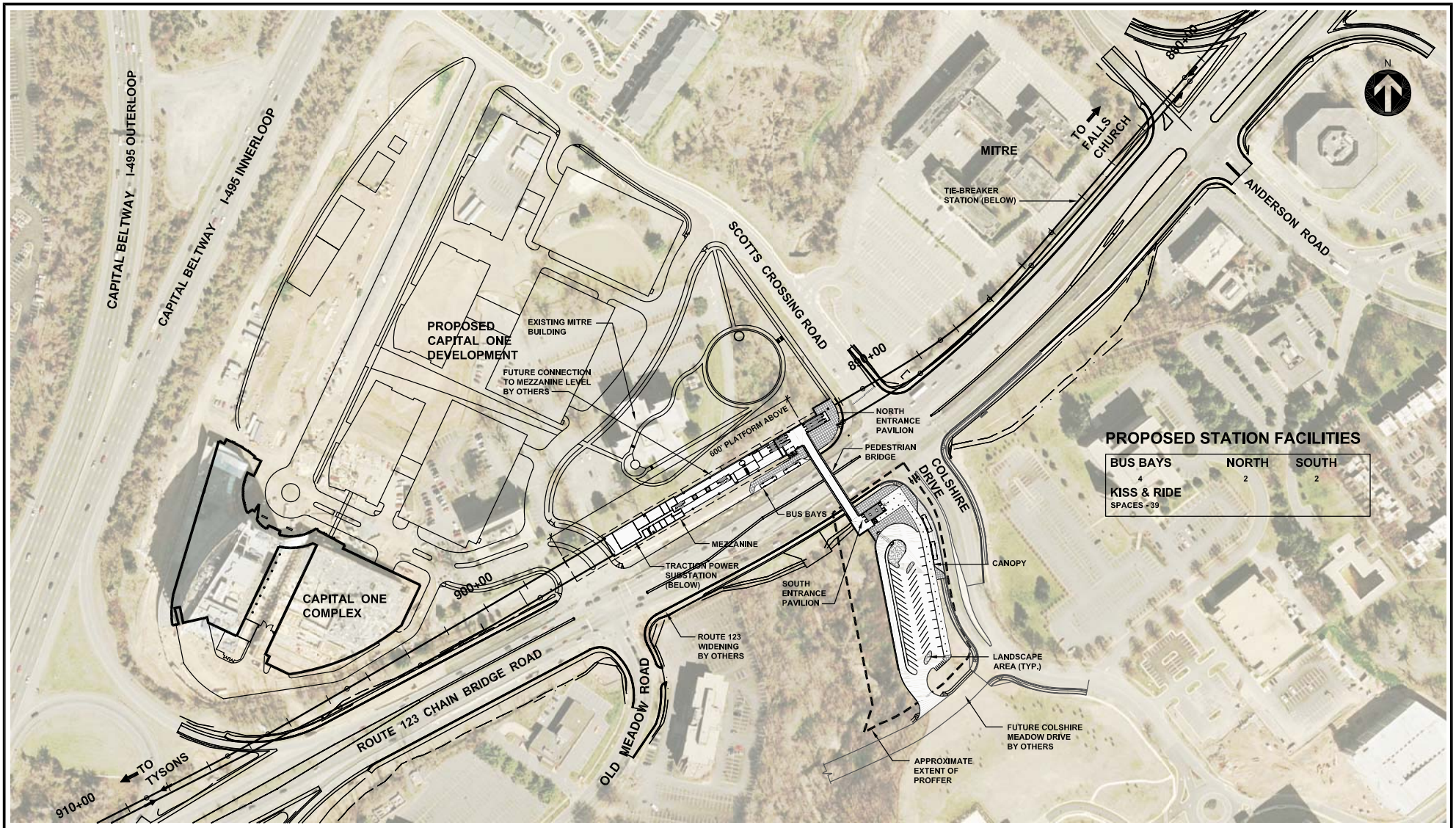
TRANSVERSE SECTIONS
TYSONS CENTRAL 123 STATION

SCALE: 1"=10'-0" (5 0 5 10)

DRAWING NO.: GPN-A-302-T123

109

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: HAK 12-03 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: MJK 12-03 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

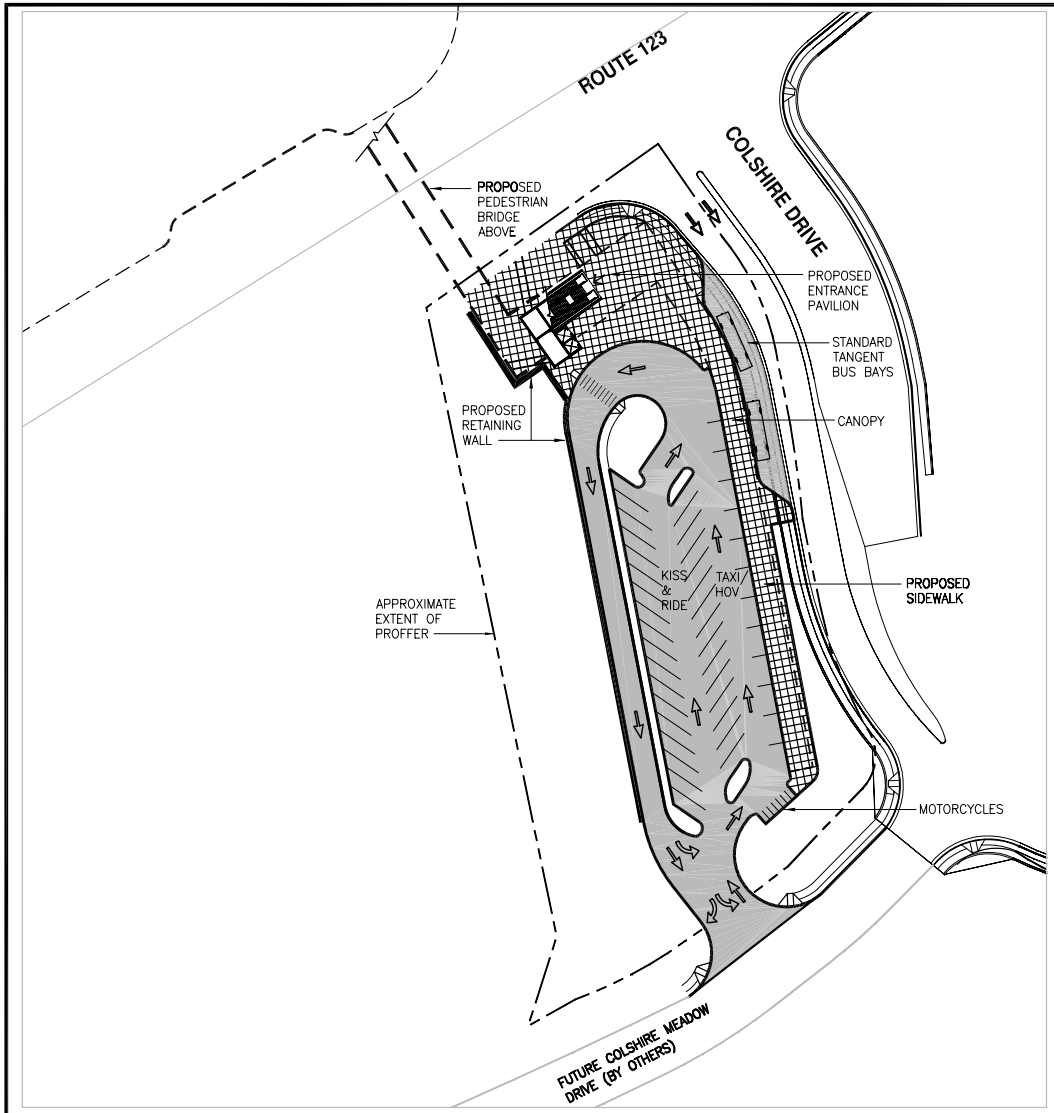
SITE PLAN
TYSONS EAST STATION

SCALE: 1"=100' (50 0 50 100)

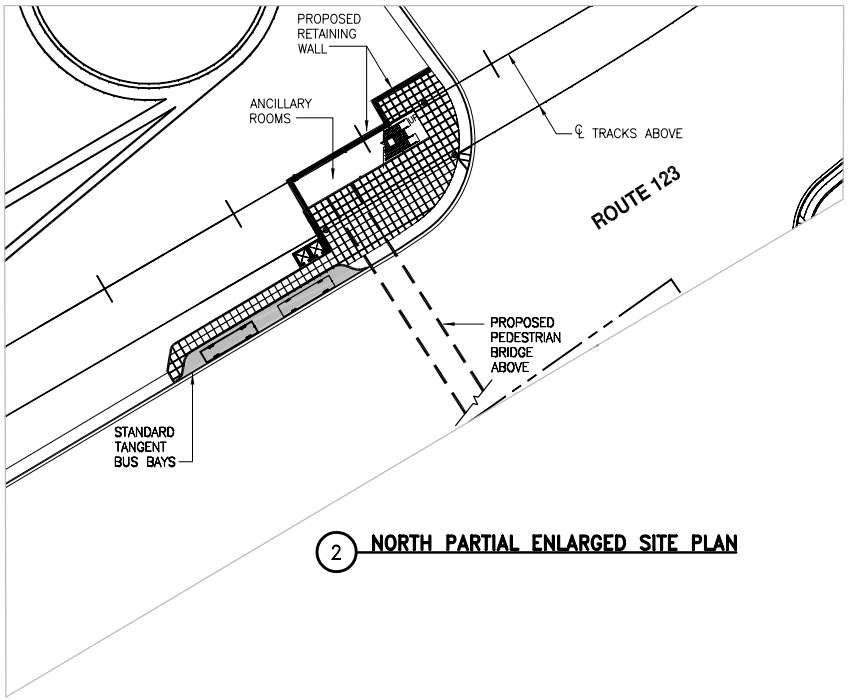
DRAWING NO.: GPN-A-100-TE

110

C:\002_dulles\FEIS Gen\Plans 06-04\Facilities\tysons east\GPN-A-100-TE.dwg, Half size, 08/09/04 03:05:26 PM, kolenam



1 **SOUTH ENLARGED SITE PLAN**



2 **NORTH PARTIAL ENLARGED SITE PLAN**

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: HAK 12-03 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: MJK 12-03 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

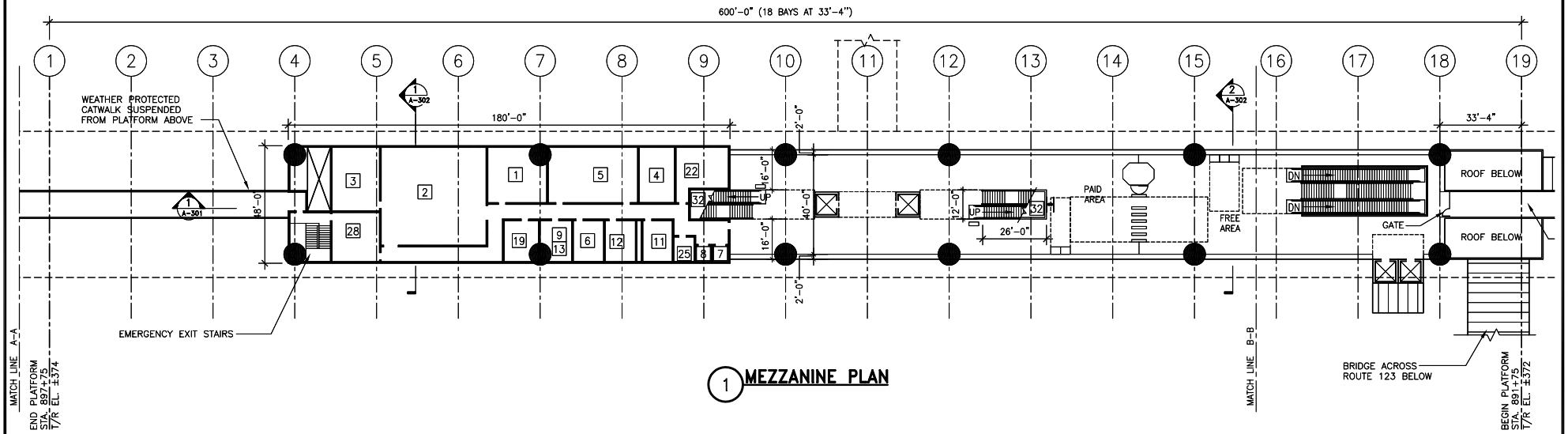
STATION ENLARGED SITE PLANS
TYSONS EAST STATION

SCALE: 1"=80' (0 20 40 80)

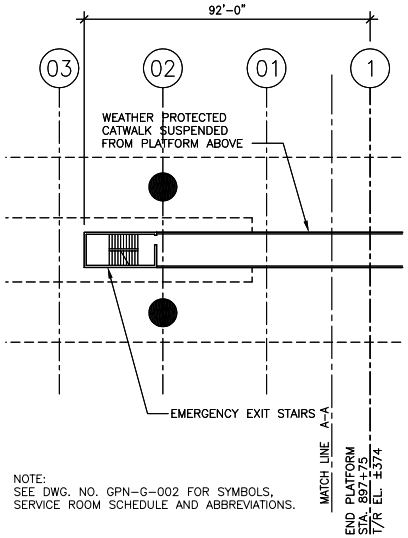
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111

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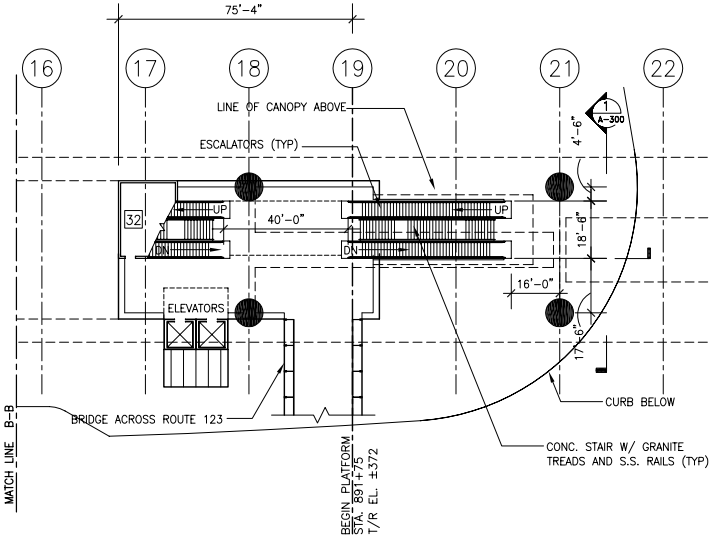


1 MEZZANINE PLAN

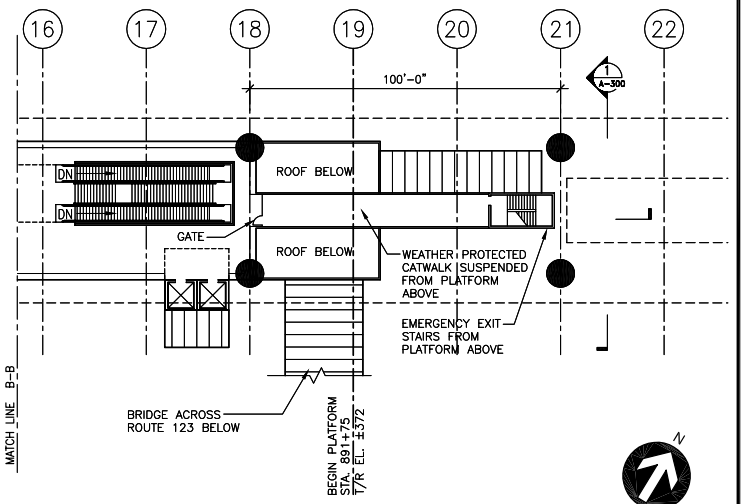


NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

2 MEZZANINE PLAN (CONTINUED)



3 BRIDGE LEVEL PLAN



4 MEZZANINE PLAN (CONTINUED)

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W.GALLAGHER 3-15-02	REFERENCE DRAWINGS	REVISIONS
DRAWN: F.PARAON 12-19-03	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED:		
APPROVED:		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

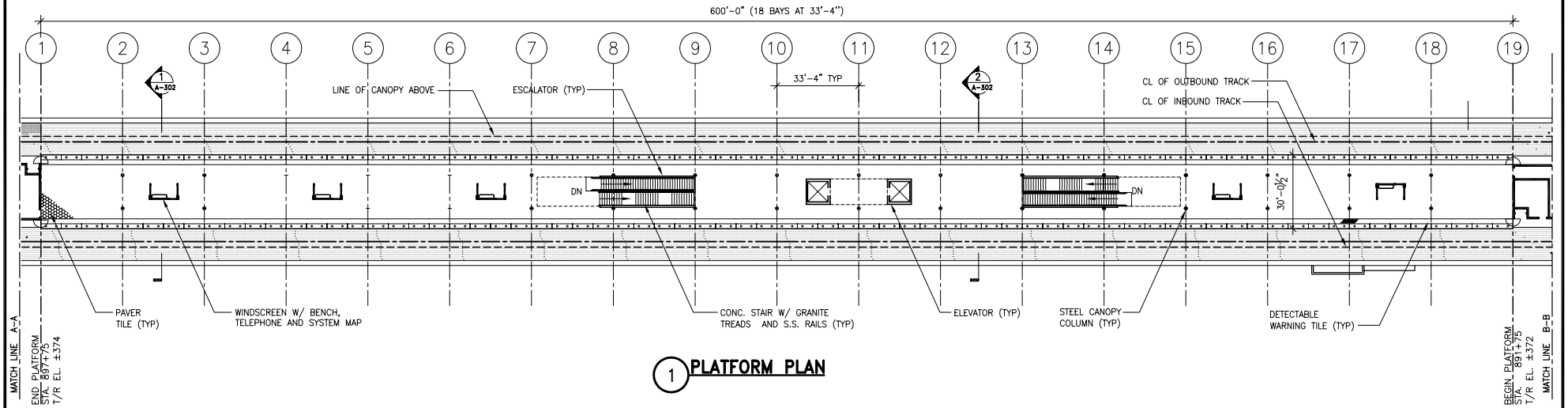
MEZZANINE PLAN
TYSONS EAST STATION

SCALE: 1"=20' (10 0 10 20)

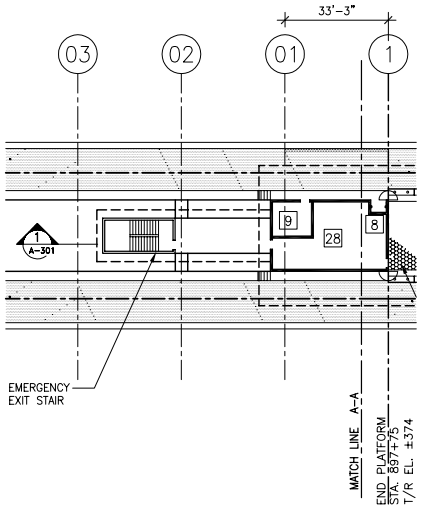
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112

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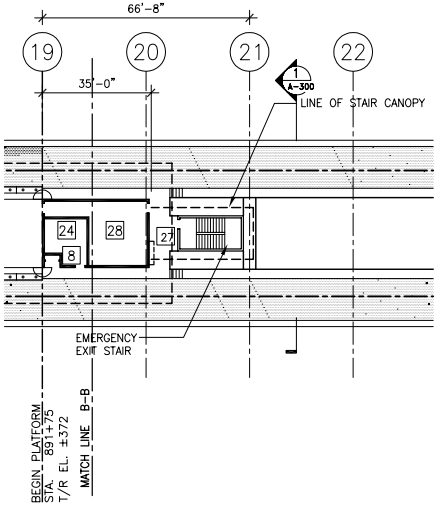


1 PLATFORM PLAN



2 PLATFORM PLAN (CONTINUED)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.



3 PLATFORM PLAN (CONTINUED)

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W.GALLAGHER	3-15-02 DATE
DRAWN: F.PARAON	12-19-03 DATE
CHECKED:	DATE
APPROVED:	DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

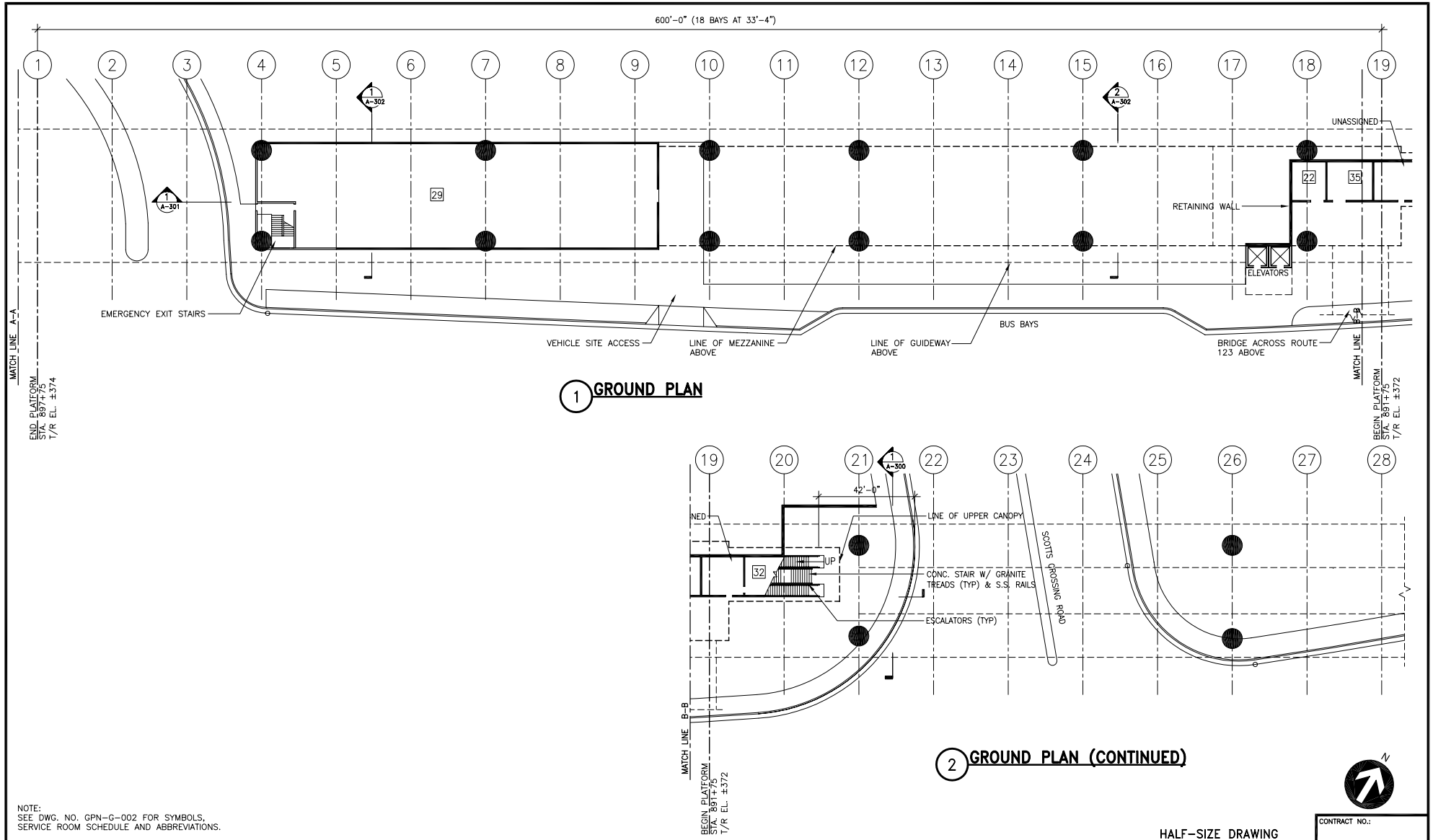
PLATFORM PLAN
TYSONS EAST STATION

SCALE: 1"=20' (10 0 10 20)

DRAWING NO.: GPN-A-201-TE

113

\\D2psvr02\CTC CAD\002_dulles\FEIS GenPlans 06-04\Facilities\tysons east\GPN-A-201-TE.dwg, PLATFORM, 08/04/04 09:11:47 AM, Rebekah



NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W.GALLAGHER 3-15-02 DATE	REFERENCE DRAWINGS		REVISIONS		
DRAWN: F.PARAON 12-19-03 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
CHECKED: DATE					
APPROVED: DATE					

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

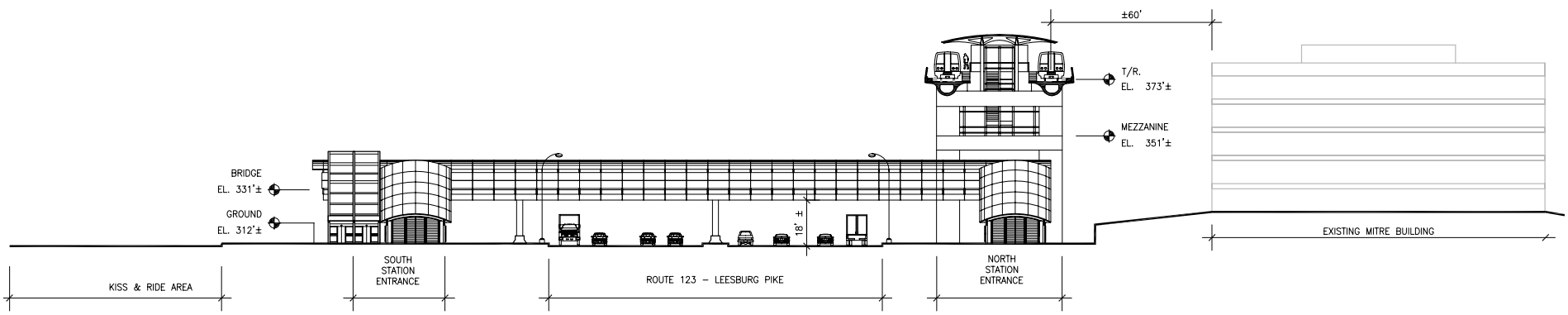
GROUND PLAN
TYSONS EAST STATION

SCALE: 1"=20' (10 0 10 20)

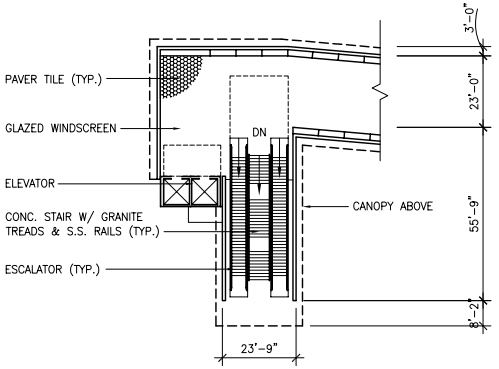
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114

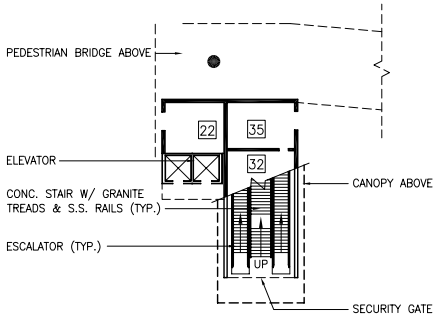
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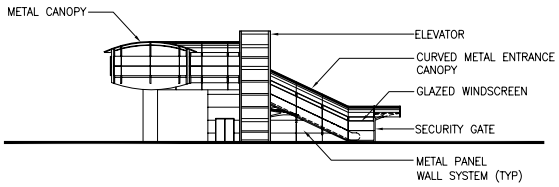
1 SITE SECTION LOOKING WEST



2 SOUTH ENTRY PLAN (BRIDGE LEVEL)



3 SOUTH ENTRY PLAN (GROUND LEVEL)



4 SOUTH ENTRY ELEVATION

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W.GALLAGHER 3-15-02 DATE
DRAWN: F.PARAON 11-12-03 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

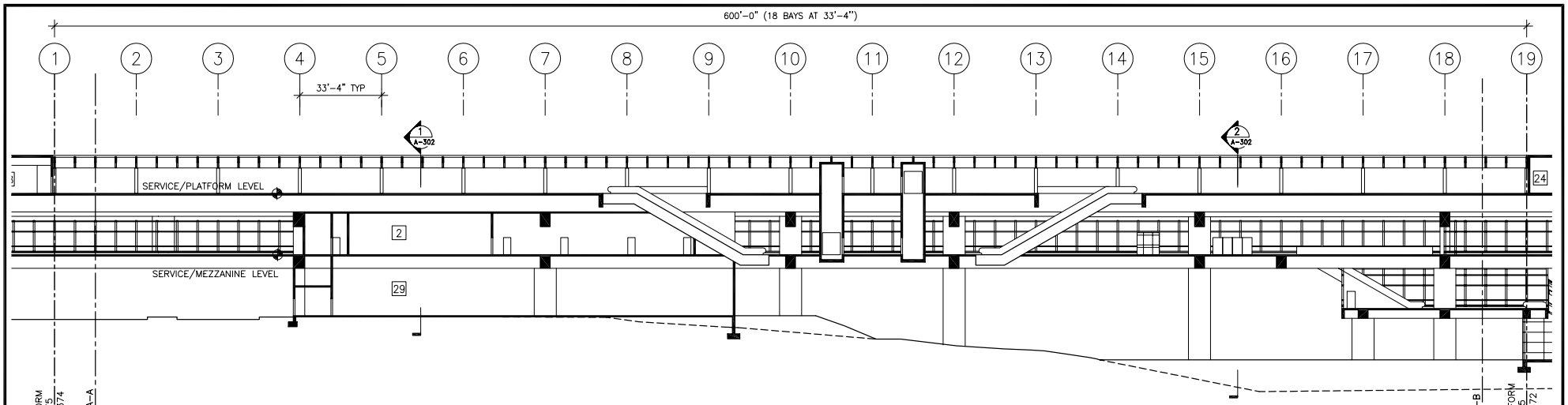
SITE SECTION/ STATION ENTRY PLANS
TYSONS EAST STATION

SCALE: 1"=20' (10 0 10 20)

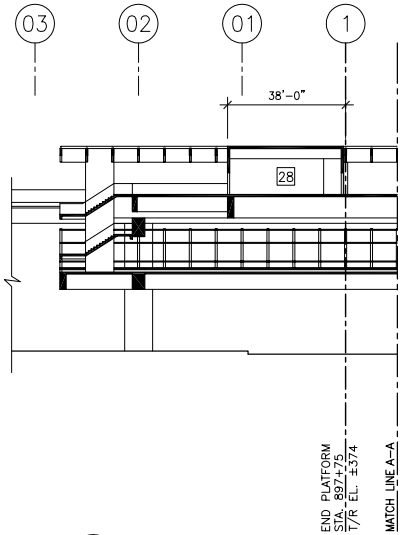
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115

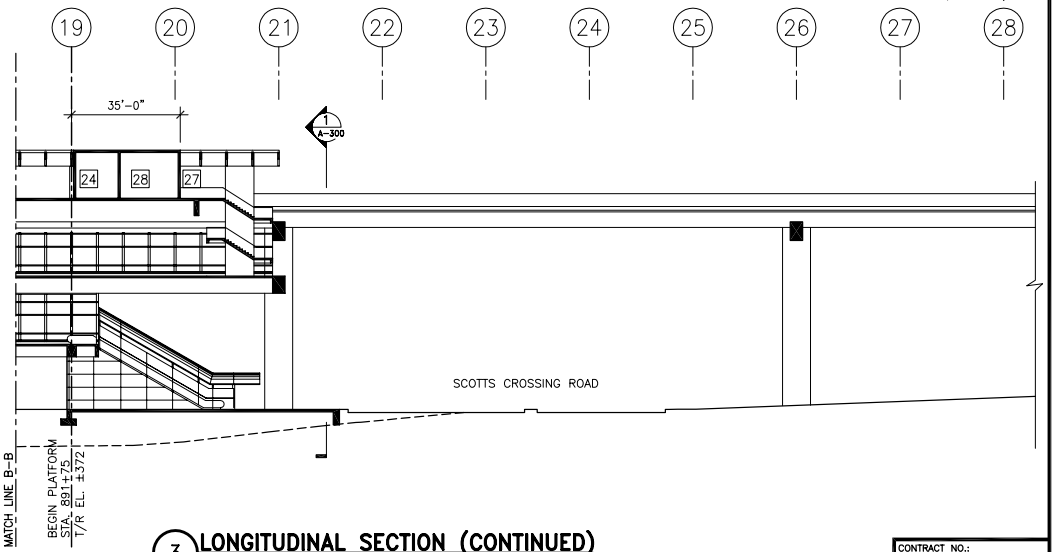
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1 LONGITUDINAL SECTION



2 LONGITUDINAL SECTION (CONTINUED)



3 LONGITUDINAL SECTION (CONTINUED)

NOTE:
SEE DWG. NO. GPN-G-002 FOR SYMBOLS, SERVICE ROOM SCHEDULE AND ABBREVIATIONS.

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W.GALLAGHER 3-15-02	REFERENCE DRAWINGS	REVISIONS
DRAWN: F.PARAON 11-18-03	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

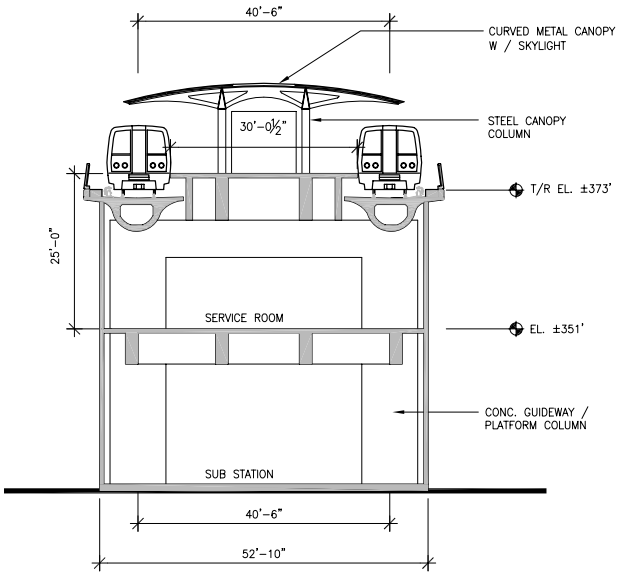
LONGITUDINAL SECTION
TYSONS EAST STATION

SCALE: 1"=20' (10 0 10 20)

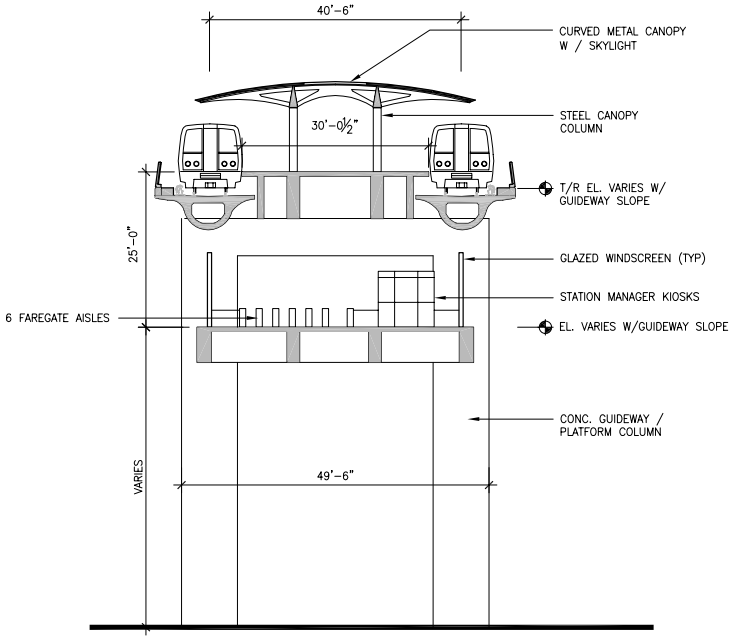
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116

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1 SERVICE ROOMS TRANSVERSE SECTION



2 MEZZANINE TRANSVERSE SECTION

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W.GALLAGHER 3-15-02 DATE
DRAWN: F.PARAON 11-12-03 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

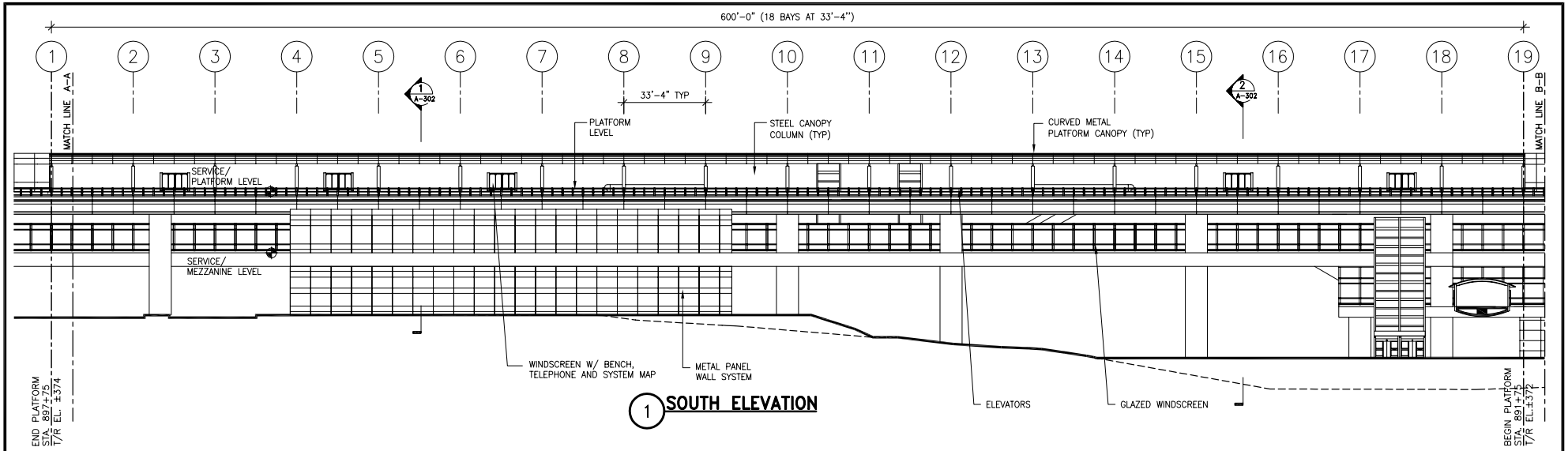
TRANSVERSE SECTIONS
TYSONS EAST STATION

SCALE: 1"=10' 5 0 5 10

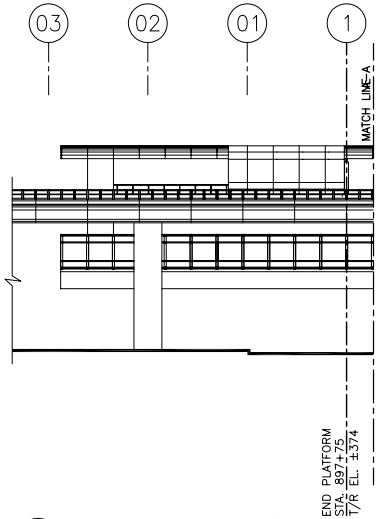
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117

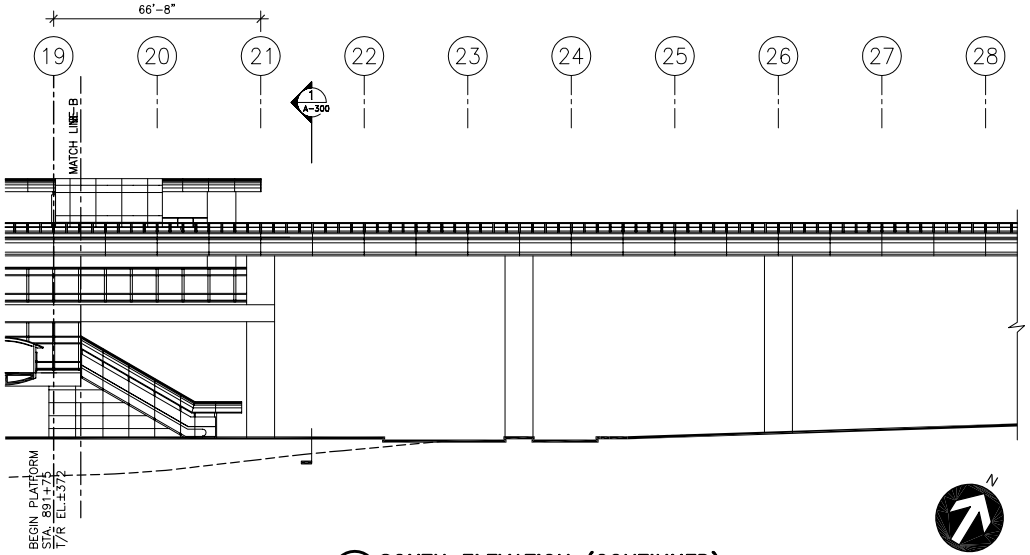
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1 SOUTH ELEVATION



2 SOUTH ELEVATION (CONTINUED)



3 SOUTH ELEVATION (CONTINUED)

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: W.GALLAGHER 3-15-02 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: F.PARAON 12-19-03 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Dana C Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

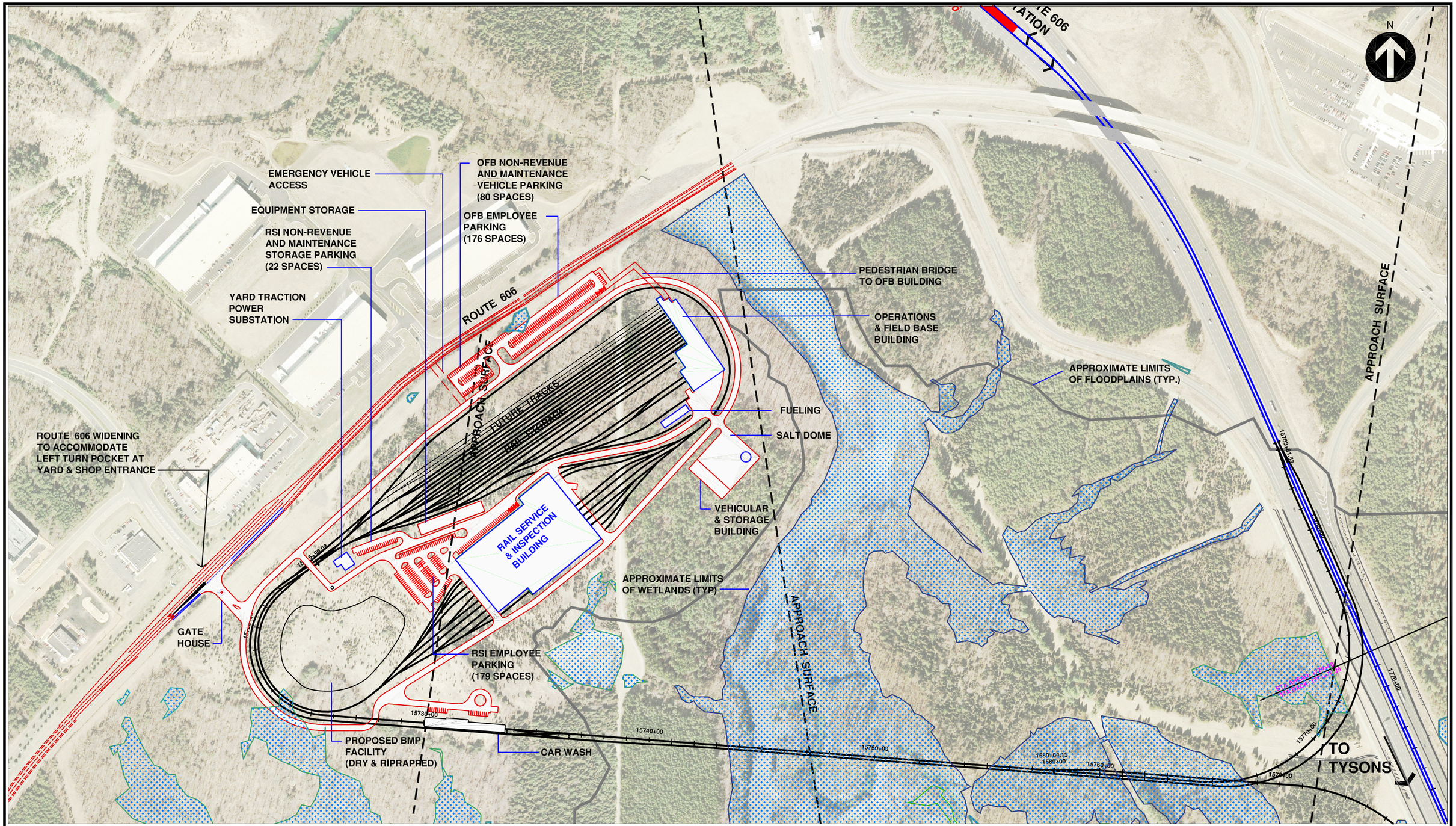
ELEVATION
TYSONS EAST STATION

SCALE: 1"=20' (10 0 10 20)

DRAWING NO.: GPN-A-303-TE

118

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HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: JG, CRM	4-29-02	DATE
DRAWN: MJK, BW, GP	4-29-02	DATE
CHECKED:	12-16-03	DATE
APPROVED:		DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED

Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

SITE PLAN
RAIL YARD & SHOP SITE PLAN

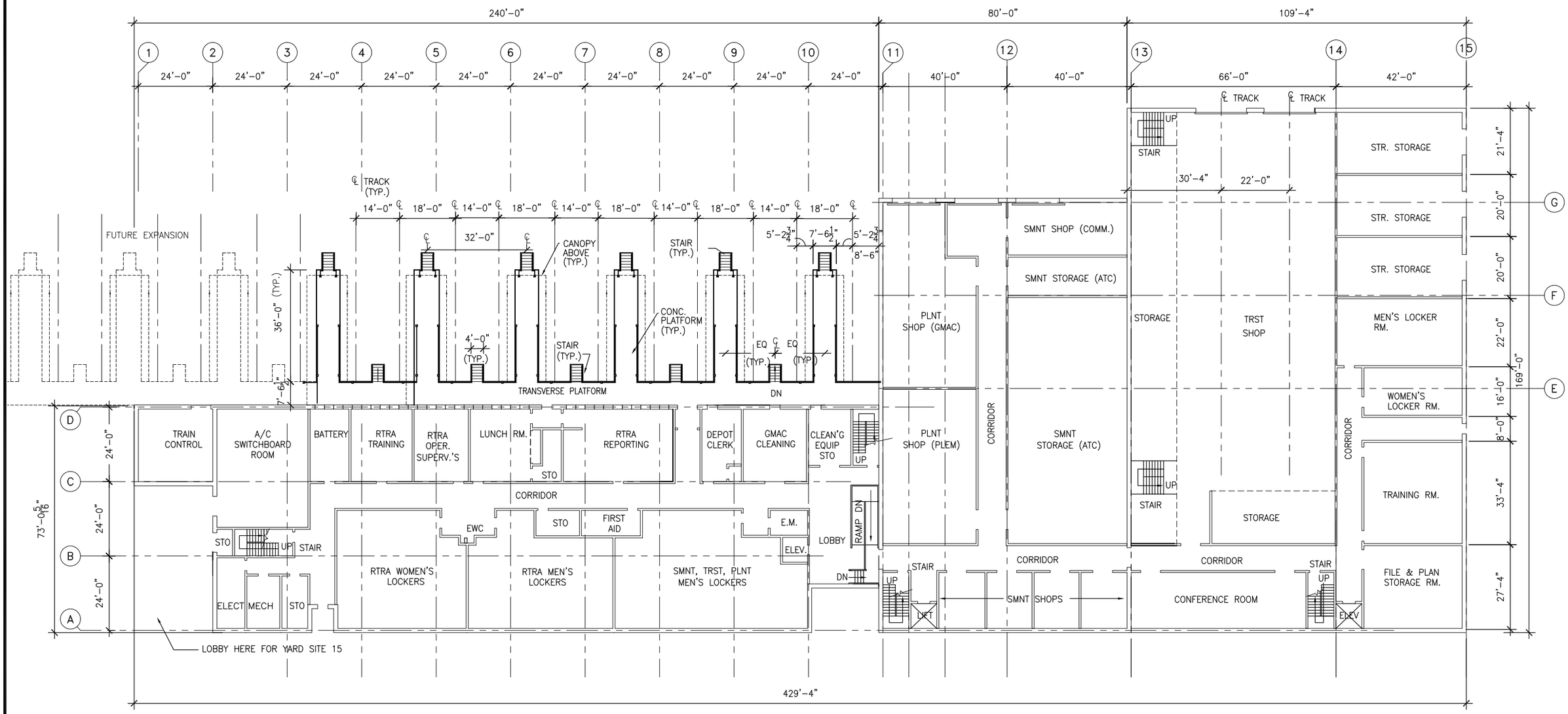
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DRAWING NO.: GPN-A-100-LY

119

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\\D2psvr02\CTC CAD\002_dulles\FEIS GenPlans 06-04\Facilities\YARD AND SHOP\01_OP1A-5.dwg, Layout1, 08/04/04 10:19:29 AM, lbiebelen



1 GROUND FLOOR PLAN

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: C.R.M	3-15-02 DATE	
DRAWN: G. P.	3-15-02 DATE	
CHECKED:	DATE	
APPROVED:	DATE	

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

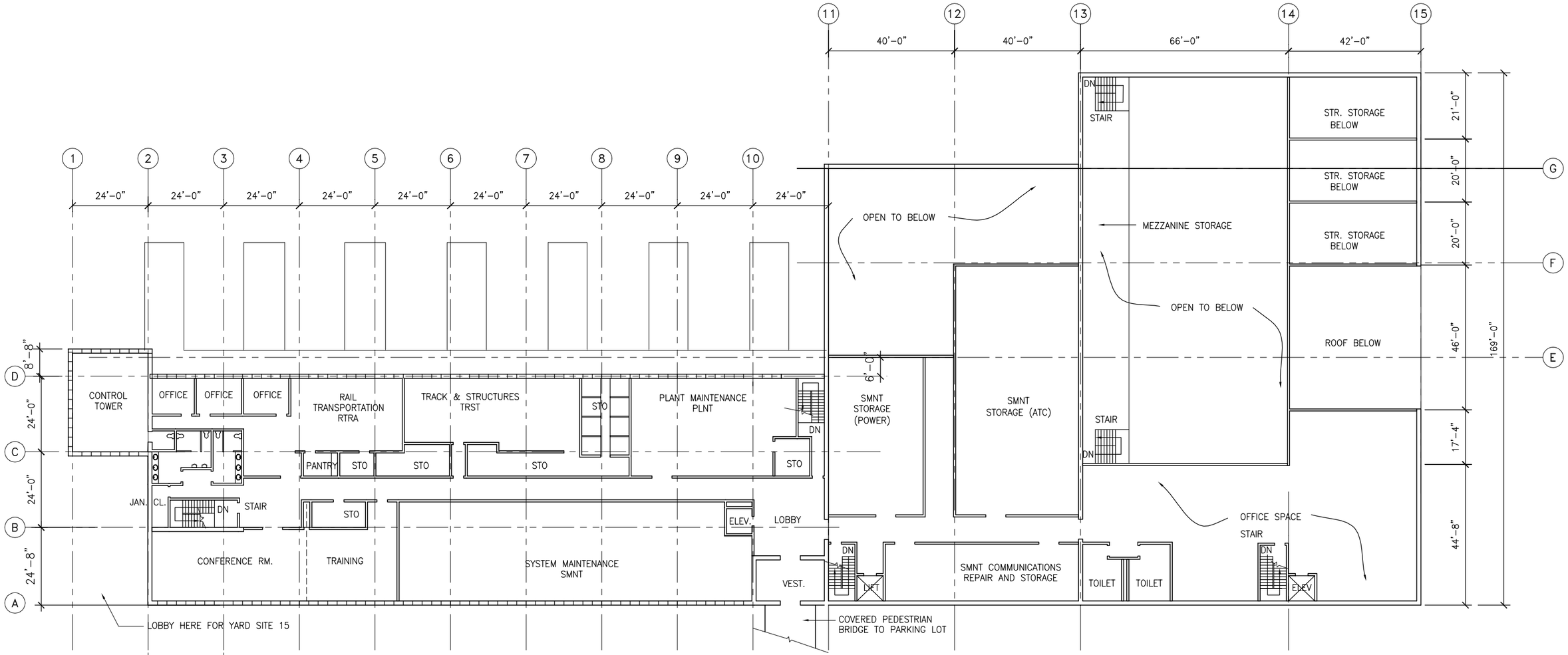
FINAL GENERAL PLANS
JULY 2004

OPERATIONS AND FIELD BASE BUILDING
GROUND FLOOR PLAN

SCALE: 1/16"=1'-0" 4 0 4 8 12 16 20

DRAWING NO.: GPN-A-200-LY

120



1 SECOND FLOOR PLAN

N

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: C.R.M. 3–15–02 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: G. P. 3–15–02 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

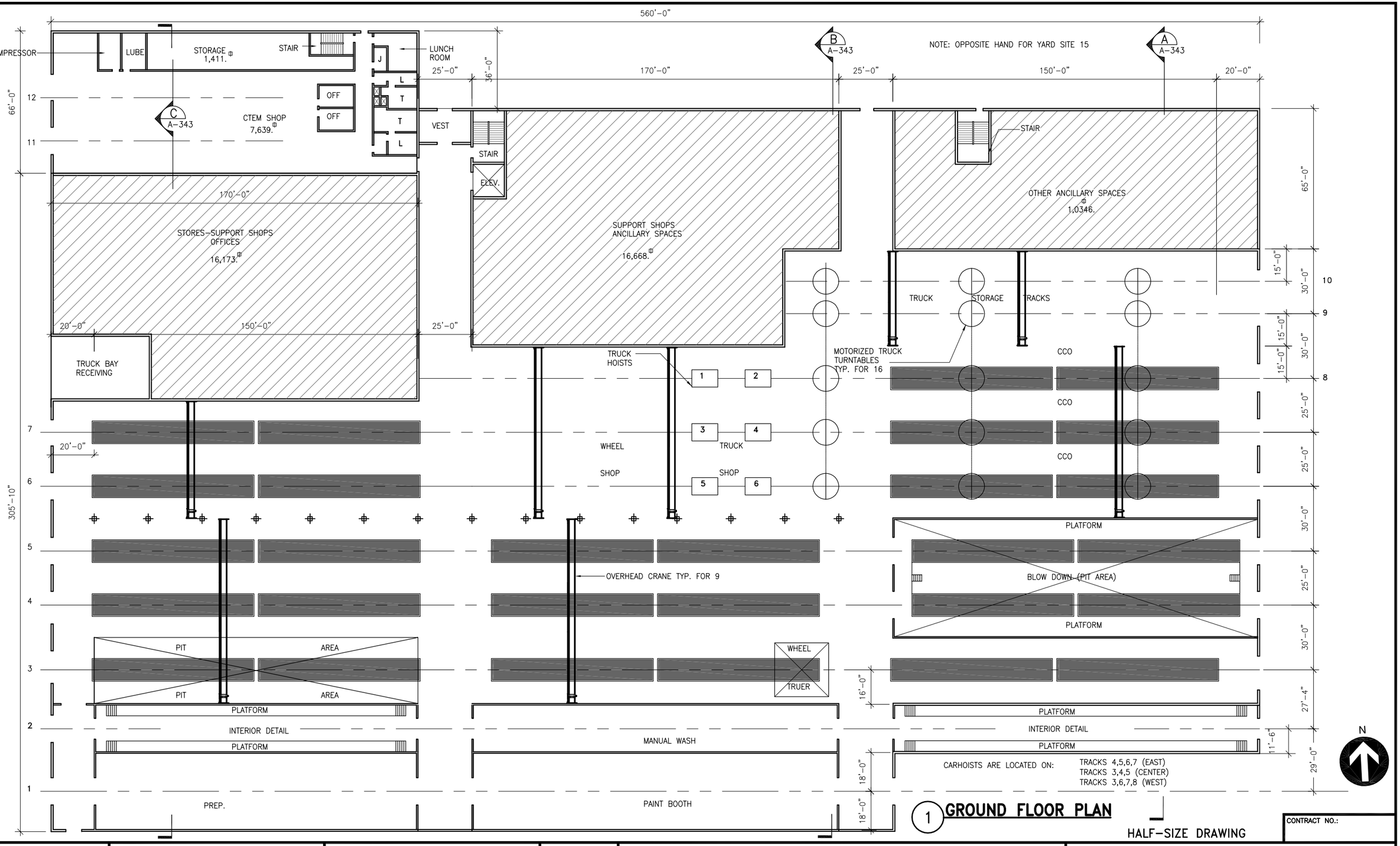
OPERATIONS AND FIELD BASE BUILDING
SECOND FLOOR PLAN

SCALE: 1/16"=1'–0" 4 0 4 8 12 16 20

DRAWING NO.: GPN–A–201–LY

121

\\D2psvr02\CTC CAD\002_dulles\FEIS GenPlans 06-04\Facilities\YARD AND SHOP\04_OP2A-6.dwg, Layout1, 08/04/04 10:20:45 AM, lbiebelen



1 **GROUND FLOOR PLAN**

HALF-SIZE DRAWING

CONTRACT NO.:

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DESIGNED: J.G., C.R.M. 3-15-02 DATE
DRAWN: G. P. 3-15-02 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS

NUMBER	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

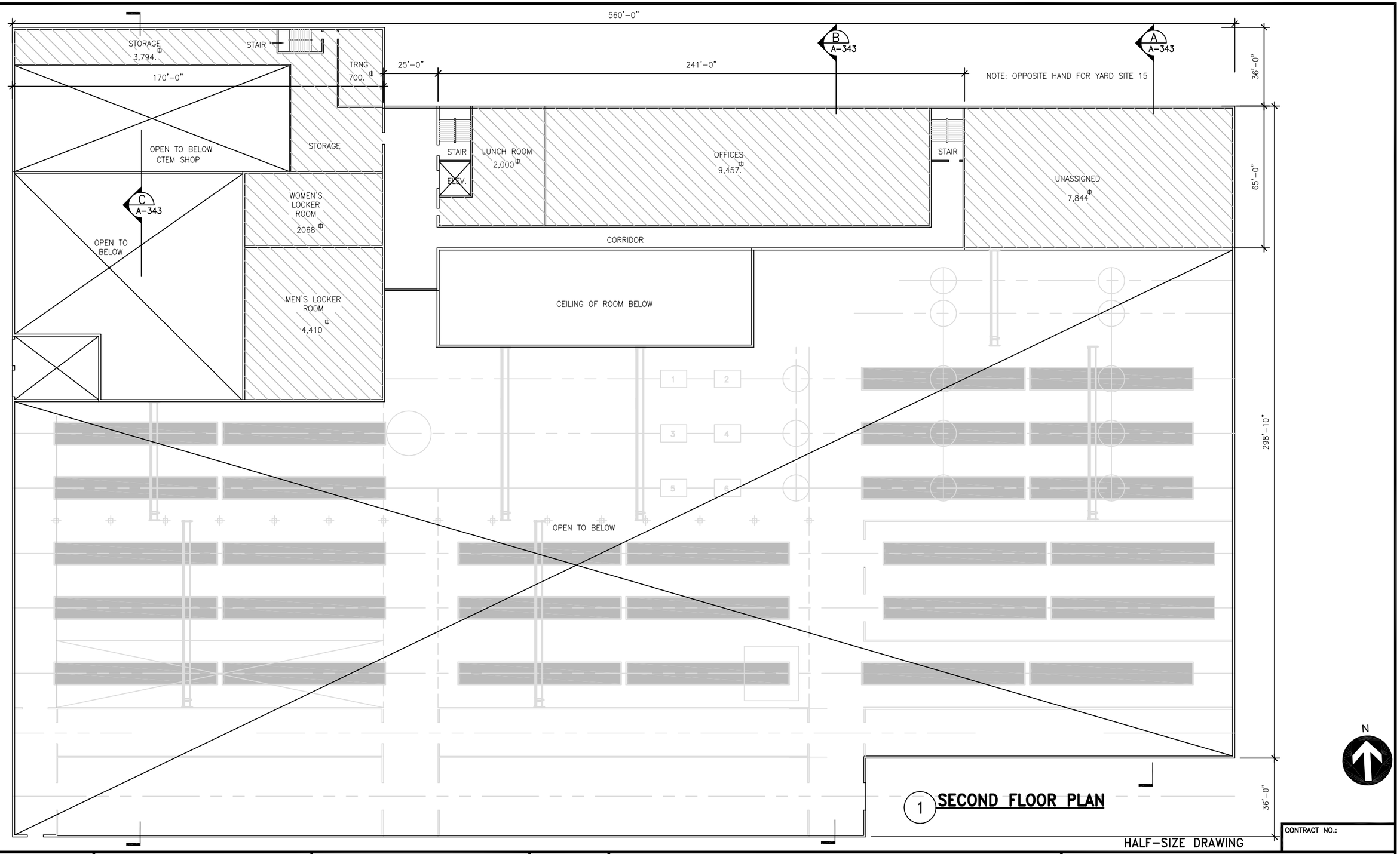
FINAL GENERAL PLANS
JULY 2004

RAIL SERVICE AND INSPECTION BUILDING
GROUND FLOOR PLAN

SCALE: 1"=20' 5 0 10 20

DRAWING NO.: GPN-A-202-LY

122



1 **SECOND FLOOR PLAN**

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: J.G., C.R.M. 3-15-02 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: G. P. 3-15-02 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

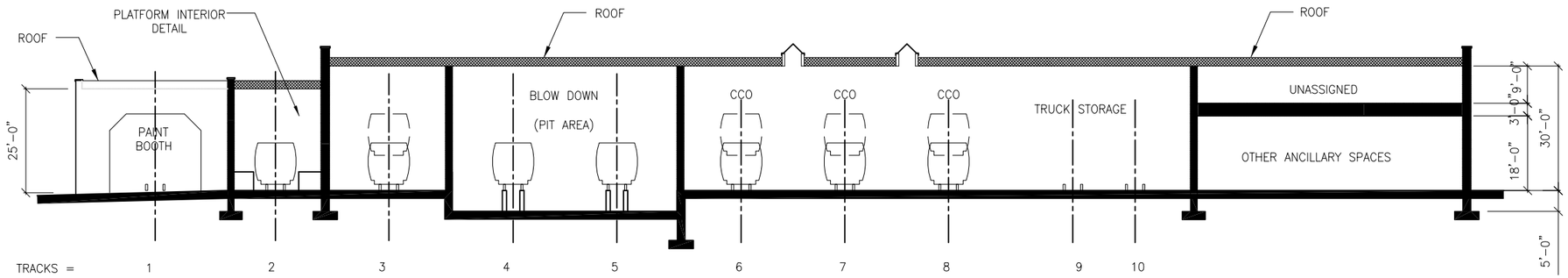
RAIL SERVICE AND INSPECTION BUILDING
SECOND FLOOR PLAN

SCALE: 1"=20' (5 0 5 10 20)

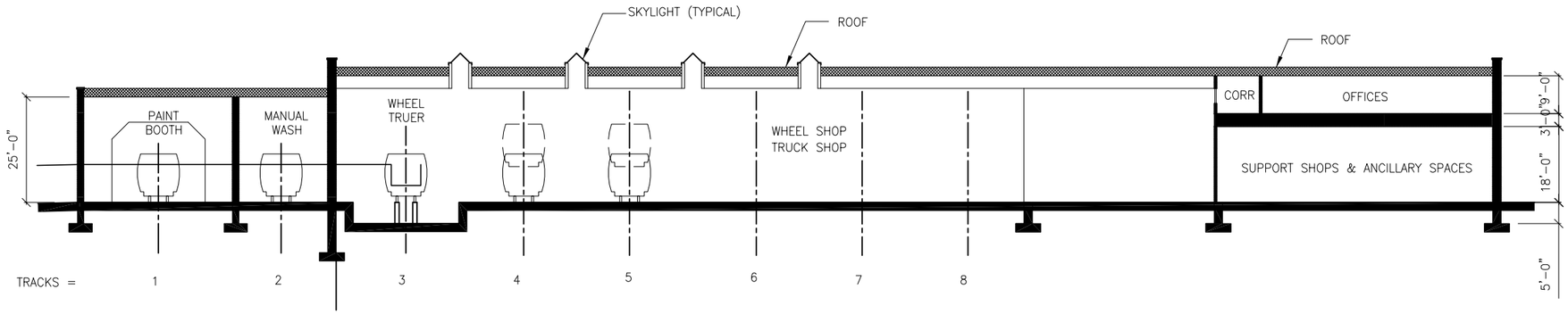
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123

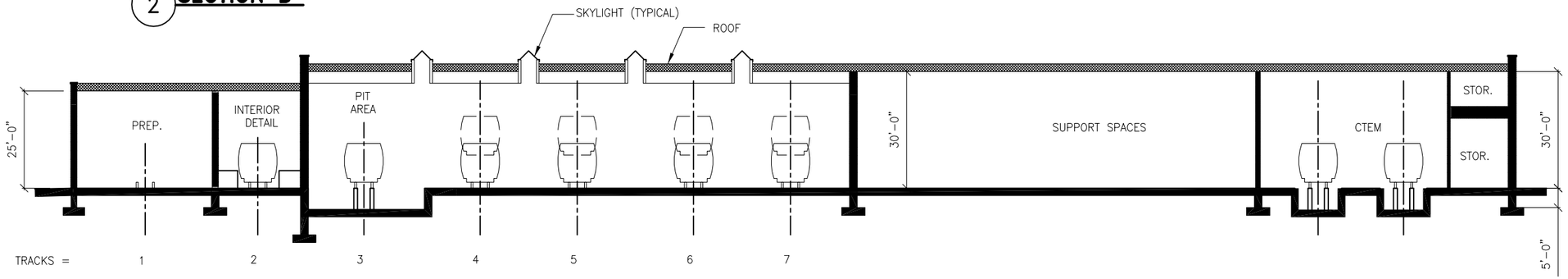
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1 SECTION A



2 SECTION B



3 SECTION C

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: J.G, C.R.M. 3-15-02	REFERENCE DRAWINGS	REVISIONS
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APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

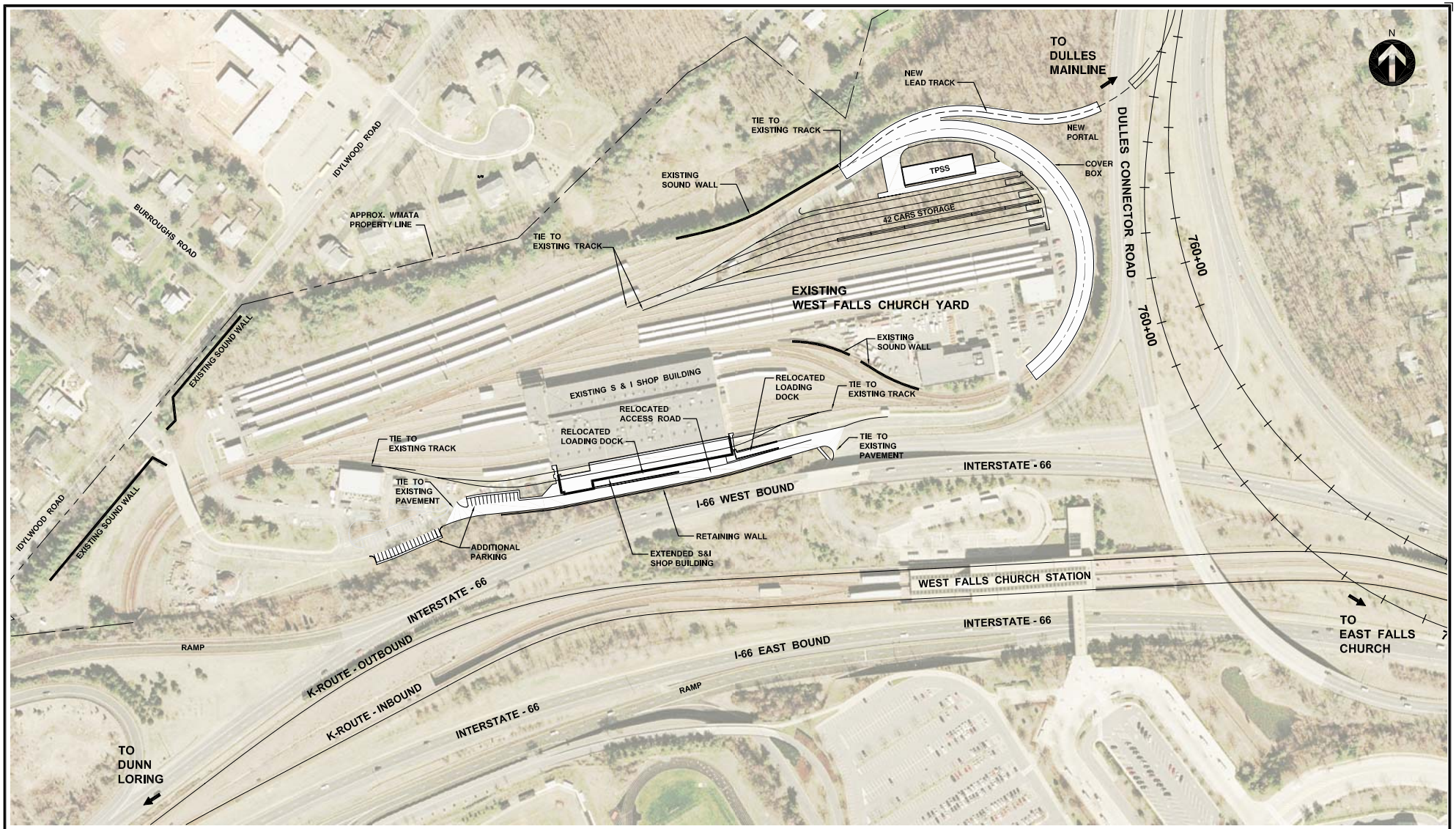
RAIL SERVICE AND INSPECTION BUILDING
SCHEMATIC BUILDING SECTIONS

SCALE: 1/16"=1'-0" 4 0 4 8 12 16 20

DRAWING NO.: GPN-A-300-LY

124

\\D2psvr02\CTC CAD\002_dulles\FEIS GenPlans 06-04\Facilities\YARD AND SHOP\BRT_SIsect-4.dwg, Layout1, 08/04/04 10:38:05 AM, IbiebeleN



HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: DM, RK 12-03 DATE	REFERENCE DRAWINGS	REVISIONS
DRAWN: MK 12-03 DATE	NUMBER / DESCRIPTION	DATE / BY / DESCRIPTION
CHECKED: DATE		
APPROVED: DATE		

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C Mendes PROJECT MANAGER

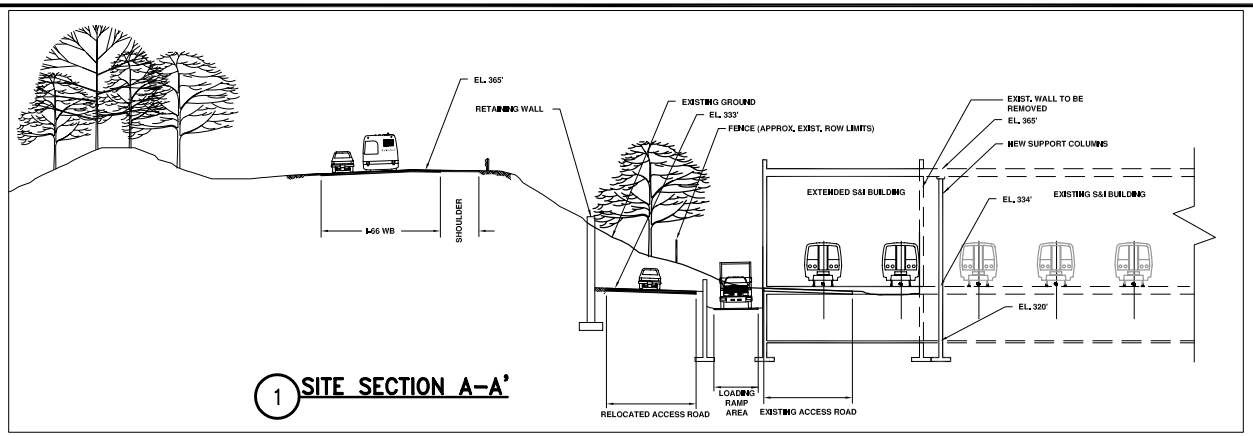
FINAL GENERAL PLANS
JULY 2004

EXPANDED YARD & SHOP SITE PLAN
WEST FALLS CHURCH YARD

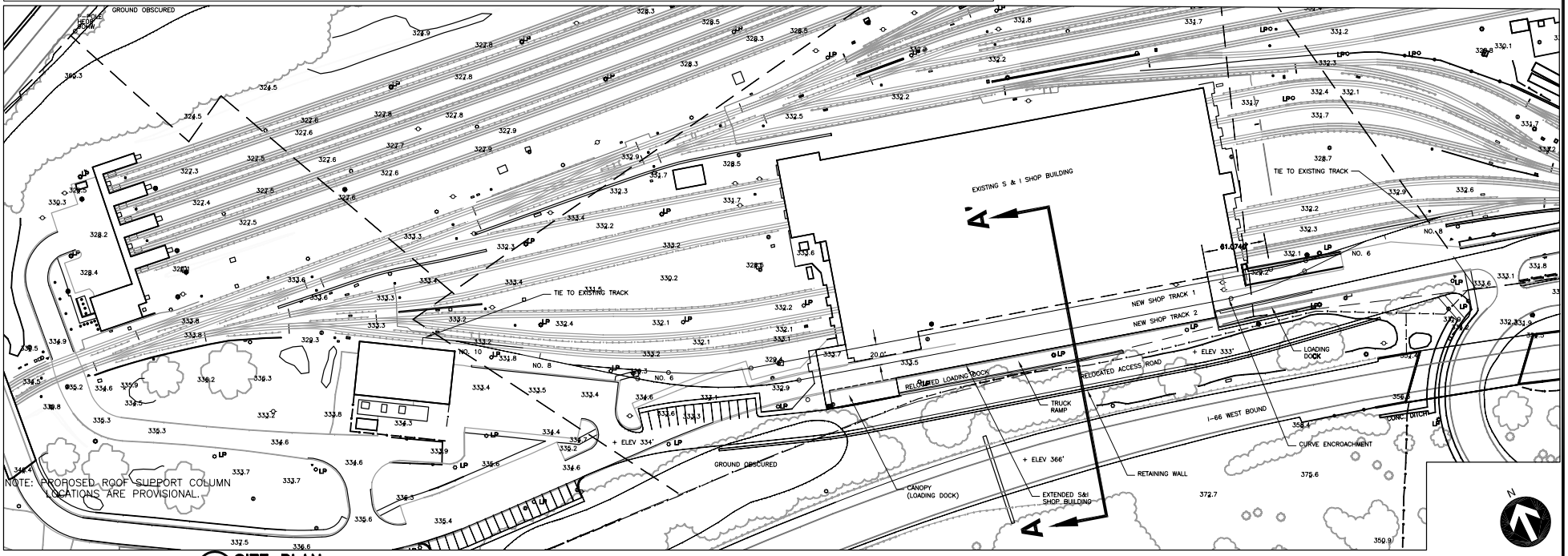
SCALE: 1"=100' (50 0 50 100)

DRAWING NO.: GPN-A-100-WFC 125

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1 SITE SECTION A–A'



2 SITE PLAN

HALF–SIZE DRAWING

CONTRACT NO.:

DESIGNED: L. PADGETT 12–03 DATE
DRAWN: N. IBIEBELE 11–28–03 DATE
CHECKED: _____ DATE
APPROVED: _____ DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS
SUBMITTED
Diana C. Mendes
PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

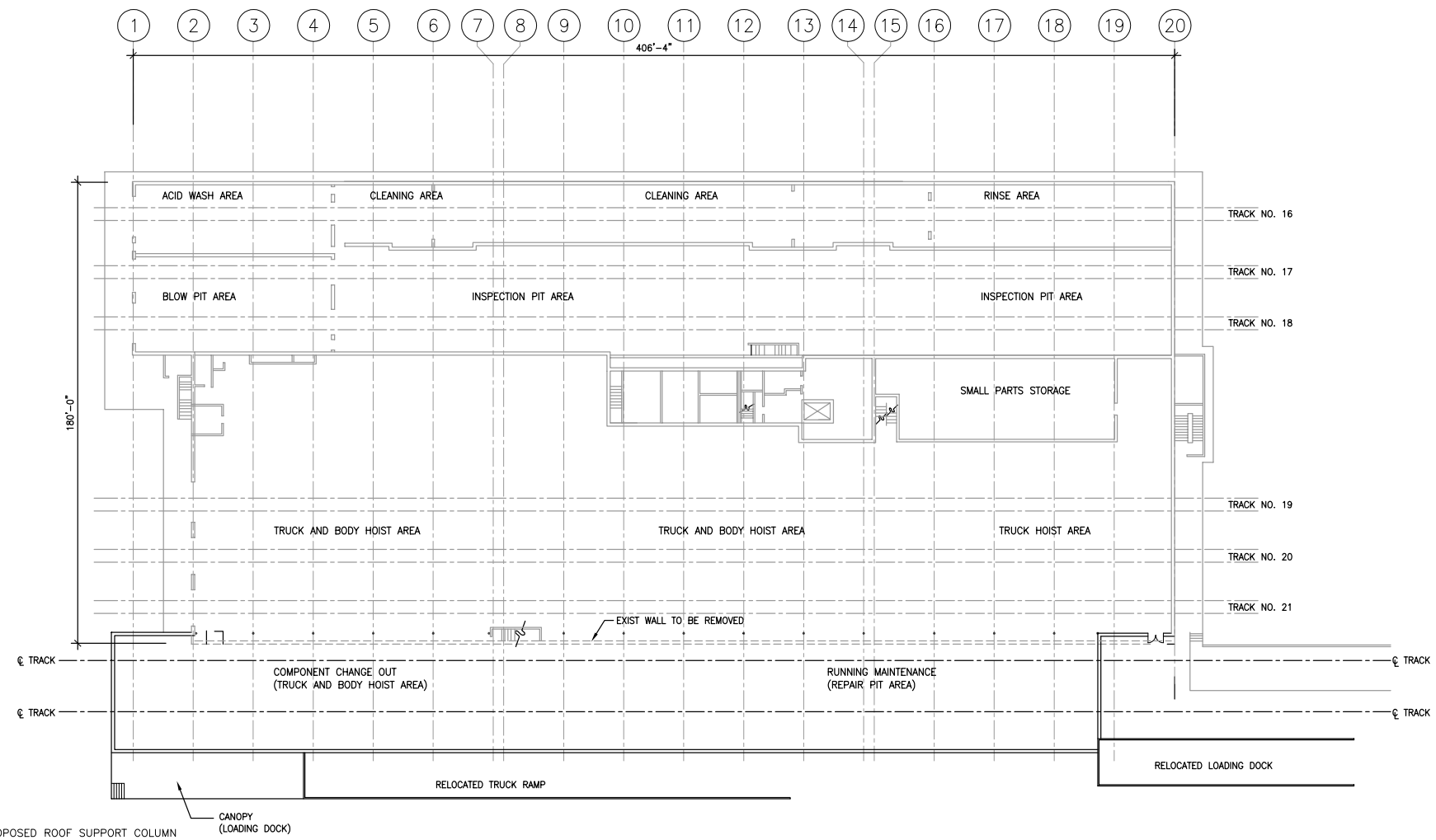
SITE SECTION AND PLAN
YARD AND SHOP EXPANSION

SCALE: 1"=30' (15 0 15 30)

DRAWING NO.: GPN–A–200–WFC

126

\\D2psvr02\CTC CAD\002_dulles\FEIS GenPlans 08\04\Facilities\MAINT & STORAGE\SITE PLAN.dwg, LAYOUT, 08/04/04 10:35:44 AM, ibiebeln



NOTE: PROPOSED ROOF SUPPORT COLUMN LOCATIONS ARE PROVISIONAL.

2 FIRST FLOOR PLAN

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: L. PADGETT 12-03 DATE
DRAWN: N. IBIEBELE 11-25-03 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

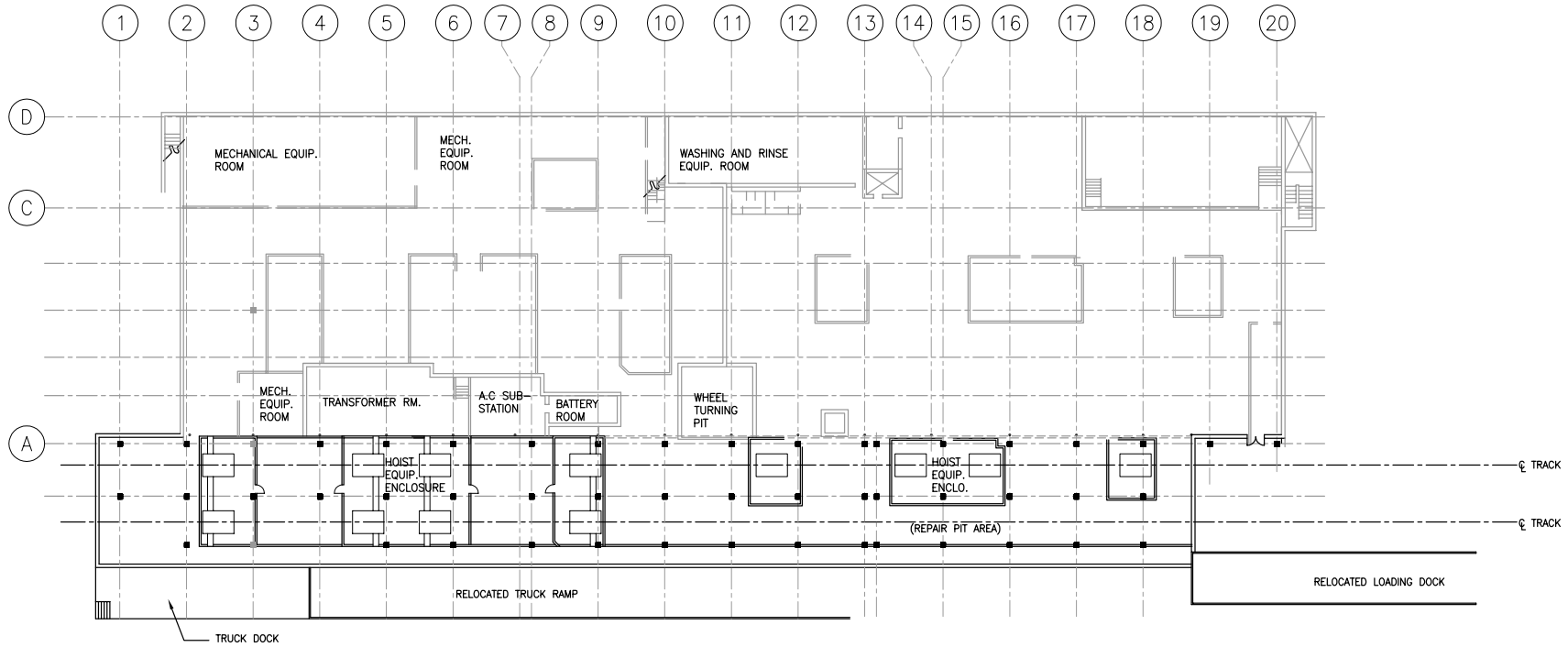
FIRST FLOOR PLAN
YARD AND SHOP EXPANSION

SCALE: 1"-20' (10 0 10 20)

DRAWING NO.: GPN-A-201-WFC

127

\\D2psvr02\CTC CAD\002_dulles\FEIS GenPlans 06-04\Facilities\MAINT & STORAGE\First Floor.dwg, PLATFORM, 08/04/04 10:39:40 AM, lbiebele



NOTE: PROPOSED ROOF SUPPORT COLUMN LOCATIONS ARE PROVISIONAL.

2 FIRST FLOOR PLAN

N

HALF-SIZE DRAWING

CONTRACT NO.:

DESIGNED: L. PADGETT DATE
DRAWN: N. IBIEBELE 11-28-03 DATE
CHECKED: DATE
APPROVED: DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

REVISIONS		
DATE	BY	DESCRIPTION

DULLES CORRIDOR RAPID TRANSIT PROJECT

CAPITAL TRANSIT CONSULTANTS

SUBMITTED Diana C. Mendes PROJECT MANAGER

FINAL GENERAL PLANS
JULY 2004

BASEMENT PLAN
YARD AND SHOP EXPANSION

SCALE: 1"-20' 10 0 10 20

DRAWING NO.: GPN-A-202-WFC

128

\\D2psvr02\CTC CAD\002_dulles\FEIS GenPlans 08-04\Facilities\MAINT & STORAGE\Basement Floor.dwg, BASEMENT, 08/04/04 10:25:17 AM, Ibiebele